The Face of Urban Poverty

Explaining the Prevalence of Slums in
Developing Countries

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Abstract

One of the most visible and enduring manifestations of urban poverty in developing countries is the formation and proliferation of slums. While attention has focused on the rapid pace of urbanization as the sole or major factor explaining the proliferation of slums and squatter settlements in developing countries, there are other factors whose impacts are not known with much degree of certainty. It is also not clear how the effects of these factors vary across regions of the developing world. This paper accounts for differences in the prevalence of slums among developing countries using data drawn from the recent global assessment of slums undertaken by the United Nations Human Settlements Programme. The empirical analysis identifies substantial inter-country variations in the incidence of slums both within and across the regions of Africa, Asia as well as, Latin America and the Caribbean. Further analysis indicates that higher GDP…/

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per capita, greater financial depth and increased investment in infrastructure will reduce the incidence of slums. Conversely, the external debt burden, inequality in the distribution of income, rapid urban growth and the exclusionary nature of the regulatory framework governing the provision planned residential land contribute positively to the prevalence of slums and squatter settlements.

1 Introduction

One of the most enduring manifestations of urban poverty in developing countries is the proliferation of slums and squatter settlements. The global assessment of slums undertaken by UN-HABITAT (2003a) shows that 924 million, or 32 per cent, of the world's urban population resides in slums. In the developing world, 43 per cent of the urban population live in slums. These settlements have the most deplorable living and environmental conditions, and are characterized by an inadequate water supply, squalid conditions of environmental sanitation, overcrowded and dilapidated habitation, hazardous location, and insecurity of tenure, as well as economic and social deprivation. It is in recognition of the development challenges posed by the proliferation of slums that Target 11 of the Millennium Development Goals (MDGs) seeks to create significant improvement in the lives of at least 100 million slum dwellers by the year 2020 (UN-HABITAT 2003b).[1] Given that this target hardly makes a dent on the magnitude of slums, in that it addresses only 11 per cent of current slum population, a revision of Target 11 has been proposed whereby, in addition to making substantial improvement to 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).

This paper contends that any attempt at improving the lives of slum dwellers, and providing alternatives to new slum formation, 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. 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 national or city 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.

The purpose of this paper is to account for variations in the prevalence of slums among developing countries, using data drawn from the global assessment of slums undertaken by UN-HABITAT. The availability of such data provides a unique opportunity to relate slums to various aspects of national development empirically. 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?

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[1] Target 11 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).

- Do countries with lower levels of inequality and good governance have a lower incidence of slums?

The answers to these questions are central to identifying the challenges that developing countries face in stemming the development of new slums, and providing alternatives to slum formation.

The remainder of the paper is organized as follows. Following this introduction, an overview of slum policies in developing 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 prevalence of slums. Finally, some of the policy implications emanating from the paper are highlighted.

2 Slum policies in developing countries

Over the past five decades, authorities in developing countries have adopted several strategies designed to tackle the problem of slums and informal settlements. These include benign neglect; forced eviction and demolition; resettlement or relocation; programmes upgrading slums; and, most recently, the adoption of enabling strategies.

2.1 Policy of benign neglect

In the early 1950s and the immediate post-independence period, authorities in developing countries adopted a policy of benign neglect or a *laissez-faire* attitude towards slums. This approach was based on the notion that slums were an illegal but temporary phenomenon that would disappear with economic growth (UN-HABITAT 2003a). 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). In turning a blind eye to slums, governments pursued a programme of low-cost housing as a strategy for meeting the housing needs of low-income households. The belief was that such a programme sustained by high and steady economic growth would result in the elimination of slums (UN-HABITAT 2003a). Despite its laudable objectives, the programme failed to meet the housing needs of its intended beneficiaries.

2.2 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). In the case of slums, agents of the state forcibly carry out mass evictions, accompanied by demolition. 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 countries. A notable example is Zimbabwe, where, on 25 May 2005, the government commenced the demolition of slums in Harare and other cities under a clean-up campaign termed

Operation Murambatsvina.[2] The demolition exercise resulted in 700,000 people either losing their homes or their source of livelihood – or both. A further 2.4 million people, or 18 per cent of the Zimbabwean population, were also affected in varying degrees (Tibaijuka 2005). It also led to the destruction of the informal sector, which, in 2004, accounted for 40 per cent of all forms of employment. Although the government of Zimbabwe indicated that the operation was designed to rid cities of illegal housing and alleged illicit business activities, observers note that houses built with durable materials – such as backyard extensions of legal houses, and informal settlements that had formally been recognized by parliament and provided with water and sanitation facilities through World Bank funding – were not spared (Tibaijuka 2005).

The general experience of developing 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 on the root causes of such settlements – thus resulting in their displacement rather than their elimination.

2.3 Resettlement/relocation programmes

Resettlement takes place when slum clearance entails the relocation of evicted households to alternative locations. Relocation programmes can either entail 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). A notable best practice of resettlement programmes 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, which 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 title should be given in the name of their wives (UN-HABITAT 2003a). Relocation was also followed by the construction of a subway and provision of several government-assisted settlement programmes, which ensured easy access to the city centre and other employment nodes.

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

2.4 Slum upgrading programmes

Given the failure of previous strategies to tackle the problem of slums and informal settlements effectively, in the 1980s many developing countries adopted programmes – funded largely by the World Bank – to upgrade slum and squatter settlements.

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[2] In the local Shona language, this literally translates to Operation Drive Out Filth.

Upgrading programmes involves employing 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; for example, water reticulation, sanitation, garbage collection, storm drainage, street lighting, and paved footpaths and streets (Abelson 1996; World Bank 2000). Upgrading also entails the provision of community services such as playgrounds, schools, markets, shopping centres, and clinics. Upgrading slums does not entail housing construction, but certain residents might be provided with subsidized loans to improve their dwellings.

Although upgrading programmes have produced some impressive results, they have been criticized on several grounds. These include: the low levels of investment that have been incapable of rectifying decades of neglect and deterioration; the adoption of a project-oriented approach that has failed to ensure the necessary follow-up maintenance; hasty planning that 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; and the absence of any clear focus on poverty reduction (Abelson 1996; UNCHS 1996, 2003a; Okpala 1999; Werlin 1999; Tebbal and Ray 2001; Gulyani and Bassett 2007).

In order to rectify these problems and institutionalize the upgrading of slums, the World Bank and UN-HABITAT initiated two major programmes: the Cities without Slums (CWS) action plan, under the auspices of the Cities Alliance;[3] and the Slum Upgrading Facility (SUF). The CWS action plan recognizes that slums are manifestations of urban poverty and, as such, programmes to upgrade slums need to be complemented by measures designed to reduce urban poverty and forestall the growth of future slums. Given the dearth of finance for the upgrading of slums, the SUF was established by UN-HABITAT in September 2004, with the key objective of mobilizing capital for the upgrading of slums by facilitating links among various local actors, and by packaging the financial, technical, and political elements of development projects (UN-HABITAT 2006a).[4] The SUF is being managed by UN-HABITAT in conjunction with the Cities Alliance, together with international donor facilities and financial institutions. Given the innovative nature of the SUF, a test phase has been designated for its initial implementation, covering three years and with capitalization of US$30 million.

2.5 Security of tenure and the enabling approach to slums and squatter settlements

From the early 1990s, a major response to the proliferation of slums centred on ensuring security of tenure. From the slum perspective, the enabling strategy advocates developing property rights, which, among others, entail the regularization of insecure

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3 Launched by the World Bank and UNCHS as a collaborative initiative in May 1997, 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 programmes to upgrade slums, both city-wide and nationwide (World Bank and UNCHS 2002).

4 The second objective of the SUF is to earmark bankable local projects for potential investment by international donor facilities, international financial institutions, and investors in global capital markets.

tenure in informal settlements. A key assumption of this approach is that while residents of slums and informal settlements might not have legal title over the land, they might still undertake home improvements if they are confident that they will not be arbitrarily evicted. The World Bank and the UN-HABITAT have been at the forefront in promoting the security of tenure approach. Specifically, in 1999 the UN-HABITAT, adopted the Global Campaign for Secure Tenure as an advocacy instrument designed to promote secure forms of tenure particularly for 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).

Durand-Lasserve (1999) identifies several benefits associated with security of tenure:

- The problem of insecure tenure in already established slums, which otherwise would translate into a vicious circle of construction, demolition, eviction, and reconstruction;

- The encouragement of the provision of urban services that were previously absent;

- Motivation of residents to invest and contribute to the management of their built environment;

- In principle, tenure security could contribute to the financial base of municipalities by improving tax recovery on both property and economic activities; and

- The regularization of tenure can be seen as a means of ensuring social peace and stability in cities.

These benefits notwithstanding, the regularization of tenure can have detrimental effects on households with the most vulnerable legal and social status. These include renters, sub-renters, and newly established occupants that are not eligible for regularization. Furthermore, given the appreciation in land values that often accompanies regularization, landowners might resell their land to the highest bidder; in which case, households with the most vulnerable tenure would have no alternative but to move out and establish informal settlements elsewhere.

3   Measuring the incidence of slums in developing countries

3.1 Defining slums

The definition of slums adopted in this paper is that proposed by the UN-HABITAT Expert Group Meeting (EGM)[5] 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

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5 The EGM that took place on the 28–30 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 11 of the MDGs.

authorities as an integral or equal part of the city' (UN-HABITAT 2003a: 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. Slums in this context also include squatter settlements. These are created by the illegal occupation of land and are in contravention of official building regulations. Squatter settlements are often found on the urban fringe and in high-risk or vulnerable areas, such as steep hill slopes, deep gullies, near dumpsites, under overpasses, and in flood-prone areas. These settlements are characterized by the absence of – or, at best, limited – infrastructure, and 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 EGM 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 that, to varying degrees, lacks a combination of these conditions. From the foregoing definition, slums are necessarily urban, although rural areas in developing countries suffer from qualitative deficiency of housing in terms of access to improved water and sanitation, structural quality/ durability of housing, but not in terms of sufficient living space and security of tenure.

3.2 Measuring the incidence of slums

The five indicators used in defining slum households are presented in Table 1. Each indicator specifies 'acceptable' urban conditions; if a household fails to meet these conditions it is classified 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 per cent of household income.

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. To achieve this, over one million household records at the national and sub-national levels were utilized, drawn from over 310 sources.[6] The slum dweller estimation process proceeded as follows.[7] 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 EGM operational definition of slum households. The third stage entailed identifying households lacking one or more of the five indicators in Table 1. For each country, this started with tallying the number of households in urban areas that lack access to improved water. Thereafter, the number of households lacking improved sanitation, without durable housing, living in overcrowded conditions, and

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[6] These include the Demographic and Health Surveys, Multiple Indicator Cluster Surveys, Joint Monitoring Programme for Water and Sanitation, and other surveys and census data.

[7] Further details on the methodology for obtaining global estimates of slum dwellers can be found in UN-HABITAT (2003c: 18–22).

Table 1: Indicators and thresholds for defining slum households

Indicator	Definition	Features of acceptable conditions
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 less than 10% of household income	− Piped connection to house or plot − Public stand pipe serving no more than 5 households − Bore hole − Protected dug well − Protected spring water − Rain water collection
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	− Direct connection to public sewer − Direct connection to septic tank − Pour flush latrine − Ventilated improved pit latrine
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	− Permanent building materials are used for walls, roof and floor − Compliance with building codes − Dwelling is not in a dilapidated state − Dwelling is not in need of major repairs − Dwelling is not located no or near toxic waste − Dwelling is not located on flood plain − Dwelling is not located on steep slope − Dwelling is not located on flood plain − Dwelling is not located on in a dangerous right of way
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	− Not more than two persons per room
Security of tenure	Security of tenure is the right of all individuals and groups to effective protection by the state against arbitrary unlawful evictions	Evidence of documentation that can be used as proof of secure tenure status, as indicated by: − Households with formal title deeds to both land and residence − Households with formal title deeds to either land or residence − Households with enforceable agreements or any document as proof of a tenure arrangement − De facto or perceived protection from forced evictions

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

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 in Table 1 to the total number of households expressed as a percentage.

A key advantage of the methodology is that it provides baseline estimates of the incidence of slums for each country. These can be used to monitor the extent to which countries are on course with regard to achieving Target 11 of the MDGs. One major weakness of the methodology is that it excludes the social, economic, and cultural aspects of slums – all of which are essential for a proper characterization of the multi-dimensional nature of slums.

3.3 Inter-country variations in the prevalence of slums

Table 2 summarizes inter-country variations in the prevalence of slums. Africa has the highest incidence of slums – over 70 per cent of the urban population live in slums. In Asia and in Latin America and the Caribbean (LAC) region, the share of slum dwellers is 41 per cent and 37 per cent, respectively. Within each region, there are remarkable inter-country differences in the incidence of slums. This can best be illustrated with the case of African countries. In order to describe inter-country differences in the prevalence of slums, the percentage of the urban population living in slums can be grouped as follows: very high (> 80 per cent); high (60–79 per cent); moderate (40–59 per cent); and low levels (<40 per cent). African countries that have a very high incidence of slums include Angola, Benin, Chad, Ethiopia, Mauritania, Niger, Rwanda, Sierra Leone, Sudan, and Uganda, where between 83 per cent and 99 per cent of urban dwellers live in slums. The very high prevalence of slums in these countries is a reflection of their low levels of income, spiralling poverty, rapid pace of urbanization, and other factors that are not readily apparent.

Countries with a high incidence of slums comprise Botswana, Burundi, Cameroon, Cape Verde, Côte d'Ivoire, Gabon, Ghana, Kenya, Nigeria, and Zambia, where at least 60 per cent of the urban population live in slums. With few exceptions, most of the countries with a high incidence of slums share common characteristics with countries having a very high prevalence of slums.

Countries experiencing a low incidence of slums include Algeria, Egypt, Libya, Morocco, South Africa, and Tunisia. Within this group, the share of slum dwellers is less than 40 per cent, with Tunisia having less than 4 per cent. Comparatively, these countries have high levels of income, more stable economies, low rates of poverty, and moderate to low urban growth rates. All these tend to stem the proliferation of slums. It is noteworthy that the low prevalence of slums particularly in Tunisia, Egypt, and Morocco reflect long-term political commitment to the upgrading of slums, slum prevention, and service provision for the urban poor (UN-HABITAT 2006b).

Table 2: Variations in the prevalence of slums, 2001

Region	Percentage of country's urban population living in slums	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%)
Africa	70.17	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
Asia	41.43	Afghanistan, Bangladesh, Nepal	Cambodia, Laos, Mongolia, Pakistan, Yemen	India, Iraq, Iran, Kyrgyzstan, Lebanon, Oman, Philippines, Tajikistan, Uzbekistan, Vietnam, Turkey	Azerbaijan, China, Indonesia, Israel, Jordan, Kazakhstan, Kuwait, Myanmar, Qatar, Saudi Arabia, South Korea, Sri Lanka, Syria, Thailand, United Arab Emirates
LAC	37.03	Haiti, Nicaragua	Bolivia, Guatemala, Peru	Venezuela	Argentina, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Honduras, Jamaica, Mexico, Panama, Paraguay, Trinidad and Tobago, Uruguay

Source: Estimated by author from UN-HABITAT (2003b).

4 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, rate of urbanization, inherited planning tradition, 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 defining the macroeconomic environment;

URBAN measures the rate of urbanization;

PLAN is indicative of the inherited planning tradition;

REG describes the regulatory framework underlying the delivery of planned residential land;

INFRAS is a measure of investment in infrastructure;

ARMCON is a variable indicating the incidence of armed conflict; and

GOVERN measures the quality of governance.

A detailed definition of these variables and their summary statistics[8] are presented in Table 3.

4.1 Specification of explanatory variables

MACRO

Improvements in slum conditions have been linked to countries' microeconomic performance (Okpala 1999). In this paper, the macroeconomic environment is operationalized by GDP per capital, 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. Annual growth in GDP per capita measures economic growth. Increase in economic growth can 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. An increase in financial depth can contribute to the overall improvement of the macroeconomic environment.

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[8] 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.

Table 3: Definition of variables used in the empirical analysis

Variable	Definition	Mean (standard deviation)		Source
Dependent variable				
Prevalence of slums	% of a country's urban population living in slums	53.53	(29.54)	UN-HABITAT (2003b)
Independent variable				
GDP per capita	GDP per capita (US$) —2001	2762.17	(5235.04)	UNDP (2003)
Economic growth	Annual growth rate in GDP per capita (1975-2001)	0.70	(2.83)	UNDP (2003)
Financial depth	Sum of the quantity of money and quasi money as % of GDP	35.45	(26.29)	World Bank (2001)
Gini coefficient	Measures the extent of inequality in the distribution of income. An index of 0 signifies perfect equality, while 100 indicates perfect inequality	44.10	(9.83)	World Bank (2004)
Heavily indebted country*	Equals 1, if heavily indebted poor country	0.38	(0.49)	
Debt service	Total debt service as % of export of goods and services	12.72	(11.00)	UNDP (2003)
Urban growth	Average annual rate of change in the urban population (1995-2000)	3.28	(1.83)	United Nations (2004)
Urban concentration	% of a country's urban population living in that country's largest metropolitan area	37.54	(18.22)	World Bank (2004)
Former British colony*	Equals 1, if country was a British colony	0.28	(0.45)	
Duration of property registration	Number of days to register a property	87.12	(106.44)	World Bank (2006)
Cost of registering property	Cost of registering property as % of value	8.56	(6.20)	World Bank (2006)
Health expenditure	Public expenditure on health as % of GDP (2001)	2.56	(1.19)	World Bank (2004)
Armed conflict*	Equals 1, if armed conflict occurred in country in the last decade: otherwise equals 0.	0.36	(0.48)	Project Ploughshares (2003)
Government effectiveness	Aggregate measure of the extent of government effectiveness (2000-01)	-0.39	(0.63)	Kaufmann et al. (2002)

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The extent of inequality in the distribution of income can, in part, account for the prevalence of slums. 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 developing countries can place severe budgetary constraints on their ability to finance the upgrading of slums and slum prevention programmes. Two variables are used in this regard: a dummy variable indicative of heavily indebted poor countries;[9] and the debt–service ratio, which is the amount a country spends servicing its debt as a percentage of the value of its exports.

URBAN

The rapid pace of urbanization is often cited as a key factor in the proliferation of slums and squatter settlements. The average annual growth in urban population and the percentage of a country's urban population residing in the largest metropolitan area are used to analyse the effects of urbanization. Under conditions of rapid urbanization, such as is occurring in Africa and Asia, urban population growth far exceeds the capacity of receiving cities to provide adequate housing and infrastructure, as well as to provide effective management of the process and consequences of urban development. In such situations, much of the growing population is accommodated in slums and squatter settlements.

PLAN

Differences in the inherited planning traditions of former colonies might also explain the incidence of slums. This paper uses a binary variable, which takes on a value of 1 if the country in question is a former British colony. This is because authorities in British colonies maintained a 'zero tolerance' policy towards slums, as slums were routinely cleared. Colonial planning regulations still form the basis of urban development in many former British colonies and, as such, similar attitudes towards slums and squatter settlements exist in varying degrees. 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 surrogate 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.

INFRAS

Investment in infrastructure – particularly water and sanitation, access roads, paved paths, and electricity – can contribute to reducing the incidence of slums and squatter settlements. The effect of investment in infrastructure is examined by using a proxy variable – public expenditure on health as a percentage of GDP. A similar variable has been used by Edelman and Mitra (2006) at the state level in India.

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9 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 application of the traditional debt relief mechanism is above 150 per cent of present value of debts to exports (IMF and World Bank 2001).

ARMCON

Armed conflicts can exacerbate slum conditions in a variety of ways. They can lead to the destruction of urban infrastructure; increase the population of urban areas, as panic-stricken rural dwellers flee to the city, thereby overstretching existing urban 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 decade.[10]

GOVERN

The final variable used is the quality of governance. Obtaining measures of governance for a diverse sample of 96 countries is empirically challenging. However, insights are offered by the work of Kaufmann *et al.* (1999a, 1999b, 2002) 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.[11] 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 regard to slums, as it constitutes a key ingredient for the successful implementation of slum improvement and slum prevention programmes.

5   Factors explaining the prevalence of slums in developing countries

In estimating the regression models, the following computational strategy was adopted. First, preliminary regression models were estimated for the entire sample and the three different regions. The initial results produced several insignificant variables with very low *t*-values. In order to obtain models of the best fit, variables with extremely low *t*-values and with the 'wrong' signs were discarded. The final results are presented in Table 4.

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10 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'.

11 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.

Table 4: Multiple regression models explaining the prevalence of slums

Variable	Region							
	Africa		Asia		LAC		Entire sample	
LN (GDP per capita)	-8.229	(3.00)*	-8.910	(2.66)*	-8.237	(1.58)***	-7.569	(4.02)*
Economic growth	3.541	(3.49)*	0.711	(0.59)	-15.478	(4.48)*	0.540	(0.65)
Financial depth	-0.322	(1.97)**	-0.272	(1.85)**	–		-0.185	(2.03)**
Heavily indebted country	20.015	(2.88)*	-5.078	(0.38)	1.520	(0.15)	13.852	(2.62)*
Gini coefficient	0.615	(2.38)*	–		0.767	(1.32)***	0.339	(1.46)***
Debt service	0.105	(0.60)	1.007	(1.98)**	0.441	(1.16)	0.285	(1.46)***
Urban growth	2.281	(1.80)**	5.247	(2.42)*	-3.859	(0.69)	3.495	(2.82)*
Urban concentration	–		-0.122	(0.58)	0.495	(2.46)*	–	
Former British colony	–		–9.074	(1.07)	–		–	
Duration of property registration	0.023	(091)	0.045	(0.81)	–		0.038	(1.85)**
Cost of registering property	–		–		–		0.229	(0.61)
Health expenditure	-4.121	(1.82)**	–		-11.392	(2.73)*	-2.049	(0.94)
Armed conflict	–		–		–		0.078	(0.08)
Government effectiveness	–		1.486	(0.16)	14.511	(1.66)***	0.778	(0.18)
Constant	83.072	(3.18)*	96.530	(2.10)*	91.953	(2.10)**	77.042	(4.50)*
F–ratio	13.374		3.651		6.702		13.544	
R^2	0.782		0.635		0.846		0.814	
Adj. R^2	0.714		0.461		0.720		0.662	
N	43		32		21		96	

Notes: 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 = Natural logarithm

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5.1 Macroeconomic environment

An important aspect of the macroeconomic environment that affects the prevalence of slums is GDP per capita. The coefficient is significant in all models across the table. Table 4 shows that an increase of 1 per cent in GDP per capita will occasion a reduction of 7.6 per cent in the proportion of a country's urban population living in 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. The impact of economic growth is significant only in the regional models for LAC and Africa, but tells a mixed story. In the LAC model, the coefficient conforms to expectation, indicating that a 1 per cent increase in the annual growth in GDP per capita will reduce the prevalence of slums by 15.5 per cent. Conversely, in the case of Africa, the coefficient suggests that a 1 per cent increase in economic growth will increase the incidence of slums by 3.5 per cent. 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[12] (or even negative) to bring about any meaningful reduction in the percentage of urban dwellers living in slum-like conditions. Perhaps a more plausible explanation is that increase in economic growth has not been translated into improvements in the living conditions of slum dwellers.

The coefficient indicative of a country's financial depth implies that a 1 per cent increase in the supply of money will reduce the incidence of slums by 0.19 per cent. 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 – all of which are essential 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 coefficient for the Gini index indicates that a 1 per cent increase in income inequality will bring about an increase of 0.34 per cent in the incidence of slums. This finding further reinforces pre-existing economic and social inequalities within developing countries. Such high levels of inequality make it difficult for economic growth to have an effect on poverty and, by extension, on the prevalence of slums.

Table 4 shows that in a heavily indebted country the prevalence of slums is increased by 13.9 per cent. Similarly, a unit increase in a country's debt service ratio will occasion an increase in the share of its urban population living in slums. The external debt burden of developing countries can contribute to the proliferation of slums in at least two ways. First, heavy debt obligations can erode the financial resources that could be used to address the infrastructure needs of the poor, including spending on the upgrading of slums and slum prevention. In Latin America, for instance, the increase in debt service payments in the 1990s saw the budgetary share of physical capital fall from 11.5 per cent in 1980 to 3.9 per cent in 1999 (Jonakin and Stephens 2004). 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,

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[12] The mean annual growth in GDP per capita (1975–2001) for African countries in the sample is 0.33 per cent.

particularly in rural areas, could trigger massive migration to urban areas, with slums and squatter settlements being the destination of many new migrants.

5.2 Urbanization

Rapid urban growth is a major factor explaining the prevalence of slums. For the entire sample, a 1 per cent increase in urban growth will occasion an increase of 3.5 per cent in the prevalence of slums. Urban growth is significant in the models for Africa and Asia – implying that a unit increase in urban growth will increase the incidence of slums by 2.3 per cent and 5.3 per cent, respectively. This perhaps is an indication that both regions are the most rapidly urbanizing in the world. In the case of African cities, UN-HABITAT (2005) notes that slums absorb about three-quarters of urban population growth. Besides, large size cities, particularly in Asia and Africa, are often associated with the prevalence of slums; as such cities are unable to meet their housing needs.

The pernicious effect of urbanization on the incidence of slums is indicative of the process of *urbanization without development*. This is common in sub-Saharan Africa and parts of Asia, and is characterized by rapid urban growth in the face of economic stagnation, poor agricultural performance, rising unemployment, financially weak municipalities, poor governance, and the absence of coherent urban planning policy (Cheru 2005). Under such conditions, 'rapid urban growth … has been an inevitable recipe for the mass production of slums' (Davis 2004: 10–11). Despite the negative impacts of urbanization on the prevalence of slums, urbanization needs to be viewed as a positive phenomenon and a precondition for improving access to services, economic and social opportunities. In most countries, cities generate the bulk of the GDP. In order to ameliorate the negative impacts of urbanization on the proliferation of slums, urban planning in developing countries will need to respond to the high levels of urban growth. The absence of adequate planning has resulted in spiralling poverty, proliferation of slum and informal settlements, inadequate water and power supply, and degrading environmental conditions among others (UN-HABITAT 2009).

5.3 Regulatory framework governing the delivery of planned residential land

The regulatory framework governing the delivery of planned residential land reveals that an increase of one in the duration it takes to complete the registration of a property will bring about an increase of 0.04 per cent in the prevalence of slums. This confirms the view that the regulatory framework underlying the delivery of planned residential accommodation in many developing countries might contribute to the development of slums and squatter settlements through bureaucratic procedures that make land unavailable and unaffordable to low-income households (Payne 2005; Kironde 2006). The land registration process in Nigeria demonstrates the exclusionary nature of the regulatory framework: bureaucratic procedures take about 274 days and incur official fees totalling more than 27 per cent 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 subsections 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 go through this tortuous process. Given this scenario, low-income families face several alternatives. The first is the construction of

unauthorized housing, often on marginal land, which not only contravenes building regulations, but also lacks basic amenities. The second is the increasing tendency to share space meant for fewer people, thereby leading to overcrowded habitation.

5.4 Investment in infrastructure

Investment in infrastructure is significant in the models for Africa and LAC. The coefficients indicate that a 1 per cent increase in health expenditure will reduce the prevalence of slums by 4.1 per cent in Africa and 11.4 per cent in LAC. Simply put, the higher the spending on infrastructure, the lower the incidence of slums. These findings are 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 (UN Millennium Project 2005). Apart from the foregoing, investment in infrastructure can deliver major benefits in economic growth, poverty alleviation, environmental sustainability, as well as reduce the health burden faced by slum dwellers.

6 Conclusion: some policy implications

Some of the policy implications emanating from this paper are highlighted in the paragraphs below. Given that the prevalence of slums decreases with income, it then follows that, in order to reduce the incidence of slums, there is a need to improve the economic wellbeing of poor and low-income households partly through income-generating programmes, and policies that support livelihood strategies specifically designed to cater for those within the lowest 20 per cent of the income distribution. The introduction of specific safeguards to ensure housing for this group has a part to play. The key ingredient required for such initiatives is political will on the part of policymakers in order to avoid a situation where middle- and high-income groups benefit from such programmes.

The prevalence of slums is linked to the macroeconomic environment. In particular, we have demonstrated that an increase in financial depth will reduce the incidence of slums, while the external debt burden has the opposite effect. The policy imperative from the perspective of achieving the slum target of the MDGs is the need to adopt policies to ensure macroeconomic stability, especially in countries where macroeconomic policies are characterized by inconsistencies. At the same time, heavily indebted countries need to 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.

Rapidly urbanizing countries have a higher incidence of slums. This is an indication that cities in developing countries need to plan based on the principles of sustainable urbanization. In this regard, urban planning can address the problem of slums and informal settlements through upgrading programmes, which entail the provision or

improvement of infrastructure and basic services such as water, sanitation, garbage collection, storm drainage, street lighting, paved footpaths and streets (UN-HABITAT 2009). Furthermore, local authorities need to be strengthened by providing them with the necessary resources and capacity to undertake a wide range of functions.

The exclusionary nature of the regulatory framework governing the provision of planned residential land is positively associated with the prevalence of slums. The policy issue here is for the relevant authorities, in conjunction with national planning associations, 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: 97–108.

Arimah, B.C. (2004). 'Poverty Reduction and Human Development in Africa'. *Journal of Human Development*, 5: 399–415.

Cheema, G.S. (1987). *Urban Shelter and Services: Public Polices and Management Approaches*. Praeger: New York.

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. Available at: www.globalization-africa.org/papers/57.pdf.

Cities Alliance (2001). *2001 Annual Report*. Available at: www.citiesalliance.org/doc/annual-reports/2001/2001-annual-report.pdf.

Clements, B., Bhattacharya, R. and Nguyen, T. (2003). 'External Debt, Public Investment and Growth in Low-income Countries'. IMF Working Paper WP/03/249. Washington, DC: IMF.

Davis, M. (2004). 'Planet of Slums: Urban Involution and the Informal Proletariat'. *New Left Review*, 26: 5–34. Available at: www.newleftreview.net/NLR26001.shtml

Durand-Lasserve, A. (1999). 'Benefits of Regularizing Informal Settlements'. *Habitat Debate*, 5. Available at: 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: 25–40.

Gulyani, S., and Bassett, E.M. (2007). 'Retrieving the Baby from the Bathwater: Slum Upgrading in Sub-Saharan Africa'. *Environment and Planning C*, 25: 486–515.

IMF and World Bank (2001). *Debt Relief for Poverty Reduction: The Role of Enhanced HIPC Initiative*. Available at: www.imf.org/ external/pubs/ft/exrp/ debt/eng/ index.htm

Jonakin, J., and Stephens, M. (2004). 'The Impact of Structural Adjustment on Government Spending and Debt in Latin America'. *Defence & Peace Economics*, 15: 157–71.

Kaufmann, D., Kraay, A., and Zoidon-Lobatón, P. (1999a). 'Aggregating Governance Indicators'. WB Policy Research Working Paper 2195. Washington, DC: World Bank.

Kaufmann, D., Kraay, A., and Zoidon-Lobatón, P. (1999b). 'Governance Matters'. WB Policy Research Working Paper 2196. Washington, DC: World Bank.

Kaufmann, A., Kraay, A., and Zoidon-Lobatón, P. (2002). 'Governance Matters II'. WB Policy Research Working Paper 2772. Washington, DC: World Bank.

Kironde, J.M.L. (2006). 'The Regulatory Framework, Unplanned Development and Urban Poverty: Findings from Dar es Salaam, Tanzania'. *Land Use Policy*, 23: 460–72.

Mayo, S. K., Malpezzi, S. and Gross, D. J. (1986). 'Shelter Strategies for the Urban Poor in Developing Countries'. *World Bank Research Observer*, 1: 183– 204.

Njoh, A.J. (2003). *Planning in Contemporary Africa: The State, Town Planning and Society in Cameroon*. Aldershot: Ashgate Publishers.

Okpala, D.C.I. (1999). 'Upgrading Slum and Squatter Settlements in Developing Countries: Is there a Cost-effective Alternative?'. *Third World Planning Review*, 21: 1–17.

Olds, K., Bunnell, T., and Leckie, S. (2002). 'Forced Eviction in Tropical Countries: An Introduction'. *Singapore Journal of Tropical Geography*, 23: 247–51.

Pattillo, C., Poirson, H., and Ricci, L. (2002). 'External Debt Burden and Growth, IMF Working Paper WP/02/69. Washington, DC: IMF.

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: 135–45.

Project Ploughshares (2003). *Armed Conflict Report*. Waterloo: Project Ploughshares.

Tebbal, F., and Ray, K. (2001). 'Housing the Urban Poor: Lessons Learned (1960–1996)'. *Habitat Debate*, 7 (3). Available at: 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'. Nairobi: UN-HABITAT. Available at: www.unhabitat.org/downloads/docs/1664_96507_Zimbabwe Report.pdf.

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 (2003a). *The Challenge of Slums: Global Report on Human Settlements 2003*. London: Earthscan.

UN–HABITAT (2003b). *Guide to Monitoring Target 11: Improving the Lives of 100 million Slum Dwellers: Progress towards the Millennium Development Goals.* Nairobi: UN-HABITAT.

UN–HABITAT (2003c). *Slums of the World: The Face of Urban Poverty in the New Millennium?* Nairobi: UN-HABITAT.

UN-HABITAT (2004). *Global Campaign for Secure Tenure: Concept Paper*, 2nd edn. Nairobi: UN-HABITAT.

UN-HABITAT (2005). *Urbanization Challenges in Sub-Sahara Africa.* Nairobi: UN-HABITAT.

UN-HABITAT (2006a). *The SUF Hand Book: Design Phase, Vol. 1.* Nairobi: UN-HABITAT.

UN-HABITAT (2006b). *State of the World's Cities 2006/2007: The Millennium Development Goals and Urban Sustainability.* London: Earthscan.

UN-HABITAT (2009). *Planning Sustainable Cities: Global Report on Human Settlements 2009.* London: Earthscan.

UN Millennium Project (2005). *A Home in the City.* Task Force on Improving the Lives of Slum Dwellers. London: Earthscan.

United Nations (2004). *World Urbanization Prospects: The 2003 Revision.* New York: Population Division, Department of Economic and Social Affairs.

Werlin, H. (1999). 'The Slum Upgrading Myth'. *Urban Studies*, 36: 1523–34.

World Bank (1993). *Housing: Enabling Markets to Work.* Washington, DC: World Bank.

World Bank (2000). 'Cities without Slums: Moving Slum Upgrading to Scale'. *Urban Notes*, 2. Washington, DC: World Bank.

World Bank (2001). *World Development Indicators.* Washington, DC: World Bank.

World Bank (2004). *World Development Indicators.* 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 Available at: www.citiesalliance.org/ citiesalliancehomepage.nsf/Attachments/Cities+Without+Slums+Action+Plan/$File/ brln_ap.pdf