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PRO-POOR PLANNING: A Tool for Strategic Territorial Planning and a Conceptual Framework Drawn from Studies in Colombia and Costa Rica

de la Espriella, Carlos

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Pro-poor Planning

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Pro-poor Planning

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List of Selected Papers

Paper I

de la Espriella, Carlos (2007). Design for equality: Conceptualising a tool for strategic territorial planning. *Habitat International*, 31 (3-4), 317-332. (*This paper addresses Research Objective 2 by proposing a methodology to visualise different dimensions of poverty related to urban planning. The methodology is referred to as the TSTP™.*)

Paper II

de la Espriella, Carlos (2008). Unforeseen effects of public interventions on housing market dynamics: The case of Las Cruces in Bogotá, Colombia. Paper presented at the European Network for Housing Researchers Conference (ENHR), Dublin, July 6-9. (*This paper addresses Research Objective 3 by describing the use of evidence-based poverty maps in a case study conducted in the poor and centrally located neighbourhood of Las Cruces, in Bogotá, Colombia.*)

Paper III

de la Espriella, Carlos (forthcoming 2010). A technique for small geographical scale poverty analyses: Its application in the case of Liberia, in Costa Rica. *Urban Studies*, accepted for publication in the January 2010 issue, 47 (1). (*This paper addresses Research Objective 3 by describing the empirical application of the TSTP™ in a case study conducted in Liberia, Costa Rica.)*

Paper IV

de la Espriella, Carlos (accepted with minor changes 2009). Applications of poverty maps in urban planning in cities of the South: Examples from Liberia, in Costa Rica. *Applied Spatial Analysis and Policy*. (*This paper addresses research Objective 4 by analysing the administrative potential of the TSTP™ for different functions of urban planning.)*

"Sumergido en el diario trajín informativo sobre guerrillas quebrantadas, paramilitares extraditados, políticos presos, luchas en el poder juridicial, popularidad del presidente y declaraciones belicosas de sus ministros, me pregunto qué fue de los pobres."

Samper, 2008

Table of Contents

List of Figures

List of Tables

Acknowledgements

During my academic and professional years in urban planning, I became more and more interested in the processes that make social housing integrate its city, diminish inequalities and build a more homogenous society. I am grateful to my friend Claudia Varela, who kept pushing me to transform this interest into research far from my native country of Colombia.

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Mi mamá por infundir en nosotros la certidumbre que todo en la vida es posible: learning horse riding, scuba-diving and even obtaining a Swedish grant…

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Part One: Research Overview

1 Introduction

1.1 The problem in focus

The United Nations foresees that before 2010 more than half the world's population will be living in urban areas (UN, 2008). This historic moment is characterised by a demographic change signified by a shift to most of the world's population living in towns and cities, and more importantly, by a social, cultural and economic transformation, both of which place urbanization processes as probably the most important global phenomenon of the 21st century, along with global warming (Simon, 2007). Particularly, the shift to most of the population living in urban centres – compared to rural areas – is occurring in towns and cities of the South[1] (Tannerfeldt and Ljung, 2006), in which it is expected to continue occurring over the next 30 years (UN, 2008).

The nature, speed and scale of urbanization processes in cities of the South, together with shortage of resources, make the task of managing the collective affairs of urban regions ever more complex, adding new challenges to urban governance (the concept of urban governance is explained in Section 2.1). These new challenges include for example the risks urbanization poses to the physical environment and natural resources, to health conditions, to social cohesion, to individual rights, and the increase in the number of the urban poor, which is palpable in overcrowded neighbourhoods, poor housing conditions and insufficient access to clean water, sanitation and other social services. See Montgomery *et al., (*2003) for further details.

To address these new challenges, important legal and institutional reforms have taken place. Some of these reforms come together in what is known as decentralization reforms, whereby local authorities are given more responsibilities and power. Decentralization is often promoted as being influenced by the movement towards democratization and political pluralism, the rise of civil society, and the spread of powerful local social and environmental movements, hoping that as government comes closer to the people, more people will participate in politics, as a result of which local decision-making will serve to provide more appropriate in-

1 The term 'cities of the South' hereby refers to cities in countries with low- or middle-income economies, which are often known as 'developing countries' despite economic classification not fully reflecting development status (see World Bank, 2008, for the economic classification of developing countries). Normally, these are cities undergoing a dynamic change in which their built environment can potentially be turned into strategic sites for development. For further details, see for example Seabrook (1996) or Drieskens *et al.,* (2007).

frastructure and better living conditions, enhance economic growth, and ultimately reduce poverty (Blair, 2000; and Montgomery *et al.*, 2003).

However, in practice urban governance in cities of the South – and their planning practices in particular – still fails to address challenges such as the formation of new slums, the increase of urban residential segregation and other issues related to urban poverty (UN Habitat, 2008), despite the transfer of more responsibilities and power to local authorities. This situation is caused in part because few local planning practices seem to be equipped with key concepts and technical, empirical and administrative capacities required to comprehend and visualize the phenomenon of poverty at inter- and intra-urban levels, which compromises their ability to simulate and inform decision-makers on the effects on poverty reduction of the land-based actions they design, implement and monitor (Montgomery *et al.*, 2003, p. 2; Ravallion, 2004; and Vos and Cabezas, 2006, p. 14).

This research problem is composed of conceptual, technical, empirical and administrative sub-problems, as described below:

First, among others Baharoglu (nd) and Deininger (2003) argue that few urban planners in cities of the South are able to grasp key concepts required to comprehend the phenomenon of urban poverty and therefore be able to address it with the actions they design, implement and monitor.

Second, various studies suggest that some planning practices in cities of the South may lack timely and reliable information systems that enable them to visualize statistical evidence in poverty maps and use them to inform decision-makers on the effects on poverty reduction of the land-based actions they are responsible for (see for instance Yomraloğlu, 1993; Montgomery *et al.*, 2003; and Huang *et al.*, 2007).

Third, an empirical limitation arises in which planning practices in cities of the South are said to lack, on the one hand, a long-term approach required to simulate and assess the effects of their actions on poverty reduction, and on the other hand a multi-sectoral approach required to coordinate in an integrated way different planning-related functions such as land management, and extension of road, electricity, water and sanitation networks (see Vos and Cabezas, 2006; and Campbell and Fainstein, 2007).

Fourth, other studies argue that as many planning practices in cities of the South are newly established or focus on short-term functions and campaign-related activities, they may not clearly distinguish in which functions of urban planning to apply a statistical information system that uses evidence-based poverty maps, how to apply it to attract public participation in decision-making processes to effectively respond to local needs in a timely way, and how to develop and use it as an input to efficiently and effectively allocate resources and as a tool to promote transparency and accountability[2] (see for example Grest, 2006; and Ngai-ming and Hoai-anh, 2008).

2 Azis (2008 p. 24) defines the term accountability as those incentives for politicians to expose or implement policies in the public interest.

This research problem was identified by the author through a series of direct observations drawn from structured studies conducted during 18 years of professional experience (these studies are described in Section 4.2). The three most relevant observations are explained in the following paragraphs.

One observation exposed the 'opening up' of social housing and urban planning sectors to include a broader number of stakeholders in order to effectively respond to citizen needs. Two actions drew the attention of this author to the potential benefits of broadening public participation in urban planning. On the one hand, in the early 1990s, the Colombian Government changed its role from provider to facilitator of social housing projects, which in turn attracted the involvement of private sector and community organizations in the design, implementation and technical assistance for the construction of social housing projects. On the other hand, in the late 1990s, urban development opportunities were opened up by less regulatory and more flexible and inclusive planning instruments in Colombia. Both actions mentioned above were presented as driven by the need for urban planning to address citizen needs more effectively.

Another observation disclosed the importance of using statistical evidence in decision-making processes in order to effectively address local needs related to urban poverty in a timely way. Two circumstances made evident to this author the value of developing and using information systems that are based on statistical evidence in decision-making processes. The first one had to do with the request of the Colombian housing agency to design, test and apply an evidence-based methodology to rate privately-developed housing projects from which the agency could select those in which poor households could use their housing vouchers as part of the down payment for the housing unit. The second one was related to a process in which a private university in Bogotá decided to set up a planning office to respond to the decision to increase the number of students. This decision required the addressing of spatial limitations, which were aggravated by a lack of information regarding the university's facilities. As a result of this, the necessary information for managing the physical plan was structured, and the use of evidence in decision-making related to the facilities was implemented. Both circumstances made evident the benefits of using statistical evidence in decision-making.

An additional observation revealed the benefits of incorporating a long-term approach to planning practices in order to be able to assess the impact of longstanding poverty-related issues such as the generation of territorial inequalities and poverty traps. A baseline survey of social housing projects in Colombia and the study of social housing projects implemented in Kimberley, South Africa brought to the author's attention the impact of planning practice on reducing or increasing territorial inequalities. The comparison of these two experiences made evident the potential of urban planning to homogenously distribute or concentrate

households of a specific socio-economic or ethnic background, increasing or decreasing their opportunities for interaction with members of other socio-economic and ethnic groups, reducing or promoting negative issues of perception, and increasing or limiting their possibilities for up-ward social mobility. These two experiences highlight the need to incorporate a long-term approach to the ways in which actions in hands of planning practices are executed in order to be able to asses their impact on longstanding phenomena such as poverty.

As a result, this research is motivated by the desire to explore the extent to which local planning practices in cities of the South could be more responsive to citizen needs and contribute to a more effective delivery of land-based actions by means of using evidence in decision-making, which in turn should strengthen accountability and public participation, and could translate into empowerment of, and broader benefits for, all stakeholders, which ultimately should contribute to poverty reduction. This motivation is reflected in both a conceptual framework and an operational tool to promote a pro-poor planning practice.

1.2 Research aim and objectives

As a response to the research problem stated above, this research aims to propose a conceptual framework which – using evidence-based poverty maps – may help urban planners in cities of the South to comprehend and visualize the effects of land-based actions on poverty reduction in order to be better equipped to inform decision-makers. This aim is addressed from four complementary angles that correspond to the research objectives: conceptual angle, technical angle, empirical angle, and administrative angle[3] (see Figure 1). Research problems and objectives are summarized in Table 1.

3 During the course of the study, the boundaries of these research angles overlapped, making them look fuzzy.

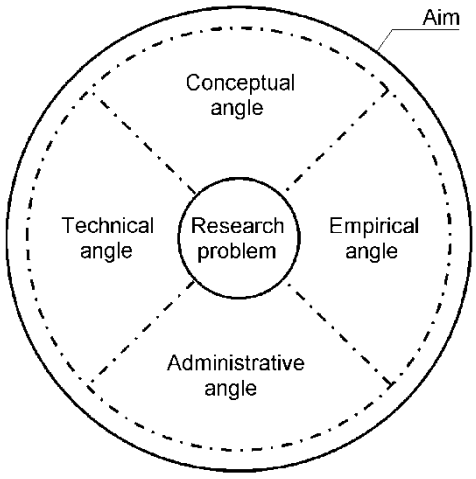


FIGURE 1
Angles from which the research problem is addressed

- **Objective 1** (conceptual angle): To discuss and establish a position in relation to the concepts of poverty, inequality, urbanization, decentralization and urban governance, which are considered by this author as key concepts that are useful for urban planners to comprehend the phenomenon of urban poverty and therefore be able to address it with the actions they design, implement and monitor. This objective is developed in the Conceptual Angle Chapter.
- **Objective 2** (technical angle): To develop an operational technique that may help urban planners to visualize and be better equipped to inform decision-makers on the effects on poverty reduction of the land-based actions they are responsible for by using poverty maps drawn from statistical evidence. This objective is developed in Paper I.
- **Objective 3** (empirical angle): To empirically test how effective the proposed technique can be in relation to the

promotion of a long-term and a multi-sectoral (integrated) approach in urban planning. This objective is developed in papers II and III.

- **Objective 4** (administrative angle): To analyze in which functions of urban planning can the proposed technique be applied, and reflect on its capacity to attract public participation and promote accountability and transparency. This objective is developed in Paper IV.

TABLE 1
Research problems and objectives

	Problems	*Objectives*
Main aim	Few planning practices in cities of the South seem to be equipped with key concepts and technical, empirical and administrative capacities they need to comprehend and visualize the phenomenon of poverty at inter- and intra-urban levels, which compromises their ability to simulate and inform decision-makers on the effects on poverty reduction of the land-based actions they design, implement and monitor	The aim of this research is to propose a conceptual framework that may help urban planners in cities of the South – using evidence-based poverty maps – to comprehend and visualize the effects of land-based actions on poverty reduction in order to be better equipped to inform decision-makers
Conceptual limitation / angle	Urban planners in cities of the South are often not equipped with key concepts required to comprehend – and therefore be able to address – the phenomenon of urban poverty with the actions they design, implement and monitor	To discuss and establish a position in relation to the concepts of poverty, inequality, urbanization, decentralization and urban governance, which are considered by this author as key concepts useful for urban planners to comprehend – and therefore be able to address – the phenomenon of urban poverty with the actions they design, implement and monitor
Technical limitation / angle	Planning practices in cities of the South may lack timely and reliable information systems to visualize statistical evidence in poverty maps and use them to inform decision-makers on the effects on poverty reduction of the land-based actions they are responsible for	To develop an operational technique that may help urban planners to visualize and be better equipped to inform decision-makers on the effects on poverty reduction of the land-based actions they are responsible for using poverty maps drawn from statistical evidence
Empirical limitation / angle	Planning practices in cities of the South are said to lack, on the one hand a long-term approach required to simulate and assess the effects of their actions on poverty reduction, and on the other hand a multi-sectoral approach required to coordinate in an integrated way different planning-related functions	To empirically test how effective the proposed technique can be in relation to the promotion of long-term and multi-sectoral (integrated) approach in urban planning
Administrative limitation / angle	Planning practices in cities of the South may not clearly distinguish in which functions of urban planning to apply a statistical information system that uses evidence-based poverty maps, how to apply it to attract public participation into decision-making processes in order to effectively respond to local needs in a timely way, and how to develop and use it as an input to efficiently and effectively allocate resources and as a tool to promote transparency and accountability	To analyze in which functions of urban planning the proposed technique can be applied, and reflect on its capacity to attract public participation and promote accountability and transparency

1.3 Outline of the research

This composite dissertation is structured in three parts. Part One presents the overview of the research, Part Two comprises the four selected papers, and Part Three includes the appendices.

The research overview (Part One) includes seven chapters. In the first chapter, the problem, motivation, aim and objectives of this research are presented. In the second chapter, key concepts that may help urban planners to comprehend and visualize the phenomenon of urban poverty are discussed and positioned in relation to different traditions of knowledge construction in urban planning; to then introduce the integrated urban planning practice approach and explain how evidence-based poverty maps may help to visualize the geographical distribution of urban

poverty and promote dialogue amongst different stakeholders of pro-poor planning practices. The third chapter explains the selection of Latin America as the macro region the research focuses on, as well as the criteria for the selection of the specific case studies of Las Curces in Bogotá, Colombia and Liberia in Costa Rica, followed by contextual information on both case studies. The chapter also explores – using evidence collected during the selection of the case studies – the relationship between decentralization and the development of democracy in the region. In the fourth chapter, the methodology is explained, including the steps and methods employed in the research. In the fifth chapter, the main outcomes and findings are presented together drawing on the discussions in chapters 2 and 3, and the four selected papers. In the sixth chapter, the structuring elements of the proposed pro-poor conceptual framework are discussed, followed by conclusions and recommendations for further research compiled in Chapter 7.

2 Conceptual angle

As mentioned in Section 1.2, the aim of this research is to provide a conceptual framework that enables urban planners in cities of the South – using evidence-based poverty maps – to comprehend and visualize the effects of land-based actions on poverty reduction in order to be better equipped to inform decision-makers. This chapter presents the conceptual angle of this aim, the objective of which is to discuss and establish a position in relation to key concepts that may help urban planners to comprehend – and therefore be able to address – the phenomenon of urban poverty with the actions they design, implement and monitor. In that sense, the chapter both covers the first objective of the research and presents its theoretical framework, which is why it is not presented as a separate self-contained paper.

In particular, the chapter develops arguments as to why the use of evidence-based poverty maps may be of importance to promote a pro-poor planning practice not only as a method to visualize the geographical distribution of poverty, but also as a tool to promote dialogue between different stakeholders. These arguments are built in the following four sections: the first section presents different traditions of knowledge construction; the second one discusses the concepts of poverty, inequality, urbanization, decentralization and urban governance and their relation to traditions of knowledge construction; the third section discusses the development of urban planning practice, establishes a position in relation to knowledge construction in urban planning, and presents the proposed integrated urban planning approach and the role of evidence-based poverty maps; and the last section presents the conclusions to this chapter. These conceptual discussions are illustrated with examples from Latin America, as relevant and pertinent.

2.1 Traditions of knowledge construction

All research aspires to build theory or construct knowledge. Knowledge construction processes described by two theoretical angles – learning theory and philosophy of science – will be briefly reviewed as they are considered relevant to this research.

In an effort to explain the processes of adult learning, Fry, Ketteridge and Marshall (2004) describe knowledge construction as the process through which we make meaning out of our experiences of the world based on how we perceive and understand it. They explain the principles of three traditions of knowledge construction. First, rationalism (or idealism) is described as being based on the idea of "*a biological plan being in existence that unfolds in very determined directions*" (p. 11). This knowledge construction tradition is usually applied in natural sciences.

Second, associationism is described as being centred on the idea of "*forming associations between stimuli and responses*" (p. 12), which is applied mainly in healthcare sciences. Both rationalist and associationism traditions share the idea that an objective reality exists, which is why they recommend to maintain an objective distance while studying it, and employ quantitative methods. Yet, this idea fails to explain social processes, and quantitative methods fail to fully capture cause-effects relationships in social processes (see critiques of quantitative methods in Section 4.1).

Third, constructivism emerged as the response of social scientists to the limitations of rationalism and associationism, in the sense that, for constructivists the process of knowledge construction is interactive and socially constructed in nature, as opposed to being a 'rigid' means to find out the 'true state of affairs'. Specifically, constructivism relies on the idea that "*experience leads to the formation of general conceptions or constructs that are models of reality*" (p. 10). Additionally, Guba and Lincoln (1989, pp. 8-11) list six properties of constructivism: *(i)* the existence of multiple socially constructed realities corresponding to constructions that are created by individuals as they attempt to make sense of their experiences; *(ii)* these constructions are shaped by the values of the constructors; *(iii)* these constructions are linked to the particular physical, psychological, social and cultural contexts within which they are formed and to which they refer; *(iv)* knowledge construction can be shaped to empower stakeholders in a variety of ways; *(v)* knowledge construction must have an action orientation that defines a course to be followed, stimulates stakeholders to follow it and generates and preserves their commitment to it; and *(vi)* in as much as knowledge construction involves humans, it is the constructor's duty to interact with those humans respecting their dignity, their integrity and their privacy.

Another effort to explain the process of knowledge construction is made under the philosophy of science, which was first systematically theorised by Auguste Comte, in the mid nineteenth century. Comte said that society undergoes three different phases regarding knowledge construction, which must be completed one-by-one in a progressive way. First comes the theological phase (pre-Enlightenment), in which man bases his belief with reference to God. Second comes the metaphysical phase (Enlightenment), in which the central idea is that humanity is born with certain rights that should not, and cannot, be taken away. Lastly comes the scientific, or positive stage, in which the central idea is that there is no higher power governing any person than the idea that one can achieve anything based on one's individual freewill and authority; hence, individual rights are more important than the rule of any person (see Giddens 1974 for more details).

Comte's knowledge construction phases led to the development of the logic positivism tradition, which combines the idea that observational evidence is indispensable for knowledge of the world, and that knowledge construction can only come from the verification of theories

through strict scientific method. Logic positivism has been criticized for its universalism, contending that all processes are reducible to physiological, physical or chemical events, and that biological organisms are reducible to physical systems (see Bullock and Trombley, 1999). Additionally, and similarly to critiques of rationalism and associationism, social scientists contend that one cannot identify laws that would hold true in all cases when human behaviour is concerned, and that while the behaviour of groups may at times be predicted in terms of probability, it is much harder to explain the behaviour of each individual or event.

Relativism emerged as a response to these critiques with the idea that some element, or aspect of experience or culture, is relative to, or depends on, some other element or aspect. In this sense, beliefs and behaviours can only be understood in terms of their historical or cultural context, affecting knowledge construction, which in turn modifies the context itself, generating a cyclical-incremental tendency in the knowledge construction process. Relativists claim that there are no absolute truths (knowledge), since truth is always relative to some particular frame of reference, such as a language or a culture, which in turn is socially affected by the same truth under study.

2.2 Key concepts of pro-poor planning practice and their relationship to traditions of knowledge construction

Having discussed different traditions of knowledge construction above may help to better understand the relationships between these and the development of the concepts of poverty, inequality, urbanization, decentralization and urban governance.

Poverty

The contemporary conceptual debate about the meanings and measurements of poverty has evolved from what is often referred to as the 'conventional' approach that identifies income and consumption as the best proxies for poverty (Ravallion, 1992). This approach is reflected in macro-economic indicators such as Gross National Product per head, and in household level poverty measures such as the international poverty line of US$ 1 per day. Clearly, this conventional approach to poverty falls into the rationalist tradition of knowledge construction, as it maintains an objective distance from the phenomenon and uses quantitative methods to study it.

This quantitative approach has been criticised for turning poverty into an essentially static concept as its measures are generally fixed in time, and in general, for leading to a narrow reductionist view that fails to understand the complexity and diversity of local realities in which the poor live (Chambers, 1995; Rakodi, 1995; and Moser, 1998).

Another quantitative effort to define poverty was developed under the basic needs approach, in which poverty came to be defined not just as lack of income, but also as lack of access to other indicators of wellbeing such as housing, water and sanitation and education. This in turn led to the development of the Unsatisfied Basic Needs method, which quantifies the number of households that have achieved a list of basic needs in two stages: one in which single variables are calculated based on direct observations and households' reports of their levels of wellbeing/poverty, and one in which the magnitude and depth of deprivation is obtained by synthesizing key indicators (known as 'dimensions of poverty') out of appropriate groups of single variables (Feres and Mancero, 2001). For instance, housing (a dimension of poverty) is often calculated from the quality of housing materials and the number of rooms and built area per number of household members. The basic needs approach and its Unsatisfied Basic Needs method to some extent follow the relativist tradition, as concepts and measures of poverty in some cases need to be understood in relation to their cultural context. The overcrowding variable may serve as an example: its threshold varies between different societies, as one society may accept as adequate a large household having a 3m x 3m bedroom for several boys and one for several girls and another may consider this as overcrowded.

The Unsatisfied Basic Needs method was found to be relevant to measure poverty in this research, as it can help urban planners in the South to identify deprived urban areas by means of analysing land-related dimensions of poverty such as housing, water and sanitation and transportation. However, this method is criticized for not being able to establish noticeable differences in societies that already have covered most of their basic needs, which is a critique that only applies to societies in the so-called developed countries, which are not the focus of this research. This method is also criticized for considering social relationships only vaguely (Moser, 1998; Cardona *et al.,* 2000; and Perlman, 2004).

Alternatives which address social relationships more fully include at least two options. One is to measure poverty using qualitative approaches to poverty, which fall into the constructivist tradition of knowledge construction, as they rely on people's perceptions and experiences of poverty. The qualitative approaches to poverty emerged as the concept broadened since the mid-1970s. Some approaches stressing the dynamic condition of poverty – from which people can move in and out – are those of 'livelihoods' (Rakodi and Lloyd-Jones, 2002) and 'assets'[4] (e.g. housing ownership, social capital, skills and ability to work) (Baharoglu, nd; and Moser, 2007). Other qualitative approaches recognising social interactions and perceptions include the 'participatory' perspective that uses multiple, subjective indicators of poverty status that emerge out of the experience of the poor (Moser, 1998); and the 'social exclusion' perspective understood as the inability to participate in the activities of normal living (Glennerster, 2000, p. 6). However, they are in turn criti-

4 Caroline Moser (1998) developed a classification of assets which she called the 'asset vulnerability framework'. This approach studies asset management strategies of the urban poor drawn from five assets categories: labour, human capital (health and education), productive assets (housing), household relations and social capital.

cized for involving a large amount of resources in their study, which is why they are normally used in pre-determined territorial areas and not often at city level.

The second option is to incorporate the relative aspect of poverty into the analysis, which is hereby addressed through the concept of inequality.

Inequality

The concept of 'inequality' refers to the differences in opportunities that an individual, or a group of people, has in relation to the opportunities of an average member of the population, in terms of his/her economic, social and cultural differences (World Bank, 2006b).

The polarization generated by inequality is manifested in the territory by mechanisms of social exclusion such as transportation, labour and residential segregation (see Paper I). This research focuses on the phenomenon of Urban Residential Segregation owing to its clear relation to urban planning. This study establishes population groups based on their socioeconomic characteristics, given that socioeconomic inequalities have been identified as constituting serious obstacles to further development in Latin America (World Bank, 2006a), as opposed to establishing population groups based on their demographic or socio-cultural patterns, which is a characteristic of the studies of Urban Residential Segregation in Europe and North America (see Tiebout, 1961; Galster, 1982; White, 1983; and Marcuse, 1997 for studies of Urban Residential Segregation regarding the American and European context; and Rodríguez, 2001; and Sabatini, 2003 for the Latin American context).

The most widely used indicator of Urban Residential Segregation is the Index of Dissimilarity (D), which shows the number of population members that may need to be relocated to another territorial unit of the city in order to obtain a perfectly even distribution throughout the city (see Duncan and Duncan, 1955 on the development of D). Some of the benefits of using the Index of Dissimilarity in poverty analyses are that its calculations can be disaggregated at different geographical levels of the city, and that it allows comparisons as it has been used internationally since 1955 (see Paper I).

As with poverty maps, spatial distribution of inequality measured in any given region can be represented in inequality maps, which when overlapped with poverty maps show different and complementary geographical patterns that can help understand poverty dynamics. Both poverty and inequality maps in this study use the Unsatisfied Basic Needs method, thus drawing on the relativist tradition of knowledge construction. Poverty maps use the method directly, while inequality maps use it to calculate the Index of Dissimilarity.

Urbanization

Ravallion (2007) shows that the share of poor households living in urban areas around the world – measured as households living below the US$1

per day poverty line – has increased from 18.5% in 1993 to 24.2% in 2002. This proves that poverty is increasingly becoming an urban phenomenon. But, what do we understand by urbanization?

The term 'urbanization' has different meanings in different contexts: from the physical spread of built-up land (urban footprint), to the decrease of agriculture-related activities; from the social process by which a population adjusts to the urban way of life to the growth in the proportion of people living in urban centres, in relation to rural areas. Yet, the term urbanization is widely understood as by Tannerfeldt and Ljung (2006, p. 20) to refer to "*the transition process from a rural to an urban society,* [in which] *the proportion of the total population living in urban centres increases while the proportion living in rural areas decreases.*", which is how the term is hereby used.

Urbanization is now mostly a Southern phenomenon. In 2007, it was recognised that regions in the South have the highest rates of urbanization, as they are less urbanized (48%) than those in the North (76%) (Birch and Wachter, 2007). Moreover, a United Nations report (UN, 2008) predicts that these high rates of urbanization in the South will continue over the next 30 years.

The causes of urbanization are generally attributed to different factors such as natural population growth, internal rural-urban migration, and/or the conversion of land from rural to urban use (Sheppard, 2007), while its effects are associated with industrial and social development.

In practice, causes and effects of urbanization vary greatly depending on local dynamics and the historical period of each country and region. For instance, most countries in Europe became urbanized during the nineteenth century, in part as a consequence of the industrial revolution, which required a massive work force in towns and cities. On the other hand, in the South the perception of cities as being engines for development[5] is not often accompanied by real opportunities as these cities may lack dynamic economies. In addition, urbanization in the South is associated with the limited degree of development in rural areas (Hataya, 1999; and Iimi, 2005, p. 90), which was not necessarily the case in the nineteenth century European urbanization.

5 Stephen Malpezzi (2006, p. 68) shows that urban growth is a strong predictor of growth in GDP per capita.

Despite great variations, something urbanization in nineteenth century European cities and in contemporary cities in the South have in common is that in both cases governments have not been prepared to receive this massive influx of population, as a consequence of which both sets of cities could not fully cope with, for instance, the coverage and quality of sewage, water and sanitation networks, and their capacity to collect and process garbage, which in turn generate high rates of disease and environmental problems (Birch and Wachter, 2007). In that sense, evidence-based poverty maps can be a great help to visualize and communicate the geographical distribution of different dimensions of poverty and their characteristics such as the territorial extent of deprived urban areas, their degree of clustering, and the proportion of population living there.

In relation to the traditions of knowledge construction, the concept of urbanization may seem to fall into the rationalist tradition as its definitions appear to indicate the existence of an objective reality that should be studied using quantitative methods. However, in this study, the concept of urbanization is approached from the relativist tradition, as its causes and effects vary greatly depending on its context, and therefore effective answers should include different actors and their perceptions on how urbanization affects them.

Decentralization

As mentioned in the introduction, decentralization reforms have taken place to address some of the new challenges raised due to urbanization processes. But, what is decentralization?

Decentralization is a complex concept that includes different subconcepts, such as political, administrative, fiscal and market decentralizations (de Souza, 2000). While political decentralization aims to give citizens more power in public decision-making – by means of public elections of local representatives –, administrative decentralization refers to transferring responsibility for the planning, financing and management of public functions from central or regional authorities to local authorities and/or semi-autonomous public authorities. Fiscal decentralization, on the other hand, refers to dispersal of financial responsibility, under the logic that if local authorities and private organizations are to carry out decentralized functions effectively, they must have an adequate level of revenues – either raised locally or transferred from the central government. Finally, market decentralization refers to privatization and deregulation reforms, which aim at shifting responsibilities from the public to the private sector. It allows functions that have been primarily the responsibility of government to be carried out by businesses, community groups, cooperatives, private voluntary associations and other non-government organizations.

Thus, decentralization refers to a series of reforms to transfer responsibilities and power to raise revenues and allocate expenditure from central to local authorities. Decentralization reforms have been influenced by the movement towards democratization and political pluralism, the rise of civil society and the spread of powerful local social and environmental movements (Montgomery *et al.*, 2003), but they have also been pushed by international agencies arguing for democratic values (Balliván and Spilimbergo, 2004). In this context, decentralization is often promoted as a set of reforms required to bring government closer to people, with the hope that more people could participate in politics and local decision-making, which in turn may serve to provide more appropriate infrastructure and better living conditions, enhance economic growth, and ultimately reduce poverty (Blair, 2000). Following the same logic, decentralization is promoted as a mechanism to make local authorities more responsive to the needs of local people, local governance more efficient and effective, regions to grow faster, and benefits to be better

distributed (see Ryan, 2004 for more details on the concepts of decentralization).

However, Azis (2008) argues that the net outcomes of decentralization are greatly determined by institutional factors, including local accountability, public participation and initial conditions of poverty and income distribution. In practice, as contexts for decentralization are very diverse, so are the effects of decentralization. Likewise, Shah (2007) and Azis (2008) describe further risks of decentralization. One risk related to local accountability is a lack of pressure for local politicians to adopt, implement and report on the progress of policies when much of the local population do not express their opinions due to a lack of proper information or low levels of education, amongst other reasons. There is also the risk that local authorities may create entry barriers to benefit local officials. A related risk is the spread of local capture[6], especially in regions with a high degree of income disparities, as the possibility of power-sharing between contesting parties is typically smaller at the local than at the national level. Another risk is associated with the general tendency to collusion among interest groups, which are more cohesive at the local than at the national level (and more difficult to break), causing the implementation of local projects to be less efficient. There is also a risk of weakening the power of regional authorities limiting regional coordination and exacerbating problems associated with regional externalities[7].

6 The term 'local capture' refers to the vulnerability of local authorities to be captured (run) by local elites.

7 Some problems associated with regional externalities are for example when pollution-generating activities in one region create external diseconomies in others; or when infrastructure development in one district compromise benefits to other districts.

In addition, responsibilities and power must be transferred in parallel, as local authorities may not be able to cope with the newly assigned responsibilities if power to raise revenue and allocate expenditure is not transferred accordingly; or uncontrolled expenditure may be generated if revenues are transferred but not responsibilities, as in the case of Nicaragua, where the National Assembly approved a law in 2003 that aggressively entailed fiscal decentralization without the transfer of expenditure responsibilities to local authorities[8] (Balliván and Spilimbergo, 2004).

Central to this study, there is a risk of capacity differentials between municipalities depending on their relative level of resources. This is a situation whereby few local authorities in the South seem to be equipped with the technical and managerial capacities they need to attract public participation in decision-making processes and make accountable decisions that simultaneously promote economic growth and assure that the poor can participate fully in the opportunities unleashed, and so contribute to that growth (Ravallion, 2004, p. 20). Moreover, some local authorities seem weak in comprehending and visualizing the phenomenon of poverty at inter- and intra-urban levels, which compromises their ability to simulate and monitor the impact on poverty reduction of the decisions they make. See also Montgomery *et al.*, (2003, p. 2) or Vos and Cabezas (2006, p. 14).

8 In 2003, the Nicaraguan National Assembly approved a law mandating 4% of tax revenue to be transferred to municipalities in 2004 and to increase this share by at least 0.5% every year thereafter, until it reaches at least 10% of tax revenues by 2010. However, the same law only transferred a small set of responsibilities to the municipalities (e.g. street lighting, recreation facilities and urban streets). According to Balliván and Spilimbergo (2004), these responsibilities on average account for only 30% of the fiscal transfer, while the rest (70%) is loosely defined for investment expenditures.

Hence, the rationalist promotion of a linear link between decentralization and democratic development is therefore challenged when showing that many factors determine the effects of decentralization. For example in Latin America, the links between decentralization and democratic

development are far from being linear, with many other factors such as economy, policy and even external pressures intervening in this relationship (see Chapter 3).

Urban governance

One of the effects of decentralization reforms is that the new challenges imposed by rapid urbanization now need to be addressed by local authorities. The way in which local authorities manage cities' affairs is by exercising their economic, political and administrative authority, which is known as urban local government. However, the mechanisms and strategies to manage cities' affairs are neither set nor static. Quite the opposite, they vary responding to context, so mechanisms and strategies used in cities of one country may be completely different to those used in cities of another country, or even the same city may change the mechanisms and strategies it uses to respond to different needs. For instance, one given local authority may opt for attracting community organizations to work together with its public institutions in addressing violence, apply laws and use its public institutions to respond to smuggling and tax evasion, and generate incentives to involve the private sector in constructing a new bus terminal. Hence, the nature of urban local government varies reflecting the ways in which the relationship between the state and civil society evolves.

The nature of local urban government has been changing in the last quarter of a century due to the transformation in the forms of social welfare delivery, the change in social expectations about policy agendas and modes of politics, and the impact of globalization on the relative importance of the nation state *vis-à-vis* sub-national governance practices and on the shifting dynamics of local economies. As a result a new practice has emerged, which is referred to as urban governance. Healey (2006) summarises this development as follows.

In the 1970s, structural analysts conceived of cities as sites for the organization of welfare delivery, which could take many forms: from bureaucratic procedures, to rational policy analysis, to interest-based politics and clientelism. Practices of urban government were then seen as structured by the tensions over the manner and distribution of welfare activity in cities and towns, the balance between social and economic objectives, and the tendency for some government insiders to pursue private interests under the cover of public authority.

In the 1980s, there was a shift in the forms of urban government from 'managerialism' to 'entrepreneurialism', as urban governing elites shifted attention to the promotion of projects and strategies to re-configure and re-position their local economies.

By the 1990s, regulation theorists became interested in the extent to which changes in urban government processes reflected the shift from Fordism to post-Fordism[9]. Others began to explore the extent to which urban processes were structured by markets, hierarchies or networks. This, together with the previous shift to an 'entrepreneurialism' form of

9 The term 'Fordism' was coined about 1916 to describe Henry Ford's methods in the automobile industry, characterized by a productive process that uses moving assembly line, standardization and the mass market. Fordism refers to the economic philosophy that widespread prosperity and high corporate profits can be achieved by high wages that allow the workers to purchase the outcomes they produce, such as automobiles. The period after Fordism has been termed post-Fordism, referring to the process whereby the economies of western countries had shifted away from manufacturing and industry and towards service and the knowledge economy. Meanwhile, industry has moved from the west to second- and third-world countries, where production is cheaper.

urban government led to increasingly call the private sector to participate in urban local government.

However, this certain coherence in urban government processes could not respond to informal practices and the experience of fragmentation. As established procedures were perceived as breaking down, systematic urban local government was giving way to project-driven practices breaking with the constrains of bureaucratically-delivered norms and standards. In practice, poverty reduction policies moved from group-targeting strategies and welfare benefits to citizen empowerment and area-based regeneration projects. As a result, new kinds of projects and new kinds of partnerships between actors appeared, at the same time as new urban arenas and practices were introduced attracting actors from a variety of different levels to government: from multinational level to local neighbourhood organizations. This emerging local urban government practice led to the development of the concept of urban governance.

The conceptual and practical development of urban governance is defined by the nature of governance, which Jenkins (2004, cited in Smith 2004, pp. 63-64) defines as "*the sphere of relations between government and other actors in civil society or non-governmental actors – including the private sector. It also refers to the processes of interaction between these in defining roles and relationships. The idea of governance is that government does not work in isolation, but in the above sphere and through these types of relations, and thus government has to be seen in the context.*" The concept of governance captures the movement towards democratization and political pluralism, the rise of civil society, and responds to the spread of powerful local social and environmental movements and the lack of capacity of the state to manage certain aspects normally addressed by the so called informal sector. In other words, the term governance describes all processes for the regulation and mobilization of social actions. These social actions are constituted by people interacting in relation to and with others, drawing on a shifting store of cultural resources through which meanings, values and knowledge are shaped (Healey, 2006). Hence, the term 'urban governance' is hereby used to cover both the formal government apparatus and the informal alliances and networks through which business groups, environmental groups, neighbourhood groups and other types of social organisations interlink with formal government to manage aspects of the collective affairs of life in the urban region (see Giddens 1984; Powell and DiMaggio, 1991; and Healey *et al.*, 2006 for more details on urban governance).

Urban governance in cities of the South generally tried to emulate those of economically developed countries, often following the practices of their former colonial powers, to the extent of their resources and the capacity to adjust to local dynamics. According to Montgomery *et al*., (2003, p. 390), amongst regions of the South, urban governance appears most advanced in Latin America with regard to finding new modalities to

manage and relate to growth, followed by Asia and then Africa. They report that "*The governance of urban centres is a central issue in a number of Latin American countries as they try to reconcile a resurgent local democratic culture with the need to manage complex local functions efficiently so as to safeguard the economic benefits accruing to their city-regions*" (p. 405).

Finally and in relation to the traditions of knowledge construction, the concept of urban government relates to the rationalist tradition as it represents a top-down practice that takes objective distance to the issues under its responsibility, while the concept of urban governance clearly can be seen as closer to the constructivist tradition of knowledge construction, as its practice is interactive and socially constructed in nature, which is why this research is inscribed in the urban governance theory.

2.3 Towards pro-poor planning practice

This section discusses the evolution and responsibilities of urban planning, presents the integrated urban planning approach and explains how evidence-based poverty maps may help to visualize the geographical distribution of poverty and promote dialogue amongst different stakeholders of pro-poor planning practices, and establishes a position in relation to knowledge construction in urban planning.

Development of planning practices

Land is a valuable resource for society. Specifically, urbanized land is a scarce resource and even when costs of converting rural to urban land are high, its benefits for society are significantly higher and linked among others to health, education, and economic, social and cultural advantages.

Urban planning – also known as city or town planning – comprises those aspects of local urban government that deal with land-based affairs and the ways in which land is used, managed and controlled. In that sense, the focus of urban planning lies in the management of land as a key resource for society (Kaiser, Godschalk and Chapin 1995). This definition includes three aspects that need to be discussed: one is the ways in which countries understand the relationship between land and society, a second one has to do with the functional responsibility of urban planning, and a third has to do with its social responsibility.

In relation to the first aspect, the approach of societies (e.g. countries) to relationships between land and society can be seen as ranging somewhere between two opposite poles: one in which land is understood as a social good that should be available for all, and another in which land is perceived as a commodity for private interests. Hence, land-based private and public investment projects fluctuate between following the terms outlined in zoning systems (driven by the specifications of land rights) and planning strategies (project-driven), respectively. Therefore,

at one extreme we see societies in which urban planning is more 'planled' and linked to welfare state policies, and at the other extreme we see societies in which urban planning is more 'project-driven' and linked to neo-liberal state policies. Yet, the location of a given society in relation to these two extremes varies along time, as it adopts new values and principles.

In relation to its functional responsibilities, urban planning seeks to coordinate and articulate different sectors and agencies in the control, management, and implementation of land-based actions. Regarding the functional responsibility of urban planning, Taylor (1999) argues that as the nature of urban government has changed, the practice of urban planning has shifted from what he describes as a 'creative design phase' to a 'scientific phase', and then to a 'facilitator phase'. These shifts respond to: *(i)* economic restructuring of many urban regions towards new forms of production and an expansion and diversification of the service sector; *(ii)* growing political influence of lobby groups (e.g. poverty reduction, environmental movement), which have focused significant political attention on the impacts the projects may have; *(iii)* trans-national pressures imposed by donor countries, bi-lateral agencies, etc.; and *(iv)* a combination of fiscal stress in the public sector and the introduction of neo-liberal political philosophy, which have led to new relationships between public and private sectors in the land and property development sectors (Healey *et al.*, 2006). These shifts are explained below based on Taylor (1999), Carley, Jenkins and Smith (2001), and Healey *et al*., (2006).

In the post-war context in which independent nations emerged, and later during the cold war and the birth of UNDP, bilateral organizations, the Marshall Plan and the US Alliance for Progress, urban planning was understood as a discipline in which aesthetic considerations where central, and was viewed almost as an art in which utilitarian or functional requirements had to be accommodated applying an instrumental rationality managed by few experts – normally architects and some civil engineers – working for what was perceived as a unitary public interest. Under this planning phase instruments such as master plans (or blueprints) and land use zoning were developed, and new towns and 'bulldozer' strategies applied (e.g. Brasilia, Chandigarh), all of which were mainly concerned with urban form.

Later, in the 1960s and 1970s, in a context of increasing concern about the environment and basic human needs, events such as the 1st UN Habitat conference, the boom of the systems theory, a strong urbanization process taking place in Latin America and parastatal agencies being preferred for implementing public projects, design-based planning shifted to strategic and longer-term planning to study a series of systems and rational processes. Hence, urban planning was seen to need rigorous analytical scientific methods to examine urban social life and economic activities. In this phase, two distinctive processes emerged (though linked in some extent in terms of both being critical of the existing approach to planning). One was the displacement of architects and engineers by

other disciplines who were seen as having a better understanding of cities as economic, social and environmental systems – who then got involved in a more flexible systems based form of planning (in the UK plan, this was reflected in the separation into higher level structure plans and lower level local plans). The other process was the realization of the impact of planning on people and how 'experts' were linked to top-down (local) government decisions, which gave rise to the figure of the advocacy planner who would work for the interest of specific communities. Under this phase of urban planning, structure plans and action plans were introduced, titling programmes, aided self-help and site and service projects received robust international support and funding, and on the other hand standardized public housing projects where built in Latin America (e.g. Caracas and Rio de Janeiro).

Finally from the 1980s through the 2000s, in the times of debt crises, structural adjustment, the expansion of the role of the private sector, globalization, deregulation, the technological boom, the decline of aid flow, the strengthening of CBOs and NGOs, and the Millennium Development Goals (MDG), urban planning became to be understood as a mechanism to facilitate processes involving different actors (e.g. private sector, civil society organisations). Urban planning may be currently seen as a social process through which a range of people in diverse institutions, relations and positions come together to design plan-making processes and develop contents and strategies for the management of spatial change. This process generates not only formal outputs in terms of policy and project proposals, but a decision framework that may influence relevant parties in their future investment and regulatory activities. This social process is shaped by both the dynamics of urban region change and the formal law and procedure of existing spatial and land-use planning systems. Under this phase of planning, UNCHS set up housing and urban indicators and USAID established urban and land policy guidelines (see Healey *et al*., 2006 to expand on this approach).

In this evolution of planning practice in relation to its functional responsibilities, a shift in the roles of the state, the market and civil society is clear. This shift has various stands, the key ones being summarised in Carley *et al*., (2001). In the 'creative design phase' the state took a leading role, establishing what the future of urban planning and new towns was to be in physical terms. When planning practice shifted towards policy frameworks with public participation, the latter provided an opportunity for interest groups to have a say. These, in theory, included all sectors of society, but it was powerful interested groups within the market that had the greatest lobbying power in decision-making. Thus the process during what Taylor (1999) called the 'scientific phase' was still led by the state and heavily influenced by the market. The 'facilitator phase', however, proposes a new way of combining views from all sectors (state, market and civil society) in an ongoing consensus-seeking dialogue.

During the shifts described above there have been changes in relation to how each urban planning phase links into different traditions of knowledge construction. The first two urban planning phases (creative design and scientific) clearly fall within the rationalist tradition as they take distance from, and promote the use of, strict quantitative methods to study the issues they are responsible for. Conversely, the 'facilitator phase' falls within the relativist tradition as it is interactive and socially constructed in nature. This last phase of urban planning includes the concept of urban governance. This research locates itself within this latter phase in planning and relates to the concept of governance. Table 2 summarizes the main characteristics of the three phases of urban planning and their relationship with traditions of knowledge construction.

TABLE 2
Phases of urban planning

Phases of urban planning	*Planning techniques*	*Division of power*	*Assumed nature of relations*	*Knowledge construction tradition*
Creative design	Master plans, zoning	Government	Common consensus exists	Rationalism
Scientific	Structure plans, action plans, special development areas	Government with private sector	Common consensus has to be created	Rationalism
Facilitator	Above techniques with participatory planning	Government, private sector and civil society	Conflict needs negotiation	Relativism

Developed based on Carley, Jenkins and Smith (2001), p.25

As mentioned in the introduction to this sub-section, in addition to the responsibility of looking for the good functioning of towns and cities, the development of which was presented above, urban planning is also charged with a social responsibility, which will be explained below.

Regarding the social responsibility of urban planning, Douglass and Friedmann (1998) define planning as "*a tool to solve conflicts between political functioning of society, its economic functioning and its functioning between men and women, rich and poor, old and young.*" This definition looks at urban planning as a way to help meet people's needs in all kinds of ways. In that regard, planning practice is about collaboration and reciprocity, especially on behalf of the poor. In other words, as social policies constitute the basic redistribution mechanism that governments have, planning practices are responsible for the coordination of those programmes and projects that deal with land-based issues.

Recent efforts to reduce poverty and inequality by means of urban planning practices have focused on four key areas. The first area is that of building knowledge on the causes and effects of poverty and inequality, as a result of which there has been a substantial increase in research and literature about the factors influencing poverty and inequality, and on the relationship between economic growth and poverty and inequality reduction. Some conceptual resources on poverty and inequality issues are those provided by international donor agencies, independent centres, and universities[10].

The second area is related to strengthening urban poverty analysis using a variety of methodologies. For instance, poverty evaluations are used to determine the current or past situation of a country or a region in

10 Some examples of donor agencies include PovertyNets and the poverty and growth blog, both from the World Bank; one example of independent centres is the Poverty Studies website; and of universities are the Research Centre for Analysis of Social Exclusion at the London School of Economics, the Center for Development Studies at Harvard University, the Townsend Centre for International Poverty Research at Bristol University, Institute for Research on Poverty at the University of Wisconsin-Madison

terms of poverty (World Bank, 2004), which is why they are referred to as ex-post. In addition, impact poverty assessments are used to identify the future and likely consequences of a current or proposed action (IAIA, 2007), and they are referred to as ex-ante. Finally, poverty studies simulate or monitor the implementation of one sectoral policy, or evaluate one single dimension of poverty at city level[11]. However, neither poverty nor impact assessments focus on the lack of economic growth, both over-emphasize income poverty, and both ignore the historical perspective, political context and international dimensions such as external debt and commodity prices trends (Hanmer, Pyatt and White, 1999). Critiques to assessments in developing countries focus on the lack of reliable urban poverty data (Devas, 2002; and Székely and Hilgert, 2007), and the inability to define and target deprived urban areas with a clearly bounded territory, in which to implement pro-poor land-based actions as part of planning practice. Poverty studies, on the other hand, are criticized on the basis that their findings are seldom articulated with those of other studies in a strategic set of actions required for combating the multi-dimensional character of poverty[12].

The third area is about strengthening evidence-based decision-making processes. This key area has seen a gradual improvement after persistent efforts have been made to build up institutions, improve procedures and compile relevant and timely evidence. For instance, in 1997 the Inter-American Development Bank (IADB) in conjunction with the World Bank and the Economic Commission for Latin America and the Caribbean implemented the Program for the Improvement of Surveys and the Measurement of Living Conditions in Latin America and the Caribbean, in 2005, Gapminder Ltd. launched a free software that visualises development statistics for all countries, in 2006 IADB launched EQXIS, which is an informational tool that presents disaggregated data on social indicators for monitoring development goals[13].

The fourth area is the implementation of strategies to reduce poverty and inequality (also know as pro-poor with equity strategies). Currently, poverty and inequality reduction strategies are at the top of the national and international development agenda (Vos and Cabezas, 2006). Some strategies designed in this key area are the inclusion of safety nets in IMF Programmes, debt alleviation in the context of the Heavily Indebted Poor Countries Initiative, new financing modalities such as the Poverty Reduction Growth Facility and the Poverty Reduction Strategy Paper framework, and the Millennium Development Goals (MDG). However, these strategies still need to be adopted and implemented locally, for example, by harmonizing them with the local development plans to be implemented trough local policies, programmes and projects.

The role of poverty maps in an integrated urban planning approach

Understanding that urban planning has both a functional and a social responsibility raises the question as to how to address the coordination

11 Assessment and monitoring are different, but interrelated functions of governance, as both contribute to knowledge as a basis for accountability and enhanced performance. Monitoring refers to the continuous collection of data in order to be able to evaluate, it is an internal, repetitive, operations and management function. Assessments are often external, periodic/snapshot, in greater depth. They ask different questions. Monitoring is concerned with the outcomes of policies, programmes and projects, while assessments are concerned with their impacts.

12 For example, since 2002, the World Bank, together with key partners, has been organizing a series of Urban Research Symposiums that bring together the forefront of urban poverty studies. See proceedings in www.worldbank.org/urban/symposium2002. These symposiums contribute to build understanding of the phenomenon of urban poverty, by means of discussing invaluable poverty studies of single urban dimensions of poverty (e.g. health and nutrition, safety and security, land use and basic services), and sometimes assessing its geographical representation. Yet the findings of these various studies are seldom articulated in pro-poor multisectoral action plans to be implemented at city level.

13 Other resources are the World Development Indicators published by the World Bank, the Human Development Report, the United Nations Common Database, and other resources of the United Nations.

FIGURE 2
Representation of the adoption of evidence-based poverty maps in the 'facilitator phase' for the combination and analysis of actors' views.

Drawings by María Teresa Sánchez

of the many different sectoral actions bearing in mind the social character of urban planning.

As explained earlier in this section, urban planning has been established to coordinate land-based actions of different sectors such as land management, extension of road, electricity, water and sanitation networks, as well as the provision of recreational spaces and social services such as social housing, schools and health centres. In relation to its social responsibility, urban planning has been seen as helping to redistribute resources and provide for minorities, poorer and less favoured citizens and seek for their active integration in society. These two sets of responsibilities of urban planning are combined in what here is referred to as 'integrated urban planning ', which is an 'ideal' approach that in practice does not often happen in cities of the South. The term 'integrated urban planning' is used as by Rossiter (2000) to mean two different and complementary aspects: a multi-sectoral approach that should be coordinated by planning practice and mutually supported by different stakeholders so that results in one sector are reinforced by achievements in another; and an overall social, economic and spatial integration of towns and cities, whereby the poorer and marginalized sections of the city's population are formally integrated into the rest of the city.

On the other hand, this section also explained that the 'facilitator phase' of urban planning implies a dialogue amongst different stakeholders for the coordination of multi-sectoral actions. However, the promotion of a dialogue that bridges communication barriers can itself become a challenge, in part because participants in the dialogue may come from various practices and professions, have different perspectives and approaches to the issues under discussion and use different terms, methods and processes to address these.

In this regard, the use of evidence-based poverty maps in this dialogue may be fruitful for poverty-related issues (see Fig. 2). However, critiques to statistical indicators must be acknowledged. Statistical indicators and their representations are not 'neutral'. On the contrary, Laurini (2001) explains that the use of statistical indicators and maps of poverty and inequality carry a certain amount of bias for those who develop them and for their users. On the one hand, developers of indicators apply their judgments and intentions for choosing one indicator over another or when selecting a determined set of variables for the construction of a given indicator, leaving other variables aside. They may also apply certain weights to the variables which a given indicator is composed of, as opposed to an un-weighted variable indicator. These decisions clearly have implications when the selected indicator is implemented and used. On the other hand, users have different capacities to understand and manage different levels of indicators or poverty maps with complex representations. For example, the composition of the Gini coefficient must be clearly understood by the user in order to be able to interpret and apply its outcomes.

However, the recognition of planning as a social process does not exclude the need to rely on statistical evidence and apply it to attract and promote dialogue, especially when it comes to issues related to poverty reduction. Under this alternative view the use of evidence-based poverty maps in planning plays at least six important roles: *(i)* they make it easy to identify geographical factors related to poverty, which helps urban planners to target scarce resources to upgrade deprived urban areas; *(ii)* they help to illustrate information derived from a variety of sources, most frequently from primary data or from national census data[14], household surveys or administrative agencies (e.g. tax authorities, education, health or police centres, etc); *(iii)* they can free analyses from the restrictions of complex numeric format databases to assist in the targeting of resources and implementation of development projects[15]; *(iv)* they allow easy comparison of indicators of poverty or wellbeing with planning-related indicators, such as access to infrastructure or services, availability and condition of natural resources, and distribution of transport and communications facilities; *(v)* they are helpful to conduct impact assessments of geographical targeting policies and programmes, such as the impact on poverty reduction of the implementation of a social housing policy; and above all, *(vi)* they make the presentation and interpretation of data on poverty more easily understandable to a non-specialist audience, which facilitates the discussion among different actors involved in urban planning practice.

As a result, this research promotes the application of an integrated urban planning approach that uses evidence-based poverty maps, not only as a method to visualize the geographical distribution of poverty, but also as a tool to promote dialogue amongst different stakeholders of pro-poor urban planning practices.

Finally, and having discussed different traditions of knowledge construction, the different phases and responsibilities of urban planning, and the role of poverty maps in an integrated urban planning approach, a question arises as to where this research stands in relation to the ways in which knowledge in urban planning is constructed.

Knowledge construction in urban planning: the research approach

This research is grounded in two complementary traditions of knowledge construction in urban planning (also known as planning theory), in the sense that planning theory is hereby seen as socially constructed (constructivism), and as embedded in an cyclical-incremental tendency in which given aspects of planning theory are relative to, and depend on, the development of the planning practice itself (relativism). The adoption of these two complementary traditions of knowledge construction is the result of recognizing the nature of urban planning as being primarily practice-oriented (Healey *et al.*, 2006).

This practice-oriented nature of urban planning should be first explained, before presenting the reasons for drawing on two knowledge

14 INEC (2004) defines census tracts as those geographical units, part of districts, which include a number of dwellings that can be completely registered by one census surveyor.

15 For instance, administrative data can be converted from numeric format to land-based formats – in the form of maps – which are often more meaningful in an urban planning context.

construction traditions. As mentioned at the beginning of this section, urban planning comprises those functions of urban local government that address land as a key resource for society. The practice of urban planning deals with managing social, technical and environmental aspects of land-based actions relative to the context in which it is embedded. It was also argued that it may vary and evolve as its context changes. For example, as with urban government, the practice of urban planning in a contemporary large European capital may be very different to that in a medium-sized city in the South and its actual practice may be different to that in place 20 years ago; among other reasons because priorities, tools and resources are different. This is why the nature of urban planning is hereby recognized as being primarily practice-oriented.

The reason for adopting the constructivist tradition lies in the way planning theory is constructed. Planning theorists attempt to construct models (that should help to make sense) of how urban planning woks based on experiences of urban planning practice (Taylor, 1999; and Campbell and Fainstein, 2007). These constructions of urban planning, as generally happens in social sciences, are socially constructed. This means that urban planning theory is built through multiple social constructs that articulate the responses of different urban planning practices to specific social, political, technological and environmental contexts in a given framework of time.

On the other hand, the adoption of a relativist tradition is explained as planning theory is hereby understood to follow a cyclical-incremental tendency, in which experiences of planning practice are valuably used to reflect, conceptualize, experiment and suggest modifications to specific aspects of planning theory, which in turns nourish the same planning practice. This modified planning practice is in turn continuously and collectively built and amended as new experiences, concepts and modifications are assimilated and accommodate. The methodology of this research also follows a cyclical-incremental tendency to knowledge construction.

2.4 Conclusions

This section summarizes why the use of evidence-based poverty maps may be of importance to promote an integrated approach in pro-poor planning practice, the conceptualization of which falls within a combined constructivist-relativist tradition of knowledge construction.

Section 2.3 showed that for an outsider observer, indicators of poverty and inequality – and hence poverty and inequality maps – appear to be neutral and favoured by a rationalist tradition of knowledge construction, yet they turn to the relativist tradition when contextualized and used as a tool to promote dialogue amongst different actors in urban planning.

In addition, this chapter has raised arguments that position the research under urban governance theory, in which urban planning is seen as a mechanism to facilitate dialogue between different stakeholders,

aiming at becoming more effective in the delivery of land-based actions, and ultimately responding to citizen needs. However, the recognition of urban planning as a social process does not exclude the need to rely on statistical evidence, especially when it comes to poverty-related issues. From that position, indicators and maps of poverty and inequality are used in this research as catalysts to underpin the discussion among different stakeholders of urban planning to coordinate land-based actions in an integrated way. This position of using indicators and maps of poverty and inequality is seen in this research as being compatible with a combined constructivist-relativist tradition, as knowledge construction in urban planning is seen as interactive and context dependent – as are the concepts and measurements of poverty and inequality.

To conclude, the use of evidence-based poverty maps is hereby seen as of importance to promote an integrated approach in pro-poor planning practice, not only as a method to visualize the geographical distribution of poverty, but also as a tool to promote dialogue between different stakeholders, hence falling within the constructivist and relativists traditions of knowledge construction.

3 Selection of the case studies

This chapter explains the choice of Latin America as the macro region the research focuses on, as well as the criteria for the selection of the specific case studies of Las Cruces in Bogotá, Colombia, and Liberia in Costa Rica, followed by contextual information on both case studies.

In an effort to put the relevance of the research into perspective, and based on the information collected for the selection of the case studies, the chapter also explores the links between decentralization and the development of democracy in Latin America, as this was seen is a premise of decentralization (see Decentralization in Section 2.2).

3.1 The context of the selection

The author chose to study cities in Latin America due to himself being a Colombian architect with interest and experience in urban planning in countries of the region. Additional reasons are that Latin America is the region of the world with the most palpable inequalities and decades of persistent poverty, it is a highly urbanized region and yet urbanization is still taking place in some countries at significant rates, and decentralization reforms have been implemented in its countries, in some cases for almost 25 years. These are key circumstances of relevance to this research as local authorities now have the responsibility and power to directly address poverty and inequality in the region's many and highly populated towns and cities.

Poverty and inequality in Latin America

In the last two decades, the total number of poor has increased in Latin America (Klinsberg, 2000)[16]. This increase has reached a point in which, for example, more than half of Central Americans are considered to be poor (20 million population), two out of five lack access to sanitation and clean water, more than a quarter do not have access to health services, and 15% of the population is illiterate (PNUD, 2003). More importantly, poverty is a longstanding phenomenon in the region, which has led to a 'core of poverty' that corresponds to consecutive generations that cannot get out of poverty. Poverty is also affecting cities in Latin America significantly as 50% of the poor reside in cities (Fagan, 2004).

In addition, Latin America has a long history of severe economic, social and political inequalities. These severe inequalities have generated, reinforced and perpetuated diverse dimensions of poverty that constitute obstacles for further development (World Bank, 2006a). Central to this research, urban residential segregation is now an established phenomenon in Latin American cities. It is caused by, among other reasons, the combined effect of severe inequalities, technically unjustified urban

16 Most of the region's poor live in cities, despite income poverty rates being much lower in towns and cities than in rural areas. In addition, the development of poverty rates has been different in each country. For example, in Costa Rica, poverty rates have not declined over the last 10 years despite consistent economic growth over the period, and in Colombia, despite substantial long-term progress, they have shown a recent setback fostering an extreme urban poverty (web.worldbank.org).

norms, processes of social differentiation, and the action of upper classes to replicate cultural patterns from developed countries (Sabatini, 2003).

To a great extent, longstanding poverty and severe inequalities have nourished growing urban unemployment, a long history of social unrest, violence and institutional instability (de Janvry and Sadoulet, 1999), to a point in which today Latin America stands out as the most violent region of the world with a yearly homicide rate of about 20 persons per 100,000 inhabitants (Ayres, 1998). Table 3 compares global and regional indicators of poverty and inequality with those in Colombia and Costa Rica (see reasons for the selection of these two countries in Section 3.2).

In relation to policy and programmes, the World Bank (2006a) recommends Latin American countries to fight poverty more aggressively if they want to grow more and actively compete in a global economy, by means of improving equity in their public expenditure programmes targeting those who really need them rather than spending resources on subsidies for programmes for the affluent. Particularly, they suggest improving efficiency and effectiveness of social policies and increasing tax collection. In relation to urban planning, the World Bank recommends tackling urban poverty, upgrading urban areas and improving infrastructure, expanding access to housing, making cities healthier, running cities better and preventing urban crime and violence. Sabatini (2003) adds the need to improve population mobility and control urban development processes and land uses.

TABLE 3
Indicators of poverty and inequality

	GDP per capita, PPP (current international $)	*GNI per capita 2006 (US$)*	*International poverty line (%)*			*Income share held by lowest 10%*	*Income share held by lowest 20%*	*Gini Index income (2003)*
			Year	*Population below US$ 1 a day*	*Population below US$ 2 a day*			
World	9,255	47,448	2001	21.1	52.9	*nd.*	*nd.*	*nd.*
HIE *	34,814	36,608	*nd.*	*nd.*	*nd.*	*nd.*	*nd.*	*nd.*
LAC **	8,967	4,785	2001	9.5	24.5	*nd.*	*nd.*	*nd.*
Colombia	6,378	3,120	1999	8.2	22.6	0.8	2.9	58.6
Costa Rica	9,564	4,980	2000	2.0	9.5	1.4	4.1	49.8

GDP per capita is the gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the US$ has in the United States.

GNI per capita (formerly GNP per capita) is the gross national income, converted to U.S. dollars using the World Bank Atlas method, divided by the midyear population.

Gini Index measures the extent to which the distribution of income (or consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution.

* HIE: High-income economies.

** LAC: Latin America and the Caribbean.

Developed based on www.econ.worldbank.org [accessed: July 2008]

Urbanization in Latin America

Latin America is one of the most urbanized regions in the world, as already 80% of its population live in its towns and cities. In addition and as from 1980s, South America reached the same level of urbanization of the more developed regions – but not Central America. Figure 3 also shows a

delay in the urbanization process of Central America in relation to that in South America.

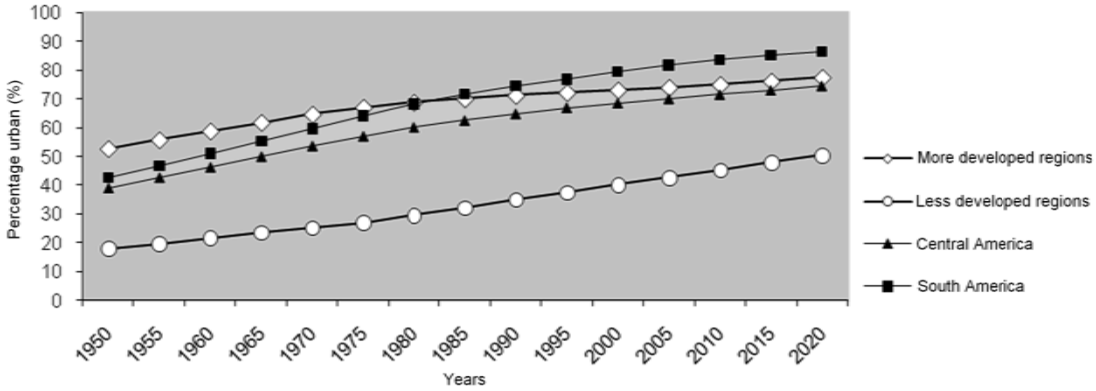


FIGURE 3
Proportion of urban population per region (1950-2020)

Based on www.esa.un.or/ [accessed: July 2008]

Urbanization in Latin America is connected to the cities' political, administrative and commercial functions (Cardoso, Pérez and Pérez, 1979), and since the 2000s, to out-migration from rural areas and internal violence factors (Cerrutti and Bertoncello, 2003). The most urbanized countries are those that have the highest Human Development Index and those that experienced an early demographic transition, with Costa Rica being the exception. Conversely, the less urbanized countries are those that are at the initial stages of the transition, as is the case for the Central American countries.

Some effects of urbanization in Latin America include: *(i)* densification and peripheral expansion of towns and cities; *(ii)* most immigrants settling in the periphery and other economically disadvantaged urban areas; *(iii)* over time, old peripheries gaining centrality and external peripheries becoming denser and their infrastructure improving; *(iv)* secondary centres becoming consolidated in this process; *(v)* proliferation of high-income gated communities; *(vi)* economically disadvantaged population groups moving into deteriorated areas of urban centres; *(vii)* other central areas regaining value by a process of gentrification; and *(viii)* the creation of megalopolises or extended metropolitan areas. Table 4 compares urbanization processes in Colombia and Costa Rica for the last 60 years and a prognosis until year 2020. This table shows a delay in the urbanization process of Costa Rica in relation to Colombia, the latter being a typical example of the period in which South America urbanized.

As a result, urban systems in the region are characterized by their gigantic cities (e.g. Mexico, São Palo, Rio de Janeiro, Buenos Aires) and by their high economic primacy[17]. The existence of such large cities has often been seen as an indicator of an unstructured and unbalanced urban system that prevents the development of smaller cities. Yet many of the countries with the largest metropolises also have a structured system of medium-sized cities that have been growing systematically[18]. Despite

17 While agriculture accounts for a small share of national growth in Latin America (7% from 1993 to 2005), in some countries, a single city generates a large percentage of the national Gross Domestic Product (GDP), for example São Paulo produces nearly 36% in Brazil, and Lima 43% in Peru.

18 During the 1980s and 1990s, the relative growth of medium-size cities (50,000 to 500,000 inhabitants) was higher than that of the major cities (IADB. 2007).

medium-sized cities being very heterogeneous in terms of their urbanization process, three common characteristics emerge: *(i)* this segment of cities is the most dynamic in demographic terms; *(ii)* their economic participation in the national economy has been growing over time; and *(iii)* they have shown a great dynamism in concentrating several economic, social and recreational functions, despite trade liberalization and economic restructuring. Therefore, municipalities serving large and medium-sized cities are seen by this author as a critical component of local government inasmuch as their capacity to address poverty and inequality affects large populations.

TABLE 4
Rates of urbanization in the studied countries

		1950	*1955*	*1960*	*1965*	*1970*	*1975*	*1980*	*1985*	*1990*	*1995*	*2000*	*2005*	*2010*	*2020*
Colombia	Urban population (%)	32.7	38.7	45.0	51.0	54.8	58.5	62.1	65.6	68.3	70.5	72.1	73.6	75.1	76.6
	Annual rate of change of percentage urban (%)		3.36	3.04	2.50	1.44	1.31	1.19	1.08	0.81	0.65	0.44	0.41	0.40	0.38
Costa Rica	Urban population (%)	33.5	33.9	34.3	35.8	38.8	41.3	43.1	45.6	50.7	55.8	59.0	61.7	64.3	66.9
	Annual rate of change of percentage urban (%)		0.23	0.23	0.88	1.61	1.25	0.83	1.11	2.13	1.92	1.12	0.89	0.83	0.71

Annual rate of change of percentage urban (%): Average exponential rate of growth of the population of urban agglomerations over a given period. It is calculated as (PUAt/PUA0)/n where n is the length of the period and PUA is the population of urban agglomerations. It is expressed as a percentage.

Developed based on http:/esa.un.org/unup/p2k0data.asp [accessed: June 2008]

Decentralization in Latin America

In the 1980s, most Latin American countries shifted towards democratic forms of government that brought with them institutional reforms. One of the forms these took was decentralization.

Tulchin and Selee (2004) explain how most countries in Latin America have a dual legacy of centralized political institutions inherited from Spanish Colonial rule and strong regional identities and interests boosted by the weakness of the post-colonial state. However, throughout the twentieth century the central state in almost all Latin America succeeded in concentrating a significant degree of power, authority and resources, which led to the centralization of most influences of regional elites and helped to set the bases for some degree of state-led development in the region. In most cases, this concentration of power led to the creation of authoritarian and exclusionary regimes, which limited or silenced the voice of citizens. In the 1980s and 1990s, many of these countries underwent transitions to free elections as a consequence of both economic and political conditions. In this process, decentralization became a favourite strategy of democratic reformers who wanted to ensure that the central state would not have the overbearing power that it had possessed in previous decades. Hence, decentralization took the form of transfer of responsibilities and power to local authorities, in which the degree of decentralization depended on their political situation and the

pressure applied by local authorities and civil society, with Argentina and Colombia being examples of the most advanced and Costa Rica and Chile of the most incipient (Ministère des Affaires Étrangères, nd).

In most cases, the transfer of financial resources has turned out to be insufficient. Thus, most municipalities are poor and depend mainly on transfers from central government, and are generally authorized to raise loans on various conditions as their financial possibilities remain limited. Additional outcomes of decentralization in the region include the persistence of inter-regional inequalities, the poor true participation of civil society (Ministère des Affaires Étrangères, nd), and the lack of any improvement in the management of public money[19]. Lastly, the deepening of democracy has not been the primary motor of decentralization; rather, it has been a top-down process initiated in response to prolonged systemic economic or political crisis and accompanied by strong external pressures[20]. As a result, these financial, economic, managerial and conceptual constrains have limited local authorities' institutional and political autonomy, except for the major cities, of which the best managed have had the possibility to carry out policies that meet their communities' needs (e.g. Belo Horizonte, Bogotá, Curitiba, Montevideo and Rosario) (Ryan, 2004).

On the other hand, decentralization reforms have opened up institutional forums for participation in Latin America. Innovative participation experiments have been set up by elected representatives, making Latin America a leading region for participatory democracy (e.g. the anti-bribery policies in Merón, participatory decentralization in Montevideo, participatory budgeting in Porto Alegre, and participatory investment projects in Rosario)[21]. However, CIPPEC, 2005 argues that public participation entails difficulties for the planning and implementation of policies, programmes and projects such as delays in time, possible higher costs, conflicts of interests and difficulties into including certain social sectors (e.g. the young, the poor and minorities). In an effort by local authorities to avoid these difficulties and retain power, participation processes in, for example, privatization or strategic planning in Latin America, have been manipulated generating distrust in governments (Boix, 2005) and calls for complementary ways to capture people's voice, which is a central issue in this study.

19 Mainly because of the lack of continuity of middle management officials, capacity-building being mostly given to agents on short contracts, and a weak system of 'career civil service' (Ryan, 2004).

20 Ryan, 2004 argues that decentralization in Latin America has been a process that is centrally-driven and designed in consultation with actors who are not stakeholders in the outcomes (e.g. foreign NGOs, donor states, international lending agencies), in which the presumed beneficiaries (constituents) and operators (local officials) tend to play marginal roles.

21 These practices are inspired by forms of organising power originating in indigenous cultures and are now becoming points of reference for European local authorities, where the crisis of representation is forcing politicians to re-examine their relations with citizens. (CIPPEC, 2005).

Urban governance in Latin America

In 2007, there were more than 15,000 local authorities in Latin America and the Caribbean (IADB, 2007). As a result, urban planning practices vary greatly in an effort to respond to local needs and resources and to internal and external pressures. Yet some common characteristics include: *(i)* an insufficient response to urbanization processes, leading to the proliferation of informal settlements and the rapid deterioration of consolidated urban areas; *(ii)* the adoption of planning practices from former colonial powers and contemporary economic powers; *(iii)* sig-

nificant differences in resources and capacities for planning between large and peripheral local authorities; *(iv)* and urban planning practices which are highly politicized, and in which changes in government (central or local) normally introduce changes to planning practice.

Table 5 compares indicators of governance in Colombia and Costa Rica with regional and global indicators. Costa Rica shows higher levels of governance than the average in Latin America; though they have been decreasing in the last ten years. Colombia, on the other hand, shows levels of governance that are below the average of Latin American indicators, nevertheless, the tendency of most of these indicators has been an increase since 1998.

TABLE 5
Indicators of governance

% of urban population with access to improved sanitation facilities (urban) 2004	*% of urban population with access to improved water sources (urban) 2004*	*Tendency of governance indicator comparing 1998, 2003 and 2007 (Governance score: -2.5 - +2.5)*			
		Voice and accountability	*Political stability*	*Government effectiveness*	*Control of corruption*
World 79	94	nd.	nd.	nd.	nd.
HIE * 100	100	Stable *(+1.31 in 2007)*	Decreasing *(+0.96 in 2007)*	Stable *(+1.51 in 2007)*	Stable *(+1.72 in 2007)*
LAC ** 86	96	Stable *(+0.12 in 2007)*	Stable *(-0.31 in 2007)*	Decreasing *(-0.25 in 2007)*	Stable *(-0.32 in 2007)*
Colombia 96	99	Small increase *(-0.28 in 2007)*	Stable *(-1.65 in 2007)*	Increasing *(+0.03 in 2007)*	Increasing *(-0.28 in 2007)*
Costa Rica 89	100	Decreasing *(+0.88 in 2007)*	Small increase *(+0.84 in 2007)*	Decreasing *(+0.39 in 2007)*	Decreasing *(+0.39 in 2007)*

* HIE: High-income economies.
** LAC: Latin America and the Caribbean.

Sources:
www.econ.worldbank.org and
www.info.worldbank.org/governance/wgi/ [accessed: July 2008]

3.2 Selection of the two case studies

The previous section has presented a highly urbanized region with long-standing poverty and severe inequalities, in which decentralization reforms are not having the expected impact as local authorities are not effectively managing public resources and attracting participation of civil society, to a point that the causal link between decentralization and the development of democratic governance appears tenuous and its impact on reducing poverty and inequality seems weak. In this context, the question that arises is whether local planning practices have the capacity to comprehend and visualize the effects of land-based actions on poverty reduction in order for urban planners to be better equipped to inform decision-makers. This question was addressed by testing, in two Latin American cities, a proposed statistical information system – the concepts on which this is based being discussed in Paper I.

The selection of the cities sought to test the proposed methodology in contexts with the following four pre-conditions: *(i)* availability of statistical data at neighbourhood level (referred to as 'census-tract data'); *(ii)* healthy economies, which could provide revenues to be used in land-based actions; *(iii)* cities in which social housing programmes have been implemented significantly, due to the important links between social

housing and urban planning, which go beyond the construction of housing units and include the coordination of land-based actions related to other sectors such as education, health, environment, etc.; and *(iv)* a pair of cities that are opposites, as to examine the phenomena in contrasting municipalities, which may allow to raise conclusions that carry a certain degree of generalization. The criteria to define the pair of opposites – and hence to select the two cities – include: an already highly urbanized city and one under a fast process of urbanization; a city with a decentralized government that has been in place for more than 20 years and another in a context where government has only recently been decentralized; and a neighbourhood in a large city and in a medium-sized city.

Having been trained and having worked in Bogotá, the selection of a poor and centrally located neighbourhood in this city was a natural decision. Bogotá was also selected due to fulfilling the pre-conditions, and because its urban planning practice has recently received international recognition as innovative in its approach to issues of urban poverty and exclusion. For instance Gilbert (2006) reports favourably on the advances in the urban governance of Bogotá, and the tenth edition of the '*Biennale de Venezia'* awarded Bogotá the Golden Lion Award for cities[22].

The selection of the second case study required a pre-selection process. With Colombia being an example of a country which urbanized and decentralized early (see Section 3.3), the pre-selection turned to Central America, where the highest rates of urban growth are expected to occur due to this currently being the less urbanized sub-region in Latin America (see Urbanization in Latin America in Section 3.1), and where countries started to implement decentralization reforms in the late 1990s and 2000s.

Due to existing links between Housing Development & Management, HDM (the university department in which the research was carried out) and counterparts in Central America, the countries in which the author has worked – as an HDM staff member – were pre-selected. These countries are Costa Rica, Honduras and Nicaragua. Each of the three countries was visited and a short list of cities was prepared with the objective of searching for the opposite to Bogotá (according to the criteria explained above). Looking for a medium-sized city, the selection turned to cities that are not located within the area of influence of major cities and non-dormitory cities, seeking examples with a higher degree of administrative and economic autonomy.

Three cities were pre-selected. The city of Liberia, in Costa Rica, has successfully moved from having an economy based on agriculture to being a dynamic tourist-based economic centre. Comayagua, in Honduras, has a prosperous economy based on attracting tourism around its well preserved historical architecture. Chinandega, in Nicaragua, is a city whose booming economy is based on commerce, due to its strategic location near the borders with Honduras and El Salvador and along the Pan-American Road.

22 Biennale de Venezia recognised that in the last decades the city of Bogotá has been addressing the problems of social inclusion, education, housing and public space, and described it as a beacon of hope for other cities, whether rich or poor.

Finally, Comayagua and Chinandega were not selected in the end, as census-tract data and matching cartography were not available at the time of the pre-selection (see availability of census-tract data in Section 5.5). As a result, the cities of Bogotá in Colombia, and Liberia in Costa Rica, were selected to test the proposed information systems (see Figure 4).

FIGURE 4
Location of the pre-selected and selected cities

Based on Microsoft, Atlas Mundial Encarta

3.3 Case study I in context

This section presents contextual information on the case study carried out in the poor and centrally located neighbourhood of Las Cruces, in Bogotá, which is discussed in Paper II.

Colombia

In 2005, Colombia had a population of around 46 million inhabitants, which in the 1990s had been growing at annual rates between 1.9 and 1.7%, and in the 2000s has been growing at annual rates between 1.6 and 1.4%. In 2007, 75% of the population resided in urban areas (econ.worldbank.org).

The government in Colombia has three tiers including central, departmental and municipal levels, which were defined in the 1886 constitution that unified all powers at central level. In the early 1980s there were about 900 municipalities with little power comprising both urban

and rural areas, 70% of which had less than 20.000 inhabitants, while five to six municipalities held 50% of the total population.

Decentralization in Colombia started in the late 1980s as a consequence of civil unrest and criticism of the poor quality of the services delivered by the decentralized state agencies[23]. In 1988 public elections of mayors were approved, and in 1991 a new constitution was signed, which created new municipalities with the total rising to 1119 and gave them more responsibilities (provision of education, health, water, sanitation and roads among other services), resources (revenue collection and intergovernmental transfers) and decision-making authority. As a result, and with contradictions and inconsistencies, the Colombian experience of decentralization is often referred to as one of true devolution to local authorities, and is classified as a case of 'democratic decentralization' (Manor, 1995; and Gilbert, 2006).

23 Decentralized state agencies are national semi-autonomous bodies which in Colombia are responsible for, among other things, social services, electricity and water (Fiszbein, 1997).

Nevertheless, decentralization reforms have reduced the authority of regional governments and generated capacity differentials amongst municipalities, mainly considering that more than a thousand municipalities still have to develop their capacities to perform effectively their new duties, starting from a basis of little or no tradition of public administration and local governance (Fiszbein, 1997).

Bogotá

Bogotá, the capital of Colombia, has a population that has grown from 4,226,000 in 1985, to 6,840,116 in 2005 (www.dane.gov.co/). Gilbert (2006) argues that Bogotá is one of relatively few middle-income cities to have experienced a significant improvement in the quality of its governance. Such an improvement was welcome after the severe crisis faced in the late 1980s[24]. Gilbert (2006) describes how the quality of governance improved dramatically after 1993. A series of much more technically-driven administrations put public finance in order, invested heavily in public works and public transportation, upgraded and serviced many low-income settlements and stimulated the use of statistical evidence in, for example, urban observatories. However, its major weakness continues to be its economy. Since Bogotá's growth rate over the last 15 years has not been impressive, and given that the population is thought to be rising annually by 3.5%, per capita income fell every year and unemployment is estimated at 12.9%. This poor economic performance has had a severe impact on poverty, with 43.4% of the total population living below the poverty line in 2004.

24 In the late 1980s, Bogotá was a good example of poor quality of urban services, which was evident in a series of major blackouts, poor coverage of electricity and water, high rates of crime and insecurity, and the increase of corruption in the public administration to the point that, in 1991, the city's mayor was actually imprisoned (Gilbert, 2006). In addition, in 1992, when Bogotá tried to borrow money abroad, the national government refused to guarantee the loan. In response, local creditors stopped advancing payments even on existing loans (Cárdenas, Zarama and Lanzetta 1996).

Ortiz-Gómez (2002) argues that the current urban planning era began with the local Acuerdo 7 of 1979, the main objectives of which were to "*retain Bogotá's surrounding rural area, define the city's infrastructure boundaries, increase urban density and plan urban spaces and activities use of zoning*" (p. 74). However, the application of this planning model limited planning to the regulation of urban plots and local urban areas, and coordination was insufficient, failing to plan the intermediate scale. In 1990, a new planning framework was introduced (Acuerdo 6 of 1990).

The basic advance in this framework was that urban development opportunities were opened up by less regulatory, more flexible planning instruments. Yet it brought about a planning practice that looks at the development of the city incrementally, with no coherent overview of its components, except in relation to the road plan and the regulations on uses and volumes. In an effort to respond to critiques throughout Colombia, Law 388 of 1997 was approved compelling all municipalities to design and follow a 10-year territorial plan (*Plan de Ordenamiento Territorial, POT*). The first Bogotá POT was approved in 2000 aiming to: *(i)* integrate urban zones and make construction of public facilities financially feasible, by means of designing land-use plans that would coordinate and ensure a more cohesive and comprehensive approach to the built-up area; *(ii)* increase densities of existing developed areas and the development of vacant land within the urban perimeter; and *(iii)* formulate a new, comprehensively planned urban zone. At the time of writing this dissertation, Bogotá was in the process of revising and proposing its second POT.

Las Cruces

The neighbourhood of Las Cruces includes 10,000 residents, 2700 households and 1400 dwellings, all contained within a surface area of 47.44 hectares. Its economy relies on local commerce, crafts and micro-industry, which often take place in the so called 'productive dwellings'. It is a predominantly residential neighbourhood which has the highest territorial concentration of tenements[25] in the city.

Las Cruces is located to the south of the Historic Centre of Bogotá, near major educational, institutional and commercial activities of the city. Las Cruces is fully served by public transport and public utilities; nevertheless, half of its blocks show evidence of physical deterioration.

Social problems in Las Cruces are acute and often linked to poverty and safety. Las Cruces is part of the District of Santa Fe, where poverty has increased since 1992, reaching its peak in 2005, when 63% and 22% of its population was counted as poor and extremely poor respectively. This District has the highest proportion of prostitutes, homeless people and drug-dealers in the city. It also has the highest rates of inequality (Gini: 0.59) and the highest rates of homicides per capita, being one of the most violent districts in the city. Regarding education, 40.8% and 10.5% of the population in the District has not finished secondary and primary education respectively (DANE, 2005). For a detailed description of Las Cruces see Paper II.

25 The term 'tenement' is used to refer to large old houses, in which every rooms (a tenement unit) is rented out to a different household, sharing entrance, corridors, stairs, bathrooms, kitchen and laundry facilities.

3.4 Case study II in context

This section presents contextual information on the case study carried out in the medium-sized city of Liberia, in Costa Rica, which is discussed in Paper III.

Costa Rica

Costa Rica has a population of around four million inhabitants, which is growing at an annual rate of 2.6%. In 2003, two-thirds of the population resided in urban areas (PNUD, 2003).

Mahoney (2001) finds the roots of Costa Rican democracy in its homogeneous agrarian class structures and the limited development of the military during the nineteenth and early twentieth centuries. These elements contrast with polarized agrarian class structures supported by strong military, which turned into authoritarian regimes in the rest of the countries of Central America. Mahoney traces these power relationship differences back to the Colonial period, during which Costa Rica was distinctive within Central America because it lacked precious metals, a significant export crop, and significant indigenous population to serve as work force, as a result of which Colonial institutions were noticeably absent. During the first half of the twentieth century, a major government effort was carried out to promote social welfare[26]; as a result, Costa Rica evolved to become a small developing country with social indicators that are close to those of developed countries – despite its modest GDP indices[27].

Costa Rica has historically been one of the most highly centralized countries in the hemisphere and it has not experienced profound crises, which is why decentralization has been much slower and more limited. During the late 1990s, mounting internal and external pressures succeeded in pushing forward meaningful reform[28]. Some enacted key elements of the decentralization process include the establishment of the local property taxing authority (1996), the restructuring of the Municipal Promotion and Support Institute (IFAM), the promulgation of a new municipal code (1998), the reform of an important intra-governmental budget transfer mechanism (*partidas específicas*)[29], the transfer of functional responsibilities to local governments, and the incremental increase in municipalities' share of the national budget (2002). As a result, new mayors and district councils are now publicly elected, several new modes of direct participation are emerging (e.g. plebiscite, referendum and *cabildos*[30]), and the elections for local officials are no longer held simultaneously with national elections.

Though it is too soon to evaluate the effects of decentralization in Costa Rica, it can be said that while these reforms have potential to effect important changes, the significance of this potential has a different connotation in Costa Rica than in neighbouring countries due to its long and solid democratic tradition. For instance, Brenes and Matorrel (2000) argue that legitimacy and support at the municipal level in Costa Rica is probably as weak, or weaker, than system-level legitimacy in newly inaugurated democracies. Therefore, the challenge here is to construct and legitimize local democracy in an environment where it has virtually never existed, and in a context in which municipal government is widely seen as unaccountable, corrupt and incompetent.

26 As part of this effort, the minimum wage was established, schools and hospitals were built throughout the country, and the Costa Rican Institute of Electricity (ICE) and the National Institute of Housing and Urbanism (INVU) were created in 1949 and 1954 respectively.

27 In 2006, Costa Rica was ranked 61st, out of 172 countries, regarding its GDP per capita (PPP US$ 9481); and only 48th, out of 177 countries, regarding its HDI (0.841). Furthermore, Costa Rica was the winner of the 2007 Human Development Award given by UNDP (www.undp.org/).

28 These pressures arose from continuing economic stagnation and rising popular discontent, while internationally they arose from growing demands for change by multilateral lending agencies and donor nations (Ryan, 2004).

29 The term '*partidas específicas*' (specific budgetary entries) refers to the allocation of resources originated in specific budgetary entries.

30 A '*cabildo*' was a former Spanish, colonial administrative council that governed a municipality. At present, they are legal representatives of the municipality and its citizens.

Decentralization in Costa Rica is largely a top-down process, as a result of which local authorities tend to view the reforms more as mandates imposed by the centre rather than as a collaborative redefinition of the local-national relationships, together with little understanding amongst municipal officials of what exactly the concept means (Ryan, 2004). Likewise, the question of timing or sequencing has been vague during the decentralization process. For example, in 2001 a law transferred at least 10% of the national budget to local authorities, yet an article in this law conditions these transfers to local authorities demonstrating their ability to exercise their new responsibilities – a condition which cannot be met without adequate support or funding (Ryan, 2004).

As a result of having been one of the most centralized countries in the hemisphere, local authority has been extremely weak in terms of authority, responsibilities and resources. The origins of this situation are described by Smith (1999) as going back to 1838, when local government was abolished under the dictatorship of Braulio Carrillo (1835 - 1837), soon after the Central American independence from Spain in 1821.

In relation to urban planning, a space for this was first opened up in Costa Rican legislation in the 1949 Constitution. However there was no agency invested with power to undertake urban planning until 1954, when the National Institute of Housing and Planning (INVU) was created, including the objective of planning the development of towns and cities, but was provided with no legal framework to do so until 1968. Additionally, local planning was established as a responsibility of local authorities, including the preparation of master plans based on zoning principles. In this context, planning units in local authorities only appeared since the late 1990s, and they vary greatly in size and capacity.

Liberia

The municipality of Liberia has grown from 17,000 inhabitants in 1984 to 40,000 inhabitants in 2000 (Martínez, 2003, p. 33), and to about 46,000 inhabitants in 2006 (declaration of the City Major in a workshop carried out in February 2007).

In Liberia there has been only one official responsible for planning until the mid 2000s, when a cadastre unit with two officials was added to establish land registers and value properties in order to collect land and property taxes. Today, the planning officer coordinates his responsibilities using the information system of the local cadastre unit. In 2008 Liberia received its second master plan, which was prepared by a consultancy firm in the country's capital, San José. However, the implementation of the master plan is yet to be analyzed, with regard to local capacities and the technical assistance from INVU in San José. For a detailed description of Liberia see Paper III.

3.5 Conclusions

Chapter 3 has presented evidence that portrays Latin America as a highly urbanized and yet still urbanizing region, with longstanding poverty and severe inequalities, and a region in which decentralization reforms have not been motivated by the deepening of democracy. These circumstances are central to this research as local authorities now have the responsibility and power to directly address poverty and inequality in its many and highly populated towns and cities. Four particular conclusions arise:

In relation to poverty and inequality, this is a region with high inequalities where, despite poverty rates being much lower in towns and cities than in rural areas, most of the poor live in cities, often in conditions that prevent them from taking full advantage of the employment and other opportunities that cities may offer. These circumstances may help to understand the importance of addressing urban poverty from a democratic perspective.

In relation to urbanization processes, Section 3.1 showed that, with four fifths of its population living in cities, Latin America is now essentially an urbanized region. This urbanized region is characterized by a combination of large metropolis and a system of medium-sized cities that have been growing systematically. For this reason, municipalities serving large and medium-sized cities are a critical component of local government in Latin America, inasmuch as their capacity to address urban poverty and inequality affects large populations.

In relation to availability of data, Section 3.2 showed that, despite efforts to develop and consolidate statistical data systems, timely and reliable census-tract data is not available in many cities, which compromises the use of evidence in decision-making processes of local authorities, and the capacity to promote accountability and transparency of their actions.

Finally, in relation to decentralization in Latin America, it was shown that it has been a top-down process initiated in response to prolonged systemic economic or political crisis and accompanied by strong external pressures, as opposed to its motor being the deepening of democracy. Then again, the outcomes of decentralization have been controversial notably because of the scarce evidence of improvement in the management of public resources, the poor participation of civil society, and the persistence of inter-regional inequalities. Therefore, the previous conclusions bring some light in relation to the question raised in the introduction of this section and show signs which question the causal link between decentralization and democratic development in Latin America, which helps to understand why the impact of decentralization reforms on poverty reduction still looks weak.

4 Methodology

This chapter is more of a reflection on the steps taken throughout this research, based on the knowledge on methodology that was acquired in the process. Steps and methods applied during this research are here described as part of what may appear to be a structured and clear research design[31]; however, sometimes the steps taken were simply a response to the previous step following a judgement rather than a predetermined research design.

4.1 Research design

Following a long research tradition in the natural sciences, academic researchers and institutions used to rely mainly on quantitative methods because the use of statistical data was seen as providing robustness to the results. However, this methodological approach was criticized in the humanities and social sciences on the basis that quantitative data cannot fully capture cause-effect relationships in social processes or people's perceptions and values, therefore failing to provide vital contextual information, which is required when doing research in these fields of knowledge. As a response to these critiques, qualitative and quantitative methods are now often combined in social sciences.

Regarding the analysis of socio-cultural and institutional issues – such as those addressed in this research – Gacitúa-Marió and Wodon (2001), referring to poverty studies, argue that these types of studies require the analysis of statistical data as well as of processes, values and the perceptions individuals have of them, for which the combination of quantitative and qualitative methods is necessary. Their arguments for combining quantitative and qualitative methods in such studies include the possibility of combining the robustness of quantitative data with in-depth interviews, accessing different types of information, and using actor-oriented perspectives in poverty research including institutions and professionals concerned with poverty reduction at both civil society and governmental levels, as well as the fact that qualitative methods capture the subjectivity of the actors allowing the final results to be understood. In addition, the combination of qualitative and quantitative methods often helps to capture and validate the voice of the poor, and therefore, build understanding of poverty and social exclusion, which is particularly significant in the South.

For the reasons presented above, this research design combined quantitative and qualitative methods, which were organized in five methodological approaches ('steps' as by Yin, 2003). The first four of these tackle each one of the four research angles which have shaped the

31 According to Yin (2003, p.20) "*a research design is a logical plan for getting from here to there, where here may be defined as the initial set of questions to be answered, and there is some set of conclusions (answers) about these questions*". He adds that "*between "here" and "there" may be found a number of major steps, including the collection and analysis of relevant data."*

pro-poor planning conceptual framework that is the object of this study, and the fifth one addresses the research aim, as shown in Figure 5.

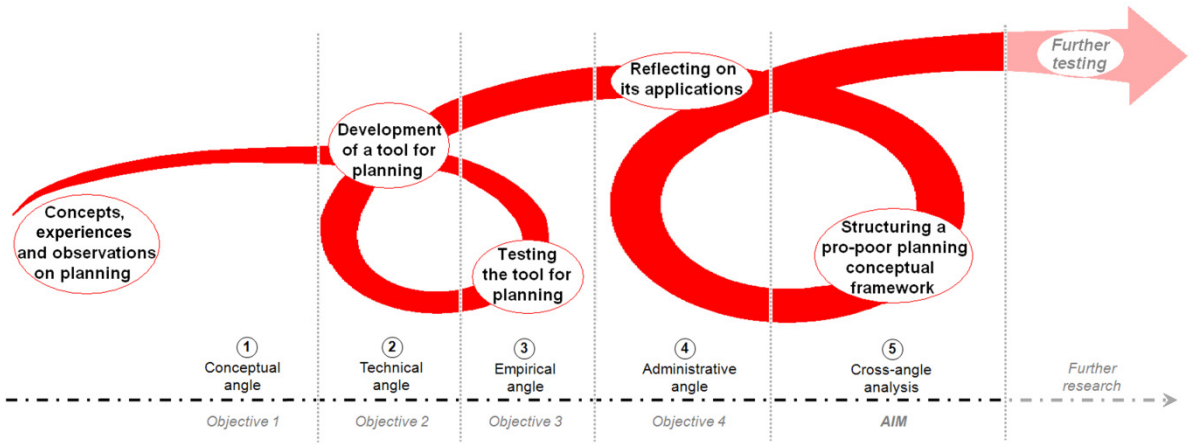


FIGURE 5
Research design

Table 6 illustrates each methodological approach (step) in relation to the research objectives, the methods applied, and outcomes obtained. The following sections describe the steps and methods – part of the research design – that were used in each methodological approach.

TABLE 6
Phases and methods used in the research

Methodological approach	*Research Objectives*	*Methods*	*Outcomes*
Conceptual angle	To discuss key concepts which are useful for urban planners in order to comprehend and address the phenomenon of urban poverty with the actions they design, implement and monitor	Direct observation Literature review In-depth interviews Structured discussions	Definition of key concepts which are useful for a pro-poor planning practice Establish a position in relation to planning theory
Technical angle	To develop an operational technique that may help urban planners to visualize and be better equipped to inform decision-makers on the effects on poverty reduction of the land-based actions they are responsible for, using evidence-based poverty maps	Conceptual and practical development of a proposed operational technique	Development of a prototype technique that promotes pro-poor urban planning using evidence drawn from statistical data
Empirical angle	To test in two case studies, how effective the proposed technique can be in promoting a long-term integrated approach in urban planning	Case studies	Testing of the proposed technique in two case studies
Administrative angle	To analyze in which functions of urban planning can the proposed technique be applied, and reflect on its capacity to attract public participation and promote accountability and transparency	Reflection Structured discussions	Identification of urban planning functions in which the proposed technique can be applied Analyze its capacity to attract public participation and promote accountability and transparency
Cross-angle analysis	To propose a conceptual framework that may help urban planners in cities of the South – using evidence-based poverty maps – to comprehend and visualize the effects of land-based actions on poverty reduction in order to be better equipped to inform decision-makers	Reflection Structured discussions	Articulation of a model for planning, referred to as the' pro-poor planning conceptual framework'

4.2 Conceptual angle

The conceptual angle was addressed through a combination of methods including direct observation, literature review, in-depth interviews and structured discussions. This methodological approach led to two final outcomes: the selection and definition of key concepts, which are useful for a pro-poor urban planning practice, and the establishment of a position in relation to planning theory (see Chapter 2).

A direct observation method was applied as by Yin (2003). Motivations to carry out the research were based on direct observations, which were the product of three structured studies[32] carried out by the author, albeit the studies took place prior to the formal initiation of the research. The direct observations emerging from the following three structured studies have been discussed in Section 1.1.

32 These studies are considered to be structured because they followed a clear set of steps to achieve predetermined objectives, in a way that the observations can traced back to those objectives.

The first study was conducted in Colombia in 1997. The objective of the study was to structure and implement an information system of the physical plant to enlarge and manage the built-up area of a university located in the historical district of Bogotá. Here, the main observation was the realization of how little statistical information was used for planning and decision-making of the university facilities, in part due to the lack of a structured information system, but also because of communication barriers between implementers, planners and decision-makers.

The second study was conducted in Colombia between 1997 and 1998. The aim of the study was to develop a methodology with which the housing government agency would be able to select, from among the housing projects being built, a list of projects in which poor households who were the recipients of housing vouchers, could get a housing unit. The study allowed the author to visit and assess housing projects being built all around the country. The main observation from this study was the existence of tangible differences in the urban quality of those housing projects that incorporate an 'integrated approach' in its design and implementation, compared to those that follow a more 'traditional approach'. Differences were evident in socially-mixed housing schemes, provision of social services, generous recreation facilities and public spaces aiming to attract households from different socioeconomic backgrounds, and not only those who received a housing voucher, in order for private developers to reduce the risk of not getting the 'blessing' from the housing government agency.

The third study was conducted in 2001. The objective of the study was to analyze degrees of success/failure post-apartheid social housing projects had in territorially unifying and socially integrating the medium-sized city of Kimberley, in South Africa. The main observation in this

study was the realization that the multidimensionality character of poverty ought to be addressed by means of incorporating a long-term approach to planning. In that regard, the author saw a clear step forward in planning practice in Kimberley during the 1990s, as a result of which a new planning practice emerged whereby its projects and actions now intentionally seek to address physical and social integration issues. This development was in part motivated by a change in the ways in which social housing projects were implemented, moving from developing housing projects in peripheral township plots, targeting exclusively the poor, and designed and implemented directly by government agencies, to implementing socially-mixed housing projects which were strategically located to unify the old divided apartheid city, whereby potential 'clients' could participate in design and implementation processes and in which the government became more of a facilitator rather than a provider.

A comprehensive literature review was carried out to identify and fill information gaps on the key concepts discussed in Section 2.1. Literature was collected using a double-foiled 'snow-ball' method, which allowed the author to understand both the roots and the state-of-the-art theories regarding the key research topics. This double-foiled snow-ball method means that, in addition to a standard literature review in which a chain of literature from the most frequently mentioned references of the initial literature is read to build an understanding of the roots of the theoretical discussion of each key concept, the researcher used impact factors in journal citation reports to identify state-of-the-art theoretical discussion regarding each key concept.

In-depth interviews with what Yin (2003) refers to as 'strategic informants' were then conducted, to corroborate certain variables of the key concepts and clarify cause-effect relationships, such as poverty and inequality. The in-depth interviewing was structured in such a way as to collect the views of international agencies, central and local authorities, private and academic sectors and consultants. Seventeen in-depth interviews were conducted (see Appendix C). Following the relativist tradition of knowledge construction, special attention was given to strategic informants with knowledge of the Latin American position in relation to these key concepts.

Finally, two structured discussions were conducted in the form or research seminars to validate relationships between variables of the key concepts. One research seminar addressed the relationship between urban planning and the phenomenon of urban residential segregation, which, as explained in Section 2.1, refers to a territorial representation of inequality[33]. The second seminar addressed the use of statistical evidence in decision-making processes at local levels[34]. These two research seminars were structured on the basis of 'trigger' essays on the relationship between variables which were given to experts on each subject before the seminar, so they could prepare questions and comments which, together with those of the audience and research fellows, helped

33 The first research seminar was carried out in March 2005, with the participation of Dr Roger Andersson as opponent. Dr Andersson is professor at the Institute for Housing and Urban Research (IBF) and at the Department of Social and Economic Geography Uppsala University. Some of his research interests include: residential segregation, urban policy, and especially area-based approaches.

34 The second research seminar was carried out in June 2006, with the participation of Dr Petter Pilesjö as opponent. Dr Pilesjö is the director of the GIS Centre, Lund University. He is a physical geographer. He is mainly interested in GIS education, implementation and spatial modelling.

the author to define six key concepts and establish a position in relation to planning theory.

4.3 Technical angle

The technical angle was addressed through the conceptual and practical development of a proposed operational technique. The final outcome of this methodological approach consists of a prototype technique that may help to promote pro-poor urban planning using evidence drawn from statistical data. This prototype pro-poor planning tool is described in Paper I.

This prototype technique is referred to as the 'Tool for Strategic Territorial Planning, TSTP™. The TSTP™ was conceptualized from comparing the key concepts, available data and limitations of urban planning practices in the selected case studies. A basic model was developed prior to conducting the case studies, and later it was adjusted based on empirical limitations.

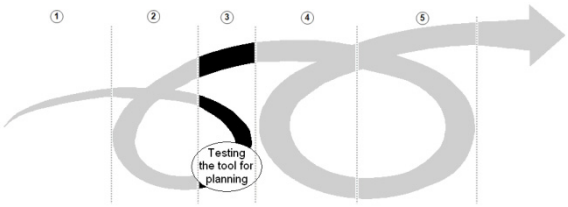
Next, five workshops were carried out to validate the proposed TSTP™ regarding its relevance, sustainability and feasibility: *(i)* a trial workshop for academics and urban planners in Bogotá, Colombia; *(ii)* a workshop for Liberian authorities in Liberia, Costa Rica; *(iii)* a workshop for national and local authorities, NGOs and CBOs in San José, Costa Rica; *(iv)* a workshop for academics and practitioners in San José, Costa Rica; and *(v)* a workshop for public servants, NGOs, CBOs, consultants, researchers and practitioners from countries of the South, carried out in one of Sida's International Training Programme, held in Lund, Sweden. A total of 91 participants attended the workshops and 78 questionnaires were collected (see Table 7 and workshops material and analysis in Appendix D).

TABLE 7
Location, date and number of participants in the workshops

Place	*Date*	*Participants*	*Respondents*
CIDER, University of Los Andes, Bogotá	Feb. 2, 2007	11: 9 academics, 1 representative of a local authority and 1 private consultant	7
Municipality of Liberia, Liberia	Feb. 8, 2007	13: Mayor of Liberia, vice-president of the Municipal Council, 3 municipal cancellers, heads of the Planning, Engineering, Environment, Cadastre and Social Works Units, 1 representative of a local NGO, 1 of private sector and 1 of the local press	7
FUPROVI, San José	Feb. 9, 2007	12: 4 representatives of NGOs, 2 of national authorities, 2 of local authorities, 1 of the national statistics department and 3 academics	11
School of Architecture, University of San José, San José	Feb. 12, 2007	28: 24 academics or students, 2 representative of the private sector and 2 of other organisations	26
HDM, Lund University, Lund	Oct. 17, 2007	28: 12 representatives of national governments, 3 of local authorities, 4 of the private sector, 3 of other organisations and 6 academics	27
		TOTAL	78

Lastly, final adjustments were implemented before making the proposed TSTP™ available online at www.planning4equality.com.

4.4 Empirical angle



The empirical angle was addressed through a case study method as by Yin (2003). The outcome of this step was the testing of the proposed technique (TSTP™) in two case studies. The first case study assessed planning-related links between land values, public interventions and residential dynamics in the neighbourhood of Las Cruces in Bogotá. This assessment is described in Paper II. The second case study analyzed the impact on four dimensions of poverty of the implementation of Costa Rica's social housing policy in the city of Liberia. This poverty study is described in Paper III.

The first case study combined quantitative and qualitative methods using a triangulation of data to identify public interventions, and establish land values and residential dynamics. Public interventions were identified from archival review and interviews with representatives from the City Planning Department (DAPD), the Office for Conservation of Historic Buildings (*Corporación La Candelaria*), and researchers from the historic building conservation master programme of La Javeriana University of Bogotá.

Land values were established from combining secondary and primary data. Secondary data include cadastre land values for the years 2000, 2003 and 2006, which were provided by the City Cadastre Department (DACD). Primary data included market land values from the year 2007, which were established based on two surveys: one in which commercial prices were collected for 129 properties, and one in which rental rates were collected from 115 properties.

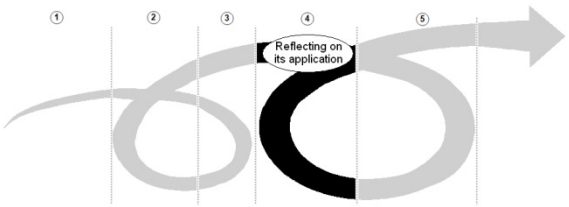
Primary data, consisting of results drawn from questionnaires administered to 306 residents, were used to establish residential dynamics. The results were analyzed and mapped using Geographic Information Systems (GIS). A detailed description of the methods used in the first case study is found in Paper II, and questionnaires, interviews and survey protocols are in Appendix E.

The second case study also combined quantitative and qualitative methods using a triangulation of primary and secondary data. Primary data were collected from interviews with urban planners and local authority officials. Secondary data were compiled from the Unsatisfied Basic Needs database provided by the National Statistical Institute of Costa Rica (INEC), which was drawn from the National Census of year 2000. Data were analyzed and results mapped using Geographic Information

Systems (GIS). A detailed description of the methods used in the second case study is found in Paper III. Its methodology included five steps:

1 Degrees of poverty were measured applying the Unsatisfied Basic Needs method (see Chapter 2). Five poverty maps were prepared, one for each of the four studied dimension of poverty and one that combined the four dimension into a single indicator of total poverty.
2 Degrees of inequality were calculated applying the Index of Dissimilarity, D (see Chapter 2). An inequality map was prepared.
3 Characteristics of all social housing projects built in Liberia between 1997 and 2004 were identified and their location was mapped.
4 The poverty and inequality maps were overlapped to establish a map that showed territorial units with high, medium and low degrees of poverty and inequality combined. This map was then overlapped with the location of the studied social housing projects to identify the territorial correlations between types of social housing projects and territorial units with high, medium or low degrees of poverty and inequality.
5 A shortlist of land-based actions to reduce specific dimensions of poverty was defined.
6 A plan of actions was prepared based on a workshop with the participation of different actors engaged in planning practice in the locality.

4.5 Administrative angle



The administrative angle was addressed through reflective and structured discussion methods. This methodological approach led to two outcomes: the identification of those functions of urban planning in which the proposed technique (TSTP™) can be applied, and on the other hand, the analysis of its capacity to attract public participation and promote accountability and transparency. This analysis is discussed in Paper IV.

A reflective method[35] was used to analyse the results of comparing urban planning theory and the findings from the case studies in relation to the different functions of urban planning in which the proposed technique (TSTP™) can be applied.

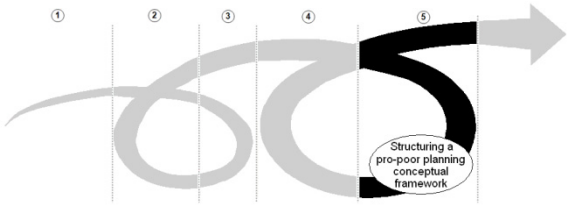
Thereafter, the findings were presented and discussed in three academic seminars (see Table 8), as a result of which Paper IV was produced.

35 A reflective method was applied as by Stake, 1995, to transform observations into assertions. This process consists in examining the data collected to interpret the meanings they carry, aiming at thoroughly understanding the phenomenon under study.

Date/place	Activity name	Paper title
Summer 2008, Manchester, UK	2008 conference of the Sample of Anonymised Records (SARs): Census Microdata: findings and futures	A Technique for Small Geographical Scale Poverty Analyses: The use of Census Census-tract data in the Case of Liberia, Costa Rica
Autumn 2008, Edinburgh, UK	Human Geography Seminar Series 2008/2009, School of GeoSciences, University of Edinburgh	The application of poverty maps in urban planning
Autumn 2008, Edinburgh, UK	Autumn 2008 seminar of the Caribbean and Latin America Research Group (CLARE)	The use of evidence-based poverty maps to assess the impact of public interventions in Las Cruces, Bogotá

TABLE 8
Seminars on applications of the TSTP™ in urban planning

4.6 Cross-angle analysis



Finally, the outcomes of each one of the four previous steps were put together and analyzed using reflective and structured discussion methods. In this step, the use of reflective methods involved a series of thought trials to establish relationships amongst the outcomes of the previous steps in order to design a model for urban planning that addresses poverty issues, which is hereby referred to as the pro-poor planning conceptual framework. The gap between the theory and the empirical results was closed by analyzing possible relationships amongst the conceptual, technical, empirical and administrative outcomes. These reflections gave shape to different but interrelated working papers (see Table 9) and papers published in peer-reviewed journals (see Table 10).

TABLE 9
Woking papers

Date/place	Activity name	Paper title
Autumn 2005, Natal, Brazil	4th conference of the International Geographical Union (IGU): The Global Challenge and Marginalization	Are Social Housing Projects Trapping the Poor? The Case of Liberia, Costa Rica
Summer 2006, Seville, Spain	52nd International Congress of Americanists: People and Cultures of the Americas: dialogues between globality and locality	Una Vivienda social incluyente: El caso de Liberia, una ciudad intermedia de Costa Rica
Autumn 2006, Washington, DC., USA	Using Statistics for Broad-Based development: Challenges for Latin America and the Caribbean	Urban Planning Monitoring System for Medium-sized Cities in Costa Rica
Summer 2008, Dublin, Ireland	European Network for Housing Research (ENHR), conference July 6-9	Unforeseen Effects of Public Interventions: The Case of Las Cruces in Bogotá, Colombia
* Summer 2008, Manchester, UK	2008 conference of the Sample of Anonymised Records (SARs): Census Microdata: findings and futures	A Technique for Small Geographical Scale Poverty Analyses: The use of Census Census-tract data in the Case of Liberia, Costa Rica
Spring 2008, Edinburgh,UK	Urban Studies Seminar Series. School of the Built Environment. Heriot-Watt University	Participation and accountability in urban planning practice in the South: potentials and limitations

* Note that the working paper presented at the SARs conference in Manchester is also part of the seminars in which Paper IV was discussed

Subsequently, both working and reviewed papers were exposed to public scrutiny, in which the working papers were presented in international conferences and research seminars, and the papers were exposed to a peer review process. The final outcome of this last step consists of the

articulation of a model for planning. This model is hereby referred to as the 'pro-poor planning conceptual framework', which is discussed in Section 6.1.

TABLE 10
Papers in peer-reviewed journals

Date	*Journal*	*Paper title*
2007, 22 (59) pp. 69-92	*INVI*	¿Una vivienda social incluyente en Liberia? El caso de una ciudad intermedia de Costa Rica
2007 (3-4), pp. 317-332	*Habitat International*	Design for Equality: Conceptualising a Tool for Strategic Territorial Planning
(Accepted for publication in 2010) (47))	*Urban Studies*	A Technique for Small Geographical Scale Poverty Analysis: Its Application in the Case of Liberia, in Costa Rica
(Accepted with minor changes, January, 2009)	*Applied Spatial Analysis and Policy*	Applications of Poverty Maps in Urban Planning

4.7 Conclusions

The research used a combination of quantitative and qualitative methods drawn from primary and secondary data, which were organized in five steps, four of which correspond to the four research objectives, and a cross-analysis step in which the outcomes of each one of the four previous steps were put together and analyzed.

Two case studies were conducted: one in the poor and centrally located neighbourhood of Las Cruces, Bogotá, Colombia, in which the relationship between public interventions, land values and residential dynamics were established using evidence-based poverty maps; and one in the medium-sized city of Liberia, Costa Rica, in which the proposed technique was tested to identify the geographical distribution of poverty and inequality and deprived urban areas, to propose a set of actions to raise the characteristics of such deprived areas to city standards, and to assess the relationship between the location of social housing projects and the identified deprived urban areas.

In this journey, ten papers were written, six of which are working papers discussed at international seminars, and four are reviewed papers which were published or accepted for publication in international peer-reviewed journals, one of which was written in Spanish and three in English. The three peer-reviewed papers written in English together with the working paper presented at the ENHR-08 conference in Dublin are a constitutive part of this monograph.

5 Outcomes, findings and validation

The main outcomes and findings of the research have been selectively chosen from chapters 2 and 3, and from the four papers that are presented in their full version in Part Two. These outcomes and findings are summarized in this chapter in relation to the research objectives (see Section 1.2) and to census-tract data and cartography. The chapter is organized in six sections, the first four of which compile those outcomes and findings that are related to the conceptual, methodological, empirical and administrative angles; availability of census-tract data and cartography is discussed in the fifth section; the validation of the proposed technique is then discussed in the sixth section; and conclusions are presented in the last section.

5.1 Conceptual angle: the structuring of key concepts for a pro-poor planning practice

This section summarizes the main outcomes that address the first objective of the research: "*to discuss and establish a position in relation to the concepts of poverty, inequality, urbanization, decentralization and urban governance, which are considered by this author as key concepts that are useful for urban planners to comprehend – and therefore being able to address – the phenomenon of urban poverty with the actions they design, implement and monitor.*" The outcomes are drawn from the conceptual angle and the context of the study (see chapters 2 and 3 respectively). Chapter 2 presented the evolution of the concepts of poverty, inequality, urbanization, decentralization and urban governance; their relationship to traditions of knowledge construction; and how they may be of help to promote a pro-poor planning conceptual framework. Chapter 3 grounded these concepts in the Latin American context making especial reference to the countries and cities studied. The main outcomes are presented below.

Section 2.3 argued that indicators of poverty and inequality – and hence poverty and inequality maps – are not 'neutral' as they carry certain amount of bias for those who develop them and for their users, who for instance apply their judgments and intentions in the selection of variables of which a given indicator is composed, or their knowledge and capacities to interpret and apply their outcomes. In addition, it was argued that they may lead to a fragmented and partial view of the issues under study as they rely primarily on a supposedly objective, and sometimes limited, appreciation of the reality. However, it was also argued that this does not mean that they should be rejected if one has a relativist stance (current relational planning theory approach); rather, their limita-

tions need to be acknowledged and indicators and maps of poverty need to be used in a relativist way.

In addition, Section 2.3 positioned the research within urban governance theory, in which pro-poor urban planning is seen as a mechanism to facilitate dialogue between different planning stakeholders, aiming at becoming more effective in the delivery of land-based actions, and ultimately respond to citizen needs, including those of the poor. In that regard, the use of an evidence-based poverty map technique was presented as being of importance to promote pro-poor planning practices, not only as a method to visualize the geographical distribution of poverty, but also as a tool to facilitate dialogue amongst different stakeholders in urban planning, both when defining indicators to measure poverty and inequality and when analyzing and discussing the results. This is a relevant outcome as Section 3.1 presented arguments which show that the poor dialogue between planning actors is a key challenge to urban governance in Latin America.

In summary, a set of concepts that may help urban planners to comprehend, and therefore be able to address, the phenomenon of poverty with the actions they design, implement and monitor, was discussed in Chapter 2 – hence responding to the first objective of the research.

5.2 Technical angle: the development of a pro-poor planning technique

This section describes the process that led to the main outcome that addresses the second objective of the research: "*to develop an operational technique that may help urban planners to visualize and be better equipped to inform decision-makers on the effects on poverty reduction of the land-based actions they are responsible for using poverty maps drawn from statistical evidence.*" The outcome is drawn from the conceptual development of the proposed technique and its applications in urban planning, which are discussed in detail in papers I and IV, respectively. Paper I is titled "*Design for Equality: Conceptualising a Tool for Strategic Territorial Planning*", and Paper IV is titled "*Applications of Poverty Maps in Urban Planning in Cities of the South: examples from Liberia, in Costa Rica*".

Paper I presented the foundations for the development of the Tool for Strategic Territorial Planning, TSTP™ as relying on the study of poverty, inequality and data management. Hence it discussed the concepts of poverty and inequality, as well as the reasons for selecting the Unsatisfied Basic Needs method to measure different dimension of poverty, the Index of Dissimilarity to assess inequality, and the Concentration Index to identify deprived urban areas[36]. It also presented arguments for the choice of Geographic Information Systems as the data manager venue for the TSTP™.

36 In the course of the empirical application of the proposed technique, the identification of priority deprived urban areas moved from applying the Concentration Index to the overlapping of poverty and inequality maps, as the second method has a more practical significance, and therefore relevance to urban planners.

Paper I explained that TSTP™ users must go through three phases when applying the proposed technique: Phase A involves the selection of the planning-related dimensions of poverty to be evaluated; Phase B includes the identification and targeting of those deprived urban areas; and Phase C focuses on the definition and assignment of priorities to a short list of specific land-based actions required to reduce poverty and inequality (see Figure 6). Each of these three phases includes a series of steps which are presented in detail in Paper I.

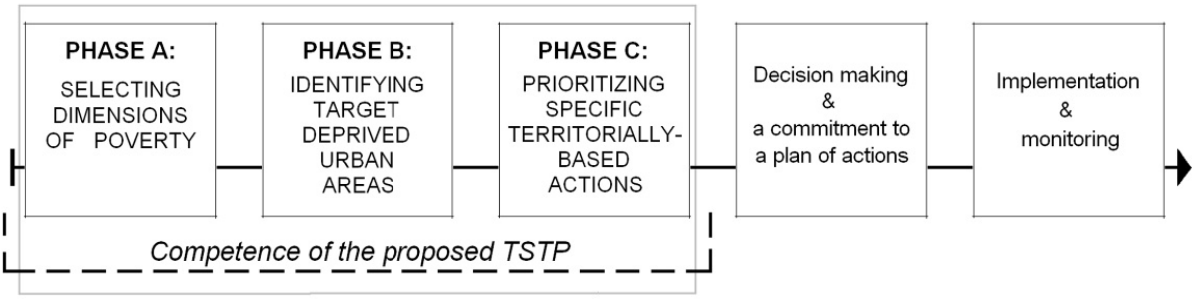


FIGURE 6
Phases of the application of the TSTP™

Source: Paper I

The aim of TSTP™ was synthesised in Paper IV as to use statistical evidence to inform all actors of planning practices about the extent to which their actions may effectively reduce poverty. Six specific objectives were identified:

- To support the use of evidence in decision-making processes
- To support the integration and articulation of land-based actions
- To promote area-based targeting strategies for poverty reduction
- To support a long-term approach to urban planning
- To promote public participation in decision-making processes
- To strengthen accountability and transparency in urban planning and local governance

Lastly, Paper I argued that the nature of the TSTP™ should not be seen as another technocratic tool which fails to connect and respond in a timely way to contextual changes, but as a tool that is inscribed in urban governance theory, which, in that sense, may help to promote dialogue between different stakeholders in urban planning. In that regard, Section 4 in Paper IV presented the proposed technique as a two-fold tool which, on the one hand, aims to assist planners in coping with new land-related functions drawn from decentralization processes and local political forces; and on the other hand, seeks to promote transparency and accountability by means of attracting public participation, as for example in Liberia, where it was made available and discussed with different stakeholders including urban planners, decision-makers, researchers and civil society organizations in order to agree on a plan of actions to raise the conditions of targeted deprived urban areas to city-wide standards.

This discussion led to one key outcome: the development of an Internet-based tool for planning, which is available online at www.planning4equality.com, and is illustrated in Figure 7. Its development is summarized in Appendix F.

In summary, papers I and IV showed the foundations, objectives and nature of a proposed pro-poor planning technique, hence responding to the second objective of the research. The outcome consists in the development of an operational pro-poor planning technique.

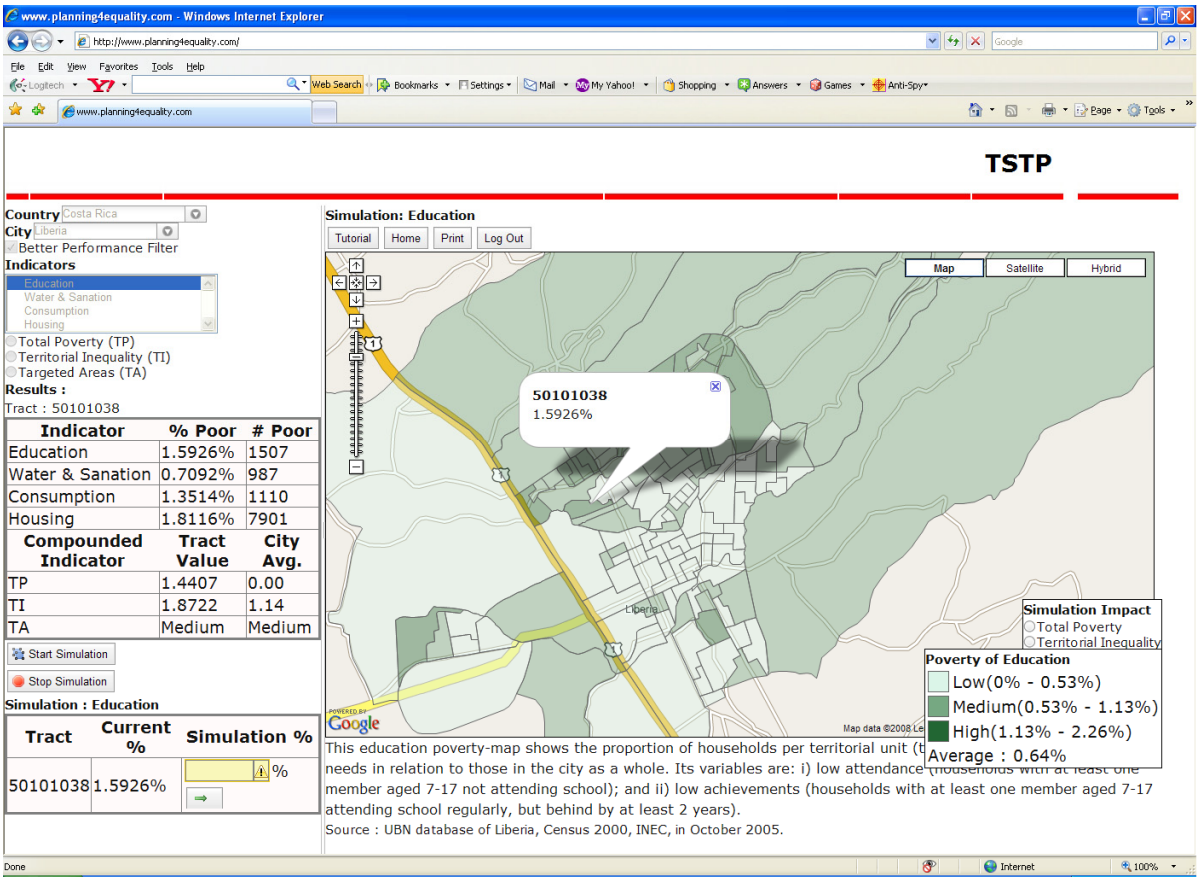


FIGURE 7
Example of the trial version of the TSTP™

Source: www.planning4equality.com

5.3 Empirical angle: the testing of the proposed technique

This section shows the main findings related to the third objective of the research: "*to empirically test how effective the proposed technique can be to promote a long-term and a multi-sectoral (integrated) approach in urban planning*." These two case studies have been reported in papers II and III.

Paper II is titled "*Unforeseen Effects of Public Interventions: The Case of Las Cruces in Bogotá, Colombia*". The paper presents a study in which evidence-based poverty maps are used to assess the urban planning-related links between land values, public interventions and residential dynamics in the poor and centrally located neighbourhood of Las Cruces in Bogotá, Colombia. The main finding of this study is that there is a need to combine physical and social interventions, and find an optimal compromise between small fast interventions and substantial long-term interventions when the aim is to reduce poverty without displacing the problems to neighbouring areas. Arguments for this finding are discussed below.

The paper showed that land values in Las Cruces have been relatively static over the past six years (see Figure 8) contrary to what is expected to happen following the investment of a significant volume of resources.

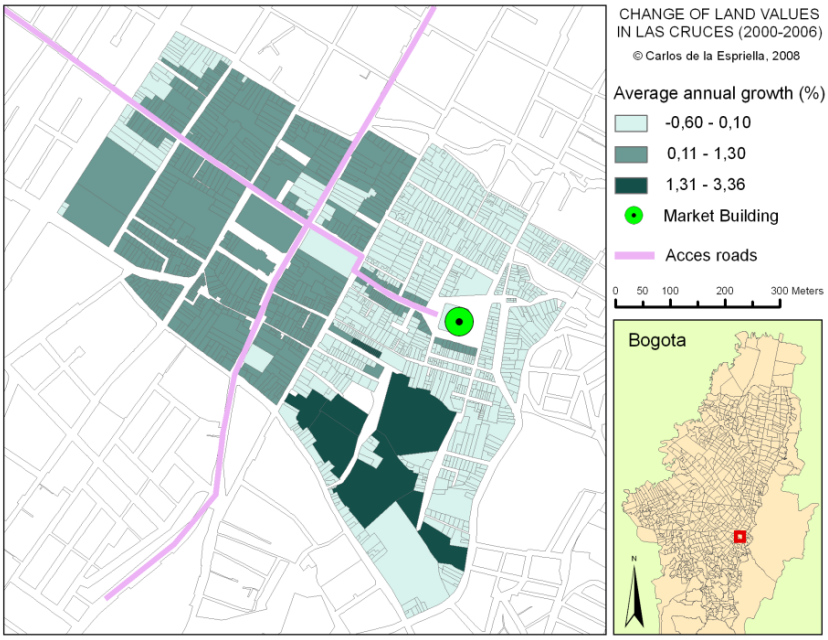


FIGURE 8
Changes in land values in Las Cruces, Bogotá (2000-2006)
Source: Paper II

Specifically, the paper argued that this behaviour of land values is the result of a combination of at least five factors:

- The governmental response to the acute social problems in Las Cruces has been timid and its actions have focused on physical interventions, despite theory showing that social interventions are also required to boost highly deteriorated urban areas without displacing social problems to adjacent areas. As a result, the persistence of social deterioration in Las Cruces has led to low demand for buying used properties, the absence of external private investment, and poor maintenance of its buildings.

- Interruptions and delays in the implementation of physical interventions have created expectations which have not been delivered, generating a negative counter-effect on land values. As a result, the maintenance and upgrading of local buildings are poor, and internal private investment is limited.
- The high territorial concentration of tenements in Las Cruces has contributed to residential polarization, creating on the one hand a disarticulated tenants group which is fairly powerless in relation to negotiating the cost and conditions of renting a tenement unit *vis-à-vis* their precarious circumstances (e.g. temporary residents, poor, low education, seasonal incomes), and on the other hand, consolidating stronger negotiation power in landlords, partly due to the high rents they receive and the social capital the have built up.
- Likewise, limited reinforcement of rental regulations and a high demand for tenement units have led to poorly maintained properties and substantial high prices for letting out tenement units, to the extent that renting is far more profitable than selling the property. This, in turn, has led to low incentives to maintain and upgrade the tenement building or develop a new project within the land plots, which combined with small plot sizes, titling and legal restrictions, have limited property prices, and private investments.
- The residents of Las Cruces have a negative perception of the neighbourhood in relation to its physical and social deterioration. This internal negative perception has crossed the boundaries of Las Cruces and has affected the external potential demand for the neighbourhood.

The second case study is reported in Paper III, which has the title "*A Technique for Small Geographical Scale Poverty Analyses: Its Application in the Case of Liberia, in Costa Rica*". The objective of this paper is to test the capacity of the proposed technique (TSTP™) to explore the links amongst social housing, poverty and inequality; the effects of the implementation of the selected policy; and the differences between group- and area-based targeting implementation strategies. Three main findings emerged:

First, it was found that the lack of an integrated approach in the implementation of a social housing policy in Liberia has led to excluding the poor from access to opportunities required for their upward social mobility. The paper illustrated which Liberian beneficiaries of the social housing policy are poor (see Figure 9), and in which different and interrelated ways. It showed that 63% of the land occupied by the studied social housing units is located in urban areas with medium or high degrees of poverty, and 69% is located in urban areas with medium or high degrees of inequality. This finding is relevant as the northern section of the city, which is mostly composed of social housing projects, used to be rural – and not necessarily poor – prior to the construction of social housing projects.

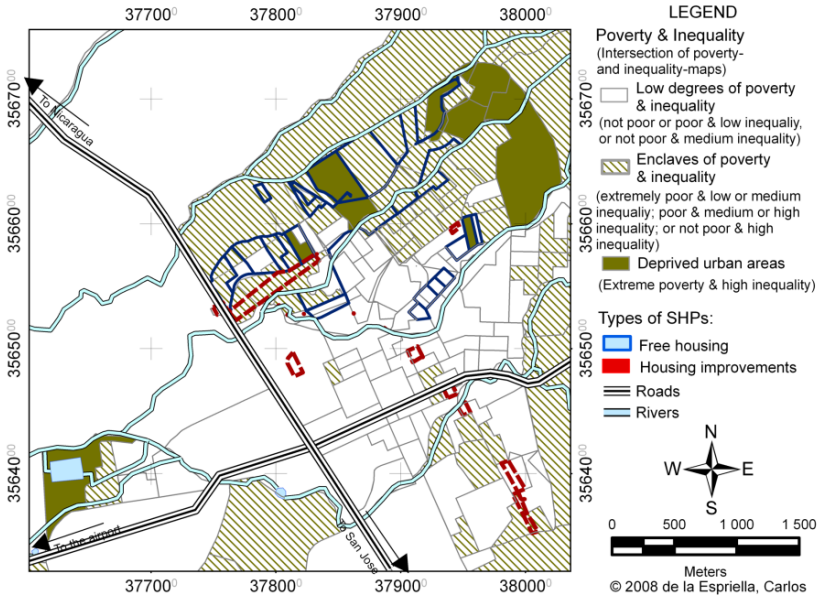


FIGURE 9
Location of social housing projects and distribution of poverty and inequality combined in Liberia

Source: Paper III

Second, it was also found that the implementation of the social housing policy in Liberia has contributed to the generation of a north-south poor-rich territorial polarization pattern, which consists of the predominant location of the poor in the north and the rich in the south of the city. Hence, the paper argued that part of the responsibility for this finding lies with poor planning and coordination in the implementation of social policies, as opposed to an integrated planning approach. Therefore, the paper advocated the need to pay more attention to coordination of the implementation of the social housing policy in Liberia with the aim of reducing poverty.

Lastly, it was found that the implementation of the social housing policy in Liberia has been more concerned with its short-term outcomes and group-targeting strategies, by which households with housing needs and low income have been targeted. As a result, the housing policy has been able to provide housing units with durable materials, solid construction techniques, and a rapid execution to almost 20% of its population, as well as reduce the housing deficit substantially. However, the focus on short-term outcomes and group targeting strategies has also contributed to clustering the poor, generating socioeconomic territorial polarization and poverty traps. Subsequently, this has contributed to the increase of insecurity and crime, and the growing distrust of local authorities and government. The paper argued that this in turn is posing new challenges to public institutions, decision-makers and urban planners, who now need to cope with volatile and changing environments, imposed by the clustering of the poor, while they manage to identify key urban areas to allocate annual budgets in more efficient and effective ways. Therefore, the paper called for reflection on how, even when the

focus on short-term outcomes and group-targeted strategies are important in the effort to reach vulnerable social groups, a long-term approach and area-based targeting strategies are also vital to improve the conditions of deprived urban areas and therefore combat territorial polarization, if applied in an integrated and coordinated way.

In that process, four dimensions of poverty were calculated and mapped to identify the geographical distribution of different degrees of poverty and inequality, and deprived urban areas with high degrees of poverty and inequality combined. This analysis was then used to set a group of land-based actions needed to improve the characteristics of such deprived urban areas to reach city standards (see Figure 10). This list of actions was subsequently discussed with different stakeholders in urban planning, in a workshop in Liberia, to agree on a feasible plan of actions.

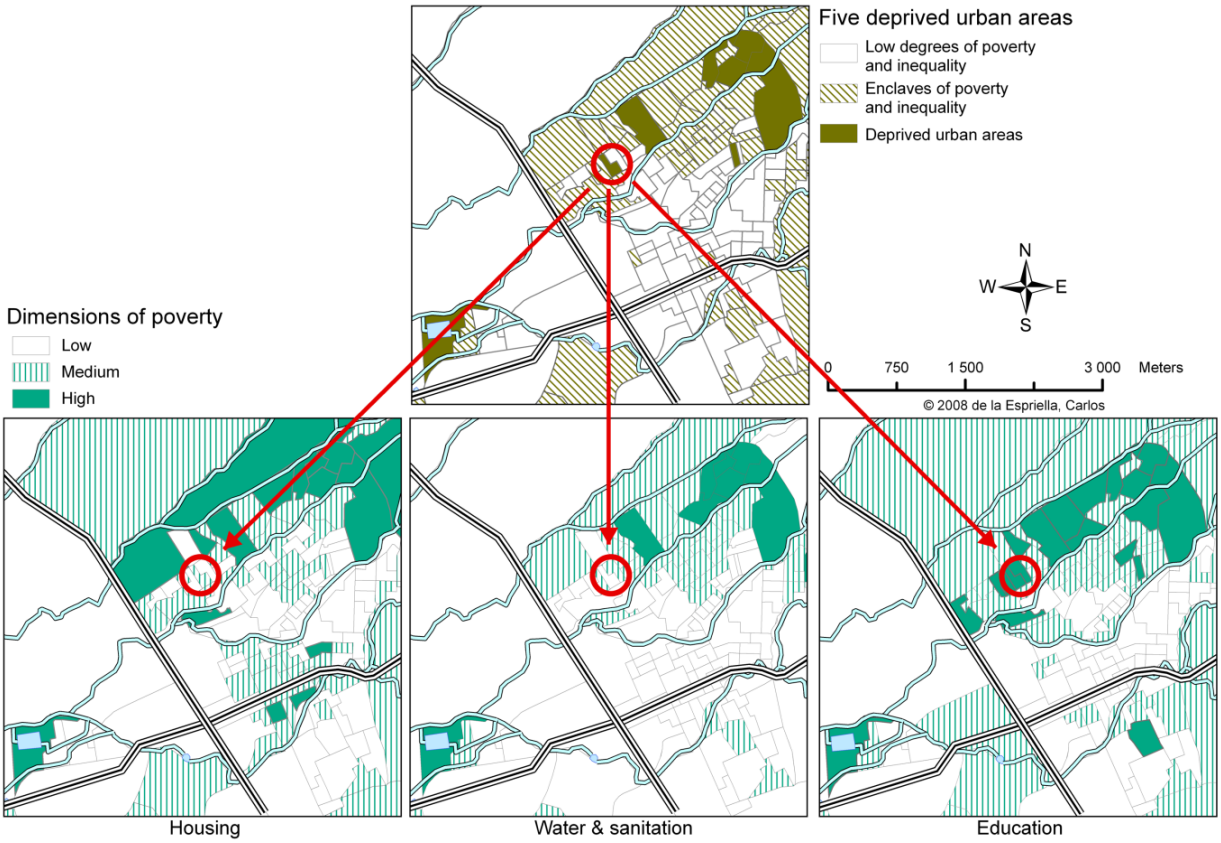


FIGURE 10
Process to define actions to improve the characteristics of deprived urban areas in Liberia.

Source: Paper III

In summary, the TSTP™ was applied in two different studies, which were processes where it was found that the TSTP™ has potential to promote a long-term approach in urban planning and support an integrated planning practice, not only as a method to visualize the geographical distribu-

tion of poverty, but also as a tool to promote dialogue between different planning stakeholders; hence addressing the third objective of the research.

Particularly, it was found that in the Las Cruces study, the application of evidence-based poverty maps suggested the need to combine social and physical interventions to reduce poverty without displacing social problems to neighbouring areas. In the Liberian study, the application of the TSTP™ shows the long-term effect of an ill-applied social housing policy that, despite providing a shelter which is considered to be decent in Costa Rica, has geographically concentrated the poor and limited their opportunities for upward social mobility. The use of the TSTP™ in the Liberian study also helped to articulate different stakeholders' views on a plan of actions to improve the characteristics of targeted deprived urban areas to reach city standards.

5.4 Administrative angle: the applications of the proposed technique in urban planning

This section summarizes the main findings that address the fourth objective of the research: "*to analyze in which functions of urban planning the proposed technique can be applied, and reflect on its capacity to attract public participation and promote accountability and transparency.*" The findings are extracted from Paper IV, which is titled "*Applications of Poverty Maps in Urban Planning in Cities of the South: Examples from Liberia, in Costa Rica*". The main finding of this paper is that the proposed technique shows potential to be used in at least four functions of urban planning: appraisal, simulation, informing decision-makers and monitoring.

In relation to the appraisal function, the paper found that the tool can be used to visualize single or compound indicators in poverty maps. Maps of single indicators are displayed in relation to the concept of 'dimensions of poverty', and maps of compound indicators are displayed in relation to the concepts of Total Poverty, Territorial Inequality and Target Areas, which respectively show the proportion of total poverty in every territorial unit of the city, the proportion between not-poor and poor households in every territorial unit in relation to the general composition of the city as a whole (Index of Dissimilarity), and the degree of poverty and inequality combined. Hence, it was found that the combination of poverty and inequality maps successfully helps to identify small deprived urban areas with a clearly demarcated territory in which to allocate scarce resources in targeted land-based actions (see Figure 11).

Concerning the simulation function of urban planning, the paper found that the use of the TSTP™ allows its users to modify the original census-tract data and display a 'simulated' poverty map in which the studied dimension of poverty is reduced or increased. Hence, it was found that the application of TSTP™-like techniques helps its users to

propose actions that may lead to preventing failed investments or overcoming their current situation, with awareness of the resources, capacities and limitations, but inspired by a model of the city that serves as a point of reference from which to judge, not so much to what extent they are reaching the goal, but how things are progressing from the point of departure.

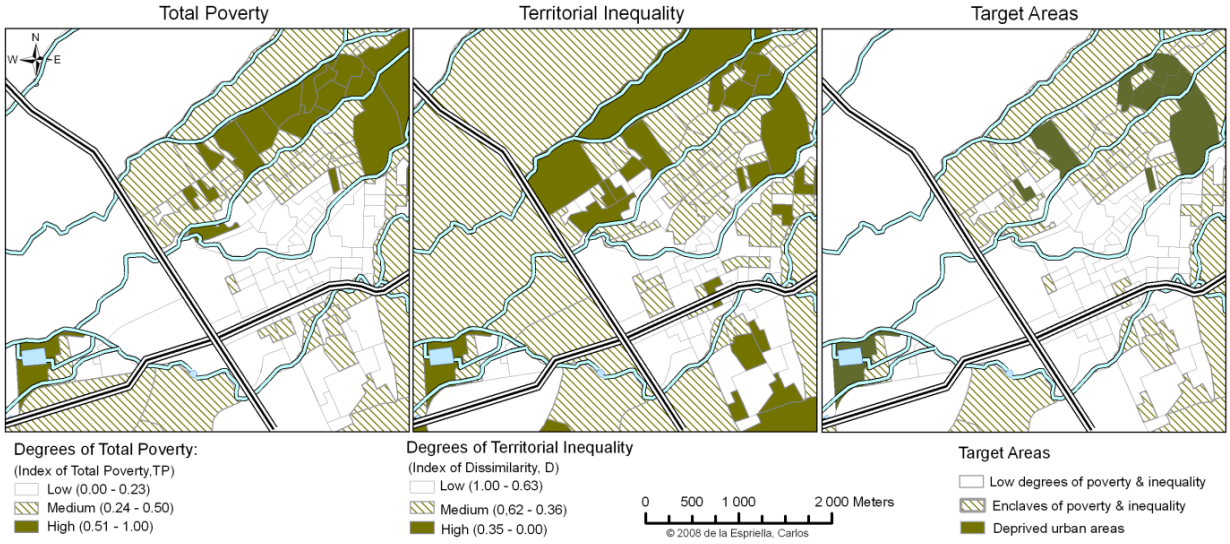


FIGURE 11
Overlapping of poverty and inequality maps to Identify deprived urban areas in Liberia

Based on: Paper III

In relation to the function of informing decision-makers, the paper found that the TSTP™ can be used to promote dialogue between different actors involved in urban planning in order to reach a feasible pro-poor plan of actions. Thus, the paper argues that the real value of integrated information systems for smaller administrative units such as the TSTP™ comes when residents, community organizations, and urban planning offices are able to access, review and use the information to inform decision-making processes.

Concerning the monitoring function of urban planning, the paper found the need to pay more attention to the long-term effects of the implementation of social policies by means of urban planning with the aim of reducing poverty. In that sense, the use of TSTP™-like techniques can help to set the bases for implementing more pro-poor social policies.

In summary, it was found that the proposed TSTP™ can be applied in at least four functions of urban planning, namely: appraisal, simulation, informing decision-makers and monitoring. In this regard, this section addresses the fourth objective of the research.

5.5 Availability and management of census-tract data

This section presents findings in relation to availability and management of census-tract data. The findings are drawn from the comparison of these issues in the four pre-selected cities (Chinandega, Comayagua, Liberia and Bogotá) and the availability and management of census-tract data in the city of Malmö, in Sweden, in which a pre-field work study was conducted to establish the equations and type of data required to be collected in the final studies. The findings are organized in according to three themes: *(i)* characteristics of cartography and census-tract data (statistical data from small geographical units); *(ii)* issues of ownership, management and use of census-tract data and cartography; and *(iii)* the links between urban planning, census-tract data and cartography.

Characteristics of Census-tract data and cartography

This sub-section presents three interrelated findings drawn from the cities' pre-selection process (see Section 3.2): *(i)* the production of census-tract data and cartography depends on the capacity to produce them and the need for these, and their quality, availability and reliability depends greatly on an offer-demand process; *(ii)* when census-tract data or cartography are not easy to access, or relevant to their user, a duplication of efforts occurs in their collection and production; and *(iii)* when this duplication occurs, census-tract data and cartography from different sources seldom match.

First, it was found that production of census-tract data and cartography depends on the need for them, and that their quality, availability and reliability depend to a great extent on an offer-demand process, in which the characteristics of data offered significantly depend on the demand that exists for these. For instance, parishes in Sweden started to register their inhabitants as early as 1686, as statistics were needed to charge taxes and enlist personnel in the military forces. Over centuries the Swedish statistics system has deepened and broadened and has been put to the service of central, regional and local governments, private institutions, and civil society in general. In 1997, Sweden's Statistical Databases (SDD) became accessible on the Internet, and in 2001, access became free of charge. Likewise, the development of statistical evidence in Latin America is normally associated to requirements of central governments. For instance in Colonial times, statistics were collected when parishes registered their inhabitants to assess the advance of Catholicism in the new colonies. During the 19th century, isolated censuses were commissioned by central governments to assess the real number of inhabitants in the new independent countries, as well as their occupation, age and distribution. Modern statistics departments were established by central governments throughout the 20th century with the purpose of – in addition to counting number of inhabitants – carrying out social, eco-

nomic and military projections required for sovereignty purposes. Later on, the Economic Commission for Latin America and the Caribbean (CELADE)[37] and the Program for the Improvement of Surveys and the Measurement of Living Conditions in Latin America and the Caribbean (MECOVI)[38] have contributed significantly to the production of statistics that can be used for development purposes. Similarly, cartography is also the result of central government requirements. For instance during the 1932 armed conflict with Peru, the Colombian government commissioned the preparation of military maps, which years later led to the creation of the National Cadastre Department.

Second, it was found that when census-tract data or cartography are not easy to access or relevant to their user, public and private institutions go out to collect their own data in the format and quality they require. This generates extra costs and duplication of efforts. For example in Honduras, although the national census is collected once every ten years by INE (*Instituto Nacional de Estadísticas*), the municipality of Comayagua carried out its own census in 2000 to define its development strategy. Maps are also produced in parallel by national governments, local governments, and private institutions. For example, with Resolution 1174 of 1999, Bogotá consolidated in one institution the cartography of Bogotá, which previously had been produced by three different public institutions including the National Cadastre (*Instituto Geográfico Agustín Codazzi*, IGAC), the National Statistics System (*Departamento Administrativo Nacional de Estadística*, DANE), and the city's Cadastre Department (*Departamento Administrativo de Catastro Distrital*, DACD).

Third, it was also found that when duplication occurs, census-tract data and cartography from different sources seldom match, in part because they are produced for different purposes. For instance in Honduras, the paper maps used for the census of 2001 does not match municipal maps. Moreover, the codes for geographical units in the national census map of Comayagua do not match those of census census-tract data and the delimitations of territorial units are hard to understand, as they have been changed and re-written on the same paper map repeatedly, without recording the changes in a separate methodological document.

Ownership, management and use of census-tract data and cartography

This sub-section discusses issues of data ownership, and management, and the importance of clear understanding by the final user as regards to which institution has what type of data and how to obtain it, which is relevant to avoid duplication of efforts and for data consistency. The Swedish system to obtain data will be used as a reference because there census-tract data and cartography are managed by central statistics offices, and are distributed either by such offices or by local authorities via their offices or their Internet site, and users have a clear understanding of procedures and sources of data.

37 CELADE was established by the United Nations and the Chilean Government in 1957 to study demographic issues in Latin America.

38 MECOVI was set up in 1997 by the Inter-American Development Bank (IADB), the World Bank and CELADE to improve surveys and measurement of living conditions in Latin America and the Caribbean.

Despite institutions responsible for statistics and cartography being clearly defined in the four Latin American pre-selected countries (see Table 11), it was found that the system to obtain data is not necessarily evident to the users, or there are barriers and limitations to accessing data. As a result, central statistics are generally limited to being used by national authorities for policy making, budget allocation and follow-up studies, as well as by multinational organizations for global comparisons and studies. Yet in times of decentralization, census-tract data is seldom used by local authorities, urban planners or civil society organizations for urban planning of medium-sized cities (as stated by an INEC official at a workshop held in San José, Costa Rica). On the other hand, census-tract data describing neighbourhood characteristics relevant to the residents is seldom available in central statistics (e.g. lack of sewerage due to missing infrastructure, capacity, maintenance). This census-tract data is essential for planners to understand causes and effects of land-related dimensions of poverty, and therefore proposed actions, projects and programmes that can be effective. For example, the institute responsible for statistics and census in Nicaragua is INEC (*Instituto Nacional de Estadística y Censos*). Yet for the purpose of this research MECOVI Nicaragua had to act as an intermediary with INEC in order to obtain the data required for the pre-selection, as INEC only provide information to a list of agencies. Finally, the 2005 census was not available because statistics were not yet digitalized. Eight months later, during a strike of government officials, some census data got lost, compromising its representativeness.

TABLE 11
Institutions managing census-tract data and cartography in Malmö and the pre-selected cities

	Ownership and management	
	Census-tract data	*Cartography*
Sweden	Statistics Sweden (www.scb.se/)	National Cadastre (www.lantmateriet.se/)
- Malmö	Planning Units of the Municipality (www.malmo.se/stadsbyggnadskontoret)	
Nicaragua	National Statistics and Census Department, INEC (www.inec.gob.ni/)	
- Chinandega	Planning Unit of the Municipality	
Honduras	National Statistics and Census Department, INE (www.ine-hn.org/)	INE (www.ine-hn.org/) Land Administration Project, PATH
- Comayagua	Planning and Statistic Units of the Municipality	
Costa Rica	National Statistics and census Department, INEC (www.inec.go.cr/)	
- Liberia		Cadastre Unit of the Municipality
Colombia	National Statistics, DANE (www.dane.gov.co/)	
- Bogotá	Department of Planning, DAPD (www.dapd.gov.co)	Cadastre Department, DACD (www.catastrobogota.gov.co/)

The institute responsible for statistics and census in Honduras is INE (*Instituto Nacional de Estadísticas*). INE provided a paper copy of the map of Comayagua divided into districts, neighbourhoods and territorial units. A digital map of Comayagua was acquired from PATH[39] in order to convert INE's paper map to a digital format. Unfortunately, the codification systems for both map and census are different, making it impossible to match census-tract data and cartography. Owing to these restrictions, additional information was collected from the Municipality of Comay-

39 The Honduras Land Administration Project (PATH), which is financed by the World Bank, seeks to develop an integrated and decentralized land administration system. The system aims to provide accurate information on urban and rural land parcels and cost-effective land administration services.

agua. Yet documents explaining sampling and methodology were not available, making this information unreliable.

Links between urban planning, census-tract data and cartography

This sub-section presents findings in relation to two interconnected links between urban planning, census-tract data and cartography: the link between cadastre and urban planning, and the link between quantitative data and poverty impact assessment.

The first and maybe the most direct link is the one that exists between cadastre and urban planning. Section 2.3 described how the nature of planning is centred on land issues – what it is used for, how it is managed and who controls it. The cadastre, on the other hand, manages land information systems, including functions such as land registration, compiling information on land characteristics, uses, values and tenure, land use planning, land valuation and land policy aspects. Thus, land is the link between cadastre and urban planning, including issues related to access to land, land use planning, access to public services and utilities and land tenure. Some specific findings are presented below.

First, the pre-selection process highlighted the need to integrate cadastre systems with other information systems in order to avoid duplication and to facilitate access to data and analyses to support decisions regarding land use and planning.

Second, it was found that the administration of the cadastre is highly centralized in the pre-selected countries. Most cadastre departments are located in their country's capitals and sometimes they are complemented with regional offices in some provincial capitals. However, even if land administration is present in the regions, its administration depends on funds from central governments, and the idea of local administration through local authorities basically funding its activities on the basis of locally levied taxes and fees is not very developed.

Third, another well-known institutional restraint has to do with lack of resources, financial and human being the most obvious. But there is also a lack of methodologies and methods representing or addressing the real problems on the ground.

Fourth, it was also found that possibilities for development or improvement of a cadastre system vary as traditions, legal systems, administrative practices and access to human and technical resources vary. For example, in 2005 the provision of security of tenure was one of the most important driving forces of the cadastre in Honduras; the need to create information for land administration, planning and construction was a key aspect in Nicaragua; while in Costa Rica the priority rests in the need to improve municipal land taxation systems; and in Colombia it focuses on how to use cartography for strengthening governance.

The second link, between planning and census-tract data, lies in how to produce and obtain quantitative data required for poverty impact assessments. These assessments in turn may enable planers to identify

deprived urban areas and propose a set of land-based actions to improve them, or to simulate the possible impact a project may have on poverty reduction.

In this respect, three main findings arose from the pre-selection process. First, income or expenditure are adequate indexes to assess socio-economic urban residential segregation, yet they only show one dimension of poverty, and reliable and representative census-tract data on income or expenditure can hardly be obtained in cities of the South, which is why the Unsatisfied Basic Needs method seems to be appropriate for use in poverty studies in cities of the South. Second, the Index of Dissimilarity (D) proved useful to identify territorial units with the highest degrees of urban residential segregation in relation to a set of land-related dimensions of poverty. Lastly, calculations of the Index of Dissimilarity (D) vary depending on the geographical scale of the analyses. For example in Malmö, D is 0.25 at district level and 0.35 at territorial unit level. This means that 25% or 35% of households respectively would need to be relocated to another district or territorial unit of the city to obtain an even distribution in the city as a whole. Thus, the calculation of D at smaller geographical scale gives a more clear understanding of patterns of urban residential segregation, as one homogeneous district can hide smaller territorial units with very different degrees of urban residential segregation.

In summary, it was found that there is a need to further develop statistical and cartographical information systems that reach small administrative units in cities of the South. In addition, there is a need to use information systems to promote dialogue between actors involved in urban governance and specifically in urban planning, in order to attract public participation in, and enhance accountability and transparency of, decision-making processes in a way that proposed land-based actions respond to local needs, including those of the poor. Likewise, the study found that despite statistical information systems being constrained by data limitations, they could promote data development as producers or users of data realize that they get effectively used.

5.6 Validation of the proposed technique

The previous sections have shown conceptually and empirically that the use of the TSTP™ may be of importance to promote a pro-poor planning practice, not only as a technique to visualise the geographical distribution of poverty, but also as a tool to promote the dialogue between different stakeholders of urban planning. In order to achieve a greater degree of generalization, the proposed technique was exposed to scrutiny for its validation in a series of workshops, the findings of which are presented below.

Seventy eight questionnaires were filled in and returned during five workshops that were carried out to assess the degree of relevance, sustainability and feasibility of the TSTP™ (see Section 4.3 for a description

of the five workshops and workshop material and analysis in Appendix D). The main findings from the workshops are presented below.

In relation to the relevance of the TSTP™, 82% of the total respondents considered there is a need for additional methods to compare the effects of land-based actions on poverty reduction. Some of the methods currently used by respondents include participatory planning, technical assistance, surveys, interviews, field visits, cartography analysis, Unsatisfied Basic Needs analysis and literature review. Some current limitations mentioned by the respondents are linked to influence and manipulation in participatory methods, budget restrictions, lack of human and technical capacities, poor governance, poor institutional cooperation and continuity of programmes and staff members, low quality of data and bias to borrow methods between different disciplines.

In relation to the sustainability of the TSTP™, the questionnaires show that 78% of the respondents agreed or strongly agreed that the TSTP™ could be appropriate for presenting data in a cartographic format; 93% were neutral, agreed or strongly agreed that the TSTP™ could provide what they need when conducting a poverty assessment; and 59% were neutral, agreed or strongly agreed with the need to have new methods to compare the effects of area-based actions on poverty reduction.

Regarding the feasibility of the TSTP™, it was found that 86% of the respondents considered the TSTP™ useful and thought it could be implemented in their contexts. In relation to statistical data, it was found that 52% of the respondents regularly or often used statistics, 75% were highly or regularly familiarized with statistical data, and 84% agreed or strongly agreed that it is useful to present statistical data in maps. However, 49% never or seldom had found trained personnel to analyze statistical data, 59% never or seldom had access to reliable and timely data, and 63% never or seldom had access to helpful methods for analyzing statistical data. In relation to cartographic data, it was found that 45% of the respondents used poverty maps to compare the effects of area-based actions on poverty reduction and 64% reported having access to technology to analyze statistical data in maps, yet 66% reported never or seldom having access to reliable and timely cartography.

Subsequently, the literature review (see Chapter 2) and the empirical application of the proposed technique (see papers II and III) were compared to establish some limitations of the proposed technique. These limitations are presented below, organized in relation to data, methodological and institutional limitations.

In relation to data limitations, the quality of statistics and cartography was found not to be yet at the stage required for pro-poor urban planning everywhere, as data tend to derive from censuses that are normally run at intervals of ten years, which compromises the delivery of data in a timely way, or from sample surveys that are not large enough in size to permit estimates of poverty dimensions of highly disaggregated geographical units.

Another data limitation has to do with issues of ownership and management, as it was found that the use of data by the general public is still restricted, possibly due to its implications as a source of power. In the same line of thought, it was found that data is often manipulated for political purposes and campaign activities, generating a distortion of the potential it has.

In relation to methodological limitations, it was found that even if estimates of poverty at the community level are fairly precise, simple geographic targeting of resources to communities may not be particularly helpful if variations in living standards within communities are pronounced. In this respect, geographic targeting will be most effective if poverty maps reveal both great variations in poverty levels across communities and low levels of inequality within the poorest communities.

In addition, even when the TSTP™ helps its users to identify deprived urban areas and their characteristics, further precision to identify causes and effects of poverty in order to propose effective actions to upgrade such areas need to rely on intra-community mechanisms.

In relation to institutional limitations, the lack of coordination between and amongst sectors and institutions is palpable in the innumerable unfinished infrastructure works, or the duplication of efforts when carrying various works in the same urban areas in an articulated manner. This in turn was found to compromise the possibility of assessing the long-term impact of such programmes and projects in, for example, poverty reduction. Among the many institutional effects, it was found that this lack of coordination has contributed to the prevalence of a short-term vision in relation to the programmes and projects that are being implemented, in an effort of institutions to exercise their mandate and use resources they have been allocated in a timely way.

Another institutional limitation is the centralized administration of resources for planning, in relation to which it was found that for example statistics and cartographic evidence are often managed at central level, or resources for their regional management are decided at central level.

A last institutional constraint has to do with the differences in terms of resources (e.g. financial, human, technical) between large and medium- or small-sized cities in order to unleash the potential of a tool like the TSTP™ for local planning. The application of the proposed technique showed that these last two constrains currently compromise the possibility of pro-poor planning affecting the way that planning practices could effectively respond to local needs and priorities in a timely way.

5.7 Conclusions

The first outcome of the research consists in the articulation of a key set of concepts (poverty, inequality, urbanization, decentralization and urban governance), a clear understanding of which may assist urban planners in addressing the phenomenon of urban poverty with the actions they design, implement and monitor.

The second outcome is the conceptualization and development of an operational pro-poor planning technique – referred to as the TSTP™ – which may help urban planners to visualize the effects on poverty reduction of the land-based actions they are responsible for and be better equipped to inform decision-makers on these, using poverty maps drawn from statistical evidence.

Subsequently, the proposed technique was tested in two case studies to find that the TSTP™ has potential to promote a long-term approach in urban planning by means of pursuing an integrated planning practice, not only as a method to visualize the geographical distribution of poverty, but also as a tool to promote dialogue between different stakeholders in urban planning.

Planning theory was compared with the empirical studies to find that the proposed TSTP™ can be applied in at least four functions of urban planning, namely appraisal, simulation, informing decision-makers and monitoring.

The cities' pre-selection process pointed to the need to further develop statistical and cartographic information systems that reach small administrative geographical units in cities of the South.

Finally, the degree of relevance, sustainability and feasibility of the TSTP™ was validated in a series of workshops with a total of 78 respondents. In this step of the research, it was found that a technique such as the TSTP™ is needed to promote a pro-poor planning practice in cities of the South. However, it was also found that a technique such as the TSTP™ alone cannot cope with the limitations mentioned above, which is why the analysis of the theory, case studies and workshops concluded that a model (set of principles) that includes the proposed technique and tackles current limitations of planning practices to address poverty is needed. Such a model of how planning practices in the South ought to work to address poverty reduction is presented in the following chapter.

6 A Pro-poor planning conceptual framework

The previous chapter has presented the outcomes and findings of the research in relation to its objectives. It was concluded that a TSTP™-like technique alone cannot cope with the current limitations of urban planning, which leads to the development of a pro-poor planning conceptual framework. In this regard, and on the basis of the research described here, this chapter presents some normative suggestions for planning practices in cities of the South to be better equipped to address land-related issues of urban poverty, thus responding to the aim of the research: "*to propose a conceptual framework that may help urban planners in cities of the South – using evidence-based poverty maps – to comprehend and visualize the effects of land-based actions on poverty reduction in order to be better equipped to inform decision-makers.*" (see Section 1.2). These normative suggestions are structured in a model of how planning practices in cities of the South ought to work in order to contribute to poverty reduction. Given this researcher's understanding of planning theory as evolving from a constant dialogue with planning practices (see Section 2.3), the proposed model is seen as a starting point from which to continue evolving as it is adapted and used in different planning practices.

The model was articulated from comparing the theory with the outcomes and findings from two case studies, five workshops with 78 respondents from 24 countries in the South, six international seminars and 17 in-depth interviews with key informants, which to a certain degree represent current urban planning practices in cities of the South.

The normative suggestions are motivated by three driving forces of the research endeavour, and the adoption of a relativist tradition in planning theory. As explained in Section 1.1, the three most relevant motivations that led to this research are the strengthening of evidence-based decision-making, the inclusion of a broader range of stakeholders in planning practices, and the pursuit of an integrated long-term approach towards urban planning. In addition, Section 2.3 explained that the research is inscribed in a relativist tradition of knowledge construction in urban planning that follows a cyclical-incremental tendency in which observations and experiences of urban planning practices are valuably used to reflect, conceptualize, experiment and suggest modifications to specific aspects of planning, which in turn may nourish those same planning practices (see Figure 4, in Section 4.1).

The proposed model is hereby referred to as the 'pro-poor planning conceptual framework', which suggests a possible course of actions for planning practices to contribute to poverty reduction. It includes six crite-

TABLE 12
Criteria and actions of the pro-poor conceptual framework

ria from which to evaluate the development towards pro-poor planning practice in cities of the South, four of which are straightforward, and two of which cut across the previous four criteria as illustrated in Table 12.

Criteria	*Actions*	*Additional Criteria (cutting across the previous criteria)*	
		5. Promoting public participation	*6. Strengthening accountability and transparency in urban planning and governance*
1. Supporting evidence-based decision-making	To develop information systems	To use census-tract data to identify who the poor are, their characteristics and the urban areas where they live, and to assess the impact on poverty reduction of land-based actions	To use census-tract data as a mechanism to strengthen controls of public institutions and their actions
	To pursue the unification and consolidation of dispersed information systems and the methods used for data collection and management		
	To build capacities for evidence-based monitoring land-based actions		
	To incorporate an applied-oriented approach to decision-making processes	To build up community data intermediaries together with the national networks that support them	
	To support the effective decentralization of statistical and cartographic information systems		
2. Promoting area-based targeting strategies	To develop methodologies for identifying deprived urban areas	To study deprived urban areas, where normally the poor live, as a way to gain insight into the needs of the poor	
	To promote area-based poverty studies		
	To promote area-based targeting strategies in budget allocation		
3. Promoting a long-term approach to planning	To promote poverty impact assessments of planning-related social policies	To assess the impact on poverty reduction of land-based actions as a way to measure how these actions are responding to the needs of the poor	To build in planning practices the capacity to monitor their own activities, in order to learn from past experiences, and change direction if required
	To strengthen career civil service schemes		
	To promote the preparation of master plans or evaluations by local planning practices		
4. Supporting the integration and articulation of land-based actions	To stimulate multidisciplinary studies and evaluations	To attract different actors to diagnosis and planning processes via the triangulation of methods and actors involved in the identification of deprived urban areas and the design of land-based actions to upgrade these areas	To attract the participation of civil society organizations in monitoring the allocation of resources and the execution of projects
	To promote the combined analysis of various planning-related indicators in order to be able to assess the impact on poverty reduction of proposed or implemented land-based actions		
	To integrate and articulate institutional structures other than local authorities		

6.1 Supporting evidence-based decision-making

With the use of census-tract data, the pro-poor planning conceptual framework seeks to assist urban planners to identify different dimensions of poverty in the territory, and design, implement and monitor pro-poor land-based actions more effectively and efficiently. The following five actions are suggested to achieve this purpose:

- To develop information systems. These information systems must combine census-tract data and cartography that could be disaggregated at inter- and intra-urban levels, and they should be developed

in accordance with local needs, priorities and resources. Data itself should be reliable, timely and pertinent to the user, and its collections should aim at building longitudinal databases. Section 3.2 mentioned that limitations of census-tract data compromised the possibility to apply the proposed technique in two pre-selected cities, and Section 5.5 elaborates on these limitations including issues of data quality, reliability, representativeness and level of aggregation, and how data systems are context-sensitive, with the use and management of census-tract data varying as it responds to different contexts.

- To pursue the unification and consolidation of dispersed information systems and the methods used for data collection and management. This action seeks to, on the one hand, clarify to the final user which institutions have what type of information and how to obtain it, and on the other hand reduce duplication of efforts in data collection and management. To accomplish this action, a clear understanding of different actors, users and their needs for data is required, as well as the strengthening of communication between final users and institutions collecting and managing data. This action is in part the result of data limitations found in Comayagua and Chinandega during the case study pre-selection process, which was reported in Section 3.2 and was further discussed in Section 5.5.
- To build capacities to monitor land-based actions, based on evidence. Section 1.1 discussed limitations of staff capacity in cities of the South to effectively and efficiently manage and apply information systems for monitoring land-based actions. This limitation was confirmed in the workshops summarized in Section 5.5. To address this limitation, capacity building, continuity of middle management officials and technical assistance should be reinforced.
- To incorporate an applied-oriented approach to decision-making processes. Section 3.3 mentioned how the change from highly politicized government practices to a more technical-driven and applied-oriented governance practice in Bogotá has, among other things, increased the use of census-tract data in decision-making and the monitoring of land-based actions, which in turn have led to more effective results.
- To support the effective decentralization of statistical and cartographic information systems, possibly by promoting local authorities funding these activities using locally levied taxes and fees. As suggested in Section 3.2 and expanded in Section 5.5, actions on this front seek to assure continuity of data collection and management, improve the quality of local information systems and make sure they are able to respond to local needs.

6.2 Promoting area-based targeting strategies

The pro-poor planning conceptual framework promotes the implementation of area-based targeting strategies for poverty reduction. As explained

in Paper III, group-targeted strategies have largely been used for poverty reduction in Costa Rica, among other reasons, because targeted groups – such as female heads of household, poor or displaced households – are relatively simple to identify. However, the exclusive application of a group targeting strategy may generate poverty traps. For example, Paper III showed how the application of a group-target strategy in the implementation of the social housing policy in Liberia ended up concentrating the poor in a specific district of the city, which in turn attracted differentials in service provision, trapping the poor living in those areas. Area-based targeting strategies can help to reduce poverty traps as conditions of targeted deprived urban areas are improved, reducing poverty and territorial polarization in largely poor and very unequal cities. The following three actions are suggested to promote pro-poor area-based targeting strategies:

- To develop methodologies for identifying deprived urban areas. Methodologies that enable their users to identify deprived urban areas and understand their characteristics are fundamental for the effective allocation of resources aiming at poverty reduction. Papers III and IV showed that the TSTP™ was helpful to identify deprived urban areas in Liberia.
- To promote area-based poverty studies. These studies are useful to highlight geographical variations in wellbeing and poverty, understand cause-effect relationships between poverty and the territory and identify areas where interventions and targeting of resources are required (see Section 2.1 of Paper III).
- To promote area-based targeting strategies in budget allocation. Traditionally, group-targeted strategies have been applied in budget allocation of social policy programmes including those related to planning. Yet area-based targeting strategies such as neighbourhood upgrading or urban renewal programmes are starting to be applied, as was shown in Paper II with urban renewal projects taking place in Bogotá, or in Paper III in relation to the area-based 'poverty eradication programme' launched in 2007 by the Ministry of Housing and Human Settlements of Costa Rica.

6.3 Promoting a long-term approach to planning

The pro-poor planning conceptual framework pursues the application of a long-term approach to planning practices, by means of promoting impact assessments of planning-related social policies. As presented in papers II and III, land-based actions have longstanding effects, which is why the impact of planning and implementation of land-based actions should be assessed in the long term. For example, poverty reduction is one of the impacts of these processes that need to be assessed over a long term. The following three actions are required to promote a long-term approach to planning:

- To promote poverty impact assessments of planning-related social policies. Both case studies have shown that the prevailing evaluation culture of planning practices is one in which policies, programmes and projects are analyzed in relation to their outputs (e.g. delivery times, number of units delivered, technical quality, etc.), while their impacts (e.g. reduction of poverty and inequality) are seldom studied.
- To strengthen career civil service schemes. The continuity of middle management officials and technical assistance must be promoted with mechanisms such as the creation and reinforcement of career civil service schemes, by which the permanence of civil servants is guaranteed.
- To promote the preparation of master plans or evaluations by local planning practices. Section 3.4 and Paper III discussed how controls over implementation of master plans by local authorities are limited when they are prepared by an external consultancy firm. The same applies to actions suggested in evaluations and monitoring and impact assessments. Commitment to the implementation of master plans or recommendations of evaluations are achieved by directly involving local planning practices – which are responsible for the implementation of such recommendations – in the preparation of such master plans and evaluations.

6.4 Supporting the integration and articulation of land-based actions

The pro-poor planning conceptual framework supports the integration and articulation of land-based actions. As suggested at the end of Section 2.3, the objective of an integrated approach to urban programmes and projects must be to address urban issues not just through 'the house and bathroom' but through inter-relationships between poverty, productivity and environment. This approach recognizes the holistic inter-relationship between economically, environmentally and socially sustainable urban development. This implies the coordination of different interventions such as basic services, education, health, nutrition and family planning as well as increasing access to infrastructure and housing. Under this approach, land-based actions should be embedded in a structured and coordinated plan of actions to effectively contribute to poverty reduction. This action plan should in turn be the result of the realistic understanding of local needs, resources available, and strengths and limitations of physical or social areas in which to intervene. The following three actions are required to support the integration and articulation of land-based actions:

- To stimulate multidisciplinary studies and evaluations. Increased contact between actors from different practices and disciplines can contribute to bridging the communication gap that exists between these.

- To promote the combined analysis of various planning-related indicators in order to be able to assess the impact on poverty reduction of proposed or implemented land-based actions. First, to develop and maintain through time indicators of different planning-related disciplines (e.g. indicators of the built environment such as public space, densities and housing design; environmental indicators such as water contamination and deforestation; infrastructure indicators such as domiciliary water and sewerage, roads, transportation; and economic and social indicators such as income, unemployment and household composition). Second, to articulate the combined analysis of such indicators in order to develop a more holistic pro-poor integrated planning practice (see for example the combination of four dimensions of poverty in Liberia, in Paper III).
- To integrate and articulate institutional structures other than local authorities. In order to promote an articulated planning practice that follows the governance approach, local authorities must coordinate their actions not only at local level, but also at regional, national and sometimes supra-national levels. In this regard, Section 3.3 argued that one of the current challenges of Colombian decentralization is to articulate and coordinate actions at regional levels. In addition, Paper II argued that the alleviation of urban poverty in, and around, Las Cruces requires managing its physical, economic and social aspects – otherwise people with social problems will simply move to neighbouring areas.

6.5 Promoting public participation

The pro-poor planning conceptual framework seeks to promote public participation as a way to capture the voice of different population groups including the poor, respond to their needs, and ultimately reduce poverty. The sub-section on decentralization in Latin America, in Section 3.1, described how apparently public participation entails difficulties in the development of policies, programmes and projects such as delays in time, possible higher costs, conflicts of interests and difficulties in adding the voice of the poor and vulnerable. It also mentioned that in an effort by governments to avoid these difficulties and retain control over their actions, participatory processes in, for example, privatization or strategic planning in Latin America, have been manipulated generating distrust of governments and calls for complementary ways to capture the people's voice. As a response to the disengagement of civil society from current public participation processes, this framework promotes the following five actions:

- To use census-tract data to identify who the poor are, their characteristics and the urban areas where they live, and to assess the impact on poverty reduction of land-based actions. The Liberian study is a good example of this action (see Paper III).

- To build up community data intermediaries, together with the national networks that support them. This action plays a crucial role in the democratization of data, serving as bridge-builders for technology, government, and the community, as suggested in Section 3.2 and expanded in Section 5.5.
- To study deprived urban areas, where normally the poor live, as a way to understand and gain insight into the needs of the poor. Detailed studies of two different deprived urban areas were discussed in papers II and III, one in the northern section of Liberia, and one in the centrally located neighbourhood of Las Cruces in Bogotá.
- To assess the impact on poverty reduction of land-based actions as a way to measure how these actions are effectively responding to the needs of the poor. For example, Paper III showed a poverty impact assessment of the implementation of the social housing policy in Liberia.
- To attract different planning stakeholders to diagnosis and planning processes via the triangulation of methods and actors involved in the identification of deprived urban areas and the design of viable land-based actions to upgrade those areas. Paper II showed the relevance of using different methods in the preparation of a neighbourhood diagnosis to better understand local dynamics and identify problems. Paper III showed the importance of involving different urban planning actors in decision-making processes in order to agree in a viable plan of actions. The more actors representing different population groups are involved in diagnosis and planning processes, the more views should be transformed into proposals to be discussed in decision-making processes, and thus the identified and prioritized actions should be more likely to represent a broader number and range of voices.

6.6 Strengthening accountability and transparency in urban planning

The pro-poor planning conceptual framework seeks to strengthen accountability and transparency in urban planning and local governance as a way to promote a more effective and efficient use of resources. The following actions are suggested to achieve this criterion:

- To use census-tract data as a mechanism to strengthen controls of public institutions and their actions. With an extensive information infrastructure in place, urban planners, decision-makers and civil society organizations should have greater access to detailed data that are vital for analyzing and monitoring changes in neighbourhoods and cities which are produced by the implementation of land-based action.
- To build in planning practices the capacity to monitor their own activities, in order to learn from past experiences, and change directions if required. Such action should enable societies to supervise and au-

dit the use of public resources, its degree of compliance with rules, outcomes and outputs obtained, as well as the consequences of these results or their final impact. Section 3.3 mentioned that the availability of census-tract data in Bogotá has promoted the development of urban observatories. Likewise, Paper IV showed that evidence-based poverty maps were used effectively to assess the relationship between deprived urban areas and the territorial location of social housing projects in Liberia.

- To attract the participation of civil society organizations in monitoring the allocation of resources and the execution of projects.

6.7 Conclusions

The proposed pro-poor planning conceptual framework is a theoretical model of how pro-poor planning in cities of the South ought to be, from which to evaluate the development towards pro-poor planning practice. In that sense, the criteria and actions outlined seek to help urban planners to comprehend and visualize the effects of land-based actions on poverty reduction in order to be better equipped to inform decision-makers. The proposed planning framework was developed in this research drawing from theory analysis, case studies, workshops, seminars and interviews. The planning framework was motivated by previous observations and experiences, and by the adoption of a relativist tradition in planning theory. The proposed planning framework followed a relativist tradition in planning theory in the sense that it was drawn from the analysis of findings which were the product of the empirical testing of a proposed planning technique, which in turn was developed based on the study of planning theory and previous observations of planning practices.

The criteria and sets of actions included in the proposed conceptual framework attempt to respond to a broader context in which planning practices in cities of the South are weak in their capacity to address urban poverty issues despite local authorities having been given more responsibilities and power to address local needs (see the concept of decentralization in Section 2.2), which makes the proposed model relevant.

Finally, the development of the pro-poor planning conceptual framework addressed the aim of the research. However, and in line with the cyclical-incremental methodology hereby used, the study suggests further testing the proposed planning framework in cities with different types of planning practices. The results of such testing may contribute to planning theory and thereafter to planning practices.

7 Conclusions

This research endeavour has been driven by the researcher's advocacy of evidence-based pro-poor planning practices that apply a long-term integrated approach. With that in mind, this last chapter presents a series of conclusions and some recommendations for further research.

7.1 Conclusions

Both economic growth (pro-growth) and inequality reduction (pro-poor) are mechanisms to reduce poverty. Theory and evidence have been presented explaining how in Colombia and Costa Rica pro-growth mechanisms have been privileged over pro-poor mechanisms, as a result of which poverty persists, the gap between the rich and poor has increased, and social and urban polarization has become aggravated.

With decentralization reforms in place, the implementation of pro-growth and pro-poor programmes and projects have become a responsibility of local authorities; however, the research showed evidence that suggests that few local authority planning departments – and local planning practices in general – in Latin America are equipped with key concepts and technical, empirical or administrative capacities which they need in order to assume a challenge of this magnitude. As a response, the researcher proposed a planning tool, and based on its development, application and validation, also proposed a model for integrated planning, both of which may assist local urban planners and decision-makers to find ways to get the pro-growth/pro-poor equation right.

Specific conclusions are discussed below. These are organized in relation to the four objectives and the aim of the research (see Section 1.2).

About the concepts for a pro-poor integrated planning practice

Two sets of conclusions were reached in relation to some concepts which were identified as being required to structure a pro-poor integrated planning practice. Chapter 2 discussed the soundness of using an evidence-based poverty map technique in urban planning, and Chapter 3 discussed the causal link between decentralization and democratic development in Latin America. The respective sets of conclusions are summarized below.

Chapter 2 argued that the use of evidence-based poverty maps may be of importance to promote a pro-poor integrated planning practice, especially as contemporary planning theory falls under a combined relativist-constructivist tradition in knowledge construction.

Specifically, Section 2.3 showed that the definition and use of poverty and inequality indicators – and hence poverty and inequality maps – follow a relativist tradition of knowledge construction, as they are not neu-

tral and carry certain amount of bias for developers and users. Then, it presented arguments that position this research within urban governance theory, in which urban planning is seen as a mechanism to facilitate dialogue between different stakeholders (constructivist), aiming at becoming more effective in the delivery of land-based actions and ultimately respond to citizen needs. However, the recognition of planning as a relativist and socially constructed process does not exclude the need to rely on statistical evidence to design, monitor and assess the impact of land-based actions in a quantitative way, and thus be better equipped to inform decision-makers on the results of such designs and assessments.

Hence, this conceptual angle chapter concluded that the use of an evidence-based poverty map technique is of significant importance to promote a pro-poor integrated planning practice, not only as a method to visualize the geographical distribution of poverty, but also as a tool to underpin dialogue amongst different stakeholders in urban planning, both when defining indicators to measure poverty and when analyzing and discussing the results.

On the other hand, Chapter 3 showed that with four fifths of its population living in cities, Latin America is now essentially an urbanized region, which is characterized by a combination of large metropolis and a system of medium-sized cities that have been growing systematically. It also showed that it is a region with severe and longstanding poverty and inequality rates, which touch a great number of households living in towns and cities as this is a highly urbanized region.

Section 3.1 showed that decentralization in Latin America has been a top-down process initiated in response to prolonged systemic economic or political crisis and accompanied by strong external pressures, as opposed to its motor being the deepening of democracy. As a result, the outcomes of decentralization have been controversial, notably because of the scant evidence of improvement in the management of public resources, the growing number of poor households, and raising differential of capacities between local authorities. In relation to urban planning, two studies were presented showing that these circumstances affect local planning practices, which show limited evidence of responding to poverty and inequality issues, and display growing differences in their capacities to attract public participation and respond adequately to local needs, despite some 20 years of decentralized governments.

Hence, Chapter 3 concluded that the causal link between decentralization and democratic development in Latin America shows signs of being compromised, which helps to understand why the impact of local planning practices on poverty reduction still looks weak.

About the proposed Tool for Strategic Territorial Planning, TSTP™

Based on the two sets of conclusions presented above, the research argued that local planning practices need more than the transfer of power and responsibilities to directly address poverty and inequality in its many

and highly populated towns and cities, which is why this research developed a Tool for Strategic Territorial Planning (TSTP™), which may assist planning practices in this task.

Section 5.2 and Paper I showed that the foundations of the proposed TSTP™ rely on the study of poverty, inequality and data management.

Paper IV presented the aim of the proposed technique as a tool that uses evidence-based poverty maps to assist urban planners in informing all actors of urban planning about the extent to which land-based actions may effectively contribute to the reduction of poverty and inequality.

Section 5.2 also presented the TSTP™ as a two-fold tool that, on the one hand, may assist planners in identifying deprived urban areas and their characteristics; and on the other hand, may help to promote dialogue between different stakeholders in urban planning, and in that sense, promote transparency and accountability by means of attracting public participation.

Finally, Section 2.2 discussed how one of the limitations of the use of poverty maps in assisting decision-makers in budget allocation is that in cities with a large proportion of poor population, poverty maps normally classify large extensions of their territory as poor, hence compromising their potential to assist in the design and selection of land-based actions required to improve the conditions of such extensive territories with limited resources. In this regard, Paper IV argued that the major strength of the proposed technique is that it incorporates a residential segregation approach to traditional poverty analysis, by means of combining poverty and inequality maps. This strategy proved helpful in assisting urban planners in the identification of deprived urban areas with a limited territory in which to implement pro-poor land-based actions that are in line with scarce resources, which led to the conclusion that the proposed technique is helpful for poverty analysis at small administrative unit levels.

About the testing of the proposed Tool for Strategic Territorial Planning, TSTP™

The proposed tool was then applied in two empirical studies, which showed that the ways in which the pro-growth/pro-poor equation is applied also matter, especially when it comes to poverty reduction.

The study of Liberia showed a case in which, on the one hand a social housing policy (pro-poor) had been implemented consistently for 20 years; and on the other hand pro-growth mechanisms such as privatization, lifting of trade barriers and deregulation to attract foreign investment in tourism have been decisively applied. As a result, the sustained implementation of the housing policy has indeed addressed the quantitative housing deficit and the implementation of pro-growth actions has stimulated economic growth in the city. However, the ways in which social housing and pro-growth programmes and projects have been applied have generated poverty traps and limited the opportunity required to lift the poor out of poverty. Hence the study showed that Liberia has

become a prosperous but highly unequal city with large enclaves of poverty and inequality, as well as other urban poverty problems.

The study of Las Cruces presented another case in which poverty had only been geographically displaced – not reduced – due to the ways in which pro-growth and pro-poor mechanisms have been applied. Despite the construction of a considerable number of social housing units and the current implementation of several public interventions to improve physical characteristics of the district, the poor in Las Cruces feel more exposed to pressures linked to the increase of location-related expenditure and unfair negotiations of their housing conditions than before, to the extent that some have already been forced to move out to neighbouring areas, most of the times taking with them social problems, and thus contributing to the deterioration of the receiving urban areas.

In addition, the studies helped to identify some of the reasons why urban planning has not been contributing to the reduction of poverty in Liberia and Las Cruces. For example, the studies showed that evidence was seldom used in decision-making, and that both current planning practices failed to articulate the views and actions of different sectors (e.g. housing, education, infrastructure in Liberia, and infrastructure and social sectors in Las Cruces). They also made evident the limited incorporation of a long-term approach in planning, and the prevalence of pro-growth over pro-poor mechanisms. Finally, they showed that group-targeting strategies still prevail as opposed to area-based targeting strategies, and the Las Cruces study showed that when the latter are applied, public interventions are fragmented and disarticulated.

About the functions of urban planning in which the proposed TSTP™ can be used

Section 2.3 described various phases of planning practices, and sections 3.2 and 3.3 discussed how different cities in Latin America apply different planning practices, as well as how even in the same city, a combination of practices can be identified. In this context, the potential strength of a TSTP™-like tool lies in the possibility of being used in both 'scientific' and 'facilitator' phases of planning practice.

For example, in the first empirical study, evidence-based poverty maps were used to assess the relationships between land prices, public interventions and residential dynamics in order to analyze the impact on poverty reduction of land-based actions. This exercise clearly follows a scientific planning practice, which, as was explained in Section 2.3, follows rigorous analytical scientific methods to examine urban social life and economic activities in order to mediate in processes of conflict. In the second empirical study, the TSTP™ was used to identify and illustrate the location of deprived urban areas, but in this case, these poverty maps were also used to promote dialogue amongst different stakeholders in urban planning, as they help unfamiliar actors to understand statistical data and can, to a certain extent, neutralize actors' differences emerging from professional and practice differences. This process falls within a

'facilitator' planning practice, which is currently applied in large Latin American cities and is being increasingly adopted in medium-sized cities, as explained in Chapter 3.

On the other hand, Paper IV illustrated that a TSTP™-like tool can be helpful in at least four different functions of urban planning: appraisal, simulation, informing decision-makers and monitoring.

Paper IV showed that in relation to the appraisal function, the combination of poverty and inequality maps successfully assists urban planners in identifying deprived urban areas with a clearly bounded territory in which to allocate scarce resources in targeted land-based actions.

Paper IV also showed that, concerning the simulation function, the application of TSTP™ in Liberia helped its users to propose actions that may lead to preventing failed investments or overcoming their current situation, with awareness of the resources, capacities and limitations, but inspired by a model of the city that serves as a point of reference from which to judge, not so much to what extent they are reaching the goal, but how things are progressing from the point of departure.

In relation to the function of informing decision-makers, the paper reflects on the Liberian study to show that the real value of integrated information systems for smaller administrative units such as the TSTP™ comes when residents, community organizations, urban planning offices and politicians are able to access and review the information, and use it to underpin dialogue during decision-making processes.

Finally, in relation to the monitoring function, the paper discussed that both studies showed that the use of the TSTP™ contributes to paying more attention to the long-term effects of the implementation of social policies by means of urban planning with the aim of reducing poverty.

Therefore, this research concludes that a TSTP™-like tool has potential to assist its users in assessing the impact on poverty reduction of land-based actions both in scientific and facilitator planning practices, and it can be used in at least four functions of urban planning.

However, it also concludes that the tool alone cannot cope with the structural limitations of planning practices discussed in the last subsection. In this regard, Section 2.3 showed that academics, international community and national governments are taking relevant actions, but it is often on the local urban scale that global and national policies and strategies 'touch down', coming into contact with communities, businesses and public and private developers, in relation to which theory and workshops confirmed that some local authorities are weaker than others when responding to this critical challenge. This is why the proposed tool, its applications and scrutiny led to the development of a model of urban planning that addresses its current limitations. The model was envisioned in a proposed pro-poor planning conceptual framework, the conclusions from which are presented below.

About a pro-poor model of planning practice

The findings of the development, application and validation of the proposed Tool for Strategic Territorial Planning (TSTP™) were then used to reflect on a set of normative suggestions to promote an integrated and long-term approach in urban planning that addresses the needs of the poor. These suggestions were derived from the adoption of a relativist tradition in planning theory (see Section 2.3), the need to broaden public participation and strengthen evidence-based decision-making, and the pursuit of a coordinated long-term approach towards urban planning, as stated in Section 1.1. In that sense, the proposed planning framework is not completely an ideal model, as it is based in part on empirical studies and previous observations. Likewise, the proposition of this conceptual planning framework rests on the belief that planning theory and planning practice are closely interrelated and interdependent.

The suggestions were structured in a model of how urban planning in cities of the South should work in order to support local authorities in their efforts to address poverty and inequality in its many and highly populated towns and cities. The model emerged from the analysis of theories and findings from case studies, workshops, seminars and interviews. The model is referred to as the 'pro-poor planning conceptual framework', which suggests possible courses of action for planning practices to contribute to poverty reduction.

The planning framework was structured according to six key criteria, the first of which refers to the need for planning practices to become more evidence based. Section 6.1 argued that statistical information needs to be collected, managed and used locally to make sure that appraisals, designs and land-based actions respond to priority needs. Actions in that line play a crucial role in the democratization of data, serving as bridge-builders between technology, government, and the community.

The second criterion is about the need for local planning practices to incorporate area-based targeting strategies for poverty reduction to the traditionally used group-targeting strategies. Section 6.2 showed that the exclusive application of group-targeting strategies in societies with large proportions of poor population could end up geographically concentrating the poor, creating differentials in service provision, and generating poverty traps. In this context, area-based targeting strategies should be applied to improve conditions in deprived urban areas to reach city standards and therefore combat poverty and territorial polarization.

The third criterion refers to the need to incorporate a long-term approach to the ways in which land-based actions are implemented, in order to be able to assess their impact on longstanding phenomena such as poverty and inequality.

The fourth criterion refers to the need to integrate and articulate land-based actions in an effort to address complex phenomena such as poverty and inequality from different angles. Likewise, the coordination of

actions of different sectors and institutions at national, regional and local levels helps to use available resources efficiently.

The last two criteria were presented as cutting across the previous four. These criteria reflect on how, if local planning practices are to implement pro-growth and pro-poor mechanisms, then they should strategically engage in the market and community rationales as fundamental components in the evolution of the city, attract public participation into decision-making processes and make accountable decisions that simultaneously promote economic growth and assure that the poor can participate fully in the opportunities unleashed and contribute to that growth.

However, it is too early to assess the potential of the planning framework, as it still needs to be further tested in cities with different types of planning practice and then adjusted as pertinent.

7.2 Further research

In this study, a set of criteria and actions encapsulated in a planning conceptual framework were proposed. Despite these criteria and actions having been drawn from empirical applications of a proposed planning technique and observations of previous studies, there is a great need to conduct further field studies to test the proposed pro-poor planning conceptual framework, analyze its performance, and make amendments and modifications as pertinent.

Likewise, the political aspect of poverty indicators and poverty maps needs further analysis, in order to reach a desirable compromise between the need for, and the risks of, designing and using poverty indicators and their representations in urban planning.

Finally, this study wants to emphasize the need to continue working on improving mechanisms for data collection, production, management and dissemination, including the harmonization and coordination of statistical and cartographic data.

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Part Two: Selected Papers

Paper I

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Designing for equality: Conceptualising a tool for strategic territorial planning

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Abstract

The struggle for equality is fundamental to the reduction of poverty in Central America. Besides, one of the foremost goals of urban spatial planning, when implementing social policies, is to contribute to the reduction of poverty. This is done by producing a list of territorially-based actions and selecting those suitable for the implementation of social policies developed at national level. However, urban planners working with local authorities in the Region face political, managerial, financial and technical limitations for adequately conducting this task. Of particular interest to this paper are the limited options they have for technically assessing the impact that territorially-based actions have on reducing inequality, and therefore poverty.

An operational methodology is proposed in this paper, as a step forward to enable planners to simulate, assess and monitor the impact of territorially-based actions on inequality, and to promote the use of evidence from statistical data when proposing, implementing and monitoring those actions. The methodology is introduced by inscribing it in the context of urban spatial planning, presenting the concepts that underpin it, describing how it is intended to work, and illustrating its use through the presentation of an empirical study.

Keywords: *Urban spatial planning; Poverty reduction; Urban residential segregation; Geographic information systems; Costa Rica*.

Paper II

Originally presented at European Network for Housing Researchers Conference (ENHR) on Shrinking Cities, Sprawl Suburbs, Changing Countrysides, July 6 – 6, Dublin, Ireland

Unforeseen effects of public interventions on housing market dynamics: The case of Las Cruces in Bogotá, Colombia

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Abstract

This paper explores those urban planning-related links that exist between land values, public interventions and residential dynamics in a context of urban land values decline. These links are discussed by means of analysing the effect of public interventions on the behaviour of land values and market eviction in Las Cruces, which is a poor and centrally located neighbourhood of the city of Bogotá. The study assessed whether public interventions in and around Las Cruces have led to the rise of rent prices and land values, as a consequence of which the poor may be 'forced' to move away.

The study applied an urban analysis technique that uses geographic information systems (GIS) to illustrate and analyse the information collected. The GIS-aided analysis of local public interventions, cadastre land values, a survey of 244 parcels and a survey of 309 residents showed that: *(i)* land values in Las Cruces have been static over the past six years, contrary to what is expected to happen following the investment of a significant volume of resources; *(ii)* local tenants are highly exposed to pressures linked to the increase of location-related expenditures and unfair negotiations; *(iii)* a clear understanding of land value forcers along interventions in historical buildings is a pre-requisites to make them sustainable and a true resource for the dynamic development of society; and *(iv)* the impact of public interventions on land values should be analysed at an urban regional level to establish whether the interventions are not simply displacing problems to adjacent urban areas.

Keywords: *public interventions, historical buildings, land values, market eviction, geographic information systems, Bogotá*

Paper III

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(JCR Impact factor @ 2007:1.274)

A technique for small geographical scale poverty analyses: Its application in the case of Liberia, Costa Rica

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Summary

This paper proposes a technique for undertaking poverty analyses at city level, by studying the implementation of Costa Rica's social housing policy in the medium-sized city of Liberia. The technique was appraised in relation to its capacity to explore the links between social housing, and poverty and inequality, the effects of the implementation of the selected policy, and the differences between targeting implementation strategies.

The technique helps to clarify the effects that housing policies have on poverty reduction in Liberia. In particular, the use of an urban residential segregation approach in small geographical scale poverty analyses allows the identification of concrete deprived urban areas and the prioritisation of feasible pro-poor land-based actions; therefore, it shows potential as a tool for urban planning and local decision-making.

Keywords: *poverty impact analyses; poverty maps; urban planning; social housing; urban residential segregation; Costa Rica.*

Paper IV

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Applications of poverty maps in urban planning in cities of the South: Examples from Liberia, in Costa Rica

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Abstract

This paper introduces a new technique that uses small administrative unit poverty maps. The paper shows a pilot application of the proposed technique using census-tract data of the medium-size city of Liberia, Costa Rica in four functions of urban planning: appraisal, simulation, decision-making and assessments. The piloting of the technique made possible to identify the territorial concentration of poverty and inequality, simulate the impact on poverty reduction of alternative land-based actions, engage different actors to discuss and agree on a plan of actions and thereby promote transparency and accountability in decision-making, and assess the impact on poverty reduction of the implementation of the social housing policy in Liberia.

The technique may help to promote the development and use of timely and reliable census-tract data. It also incorporates a residential segregation approach to traditional poverty analyses, which proved to be helpful for poverty analysis at small administrative unit levels.

Keywords *Poverty Maps, Urban Planning, Poverty Impact Assessment, Census-tract data, Costa Rica*

Appendix A

Part Three: Appendices

Glossary of terms

Accountability refers to being able to account for or explain one's actions. In a political context it therefore refers to politicians' responsibilities towards society.

Cadastre refers to a land information system, usually based on division of land into parcels, which gives information on rights, use and value of land. The term 'cadastre' can also include land registration and other land information systems, legal aspects on land tenure and procedures, land use planning, land valuation and land policy aspects.

Census census-tract data refer to statistical data at neighbourhood level drawn from censuses or surveys, which are normally produced by the national census department.

Decentralization is the transfer of authority and responsibilities for planning, financing and managing of public functions from central or regional governments to local governments.

Geographic information systems, GIS are tools designed to handle data which in one way or another are related to a position on the Earth's surface.

Governance refers to the sphere of relations between government and civil society, including the private sector. It also refers to the processes of interaction between these in defining roles and relationships. The idea of governance is that government does not work in isolation, but in the above sphere and through these types of relations, and thus government has to be seen in this context.

Inequality refers to the differences in opportunities that an individual, or a group of people, have in relation to the opportunities of an average number of the population, in terms of his/her economic, social and cultural differences.

Integrated urban planning refers to two different and complementary aspects: a multi-sectoral approach that should be coordinated by urban planning practice and mutually supported by different sectors so that results in one sector are reinforced by achievements in another; and an overall social, economic and spatial integration of a city, whereby the poorer and marginalized sections of the city's population are formally integrated into the rest of the city.

Land-based actions refer to all those actions whose implementation or management are related to the land in one way or another, such as housing and parks; roads, water and electricity networks: collection and collection of solid waste, etc.

Local authorities refer to the specific government institutions or entities created to deliver a range of specified services to a relatively small geographically delineated area.

Poverty refers to a lack of access to, or command over, the basic requirements for an accepted minimum standard of living which is culturally defined. For example, in most socio-economic contexts a person is considered to be poor if he or she has insuffi-

cient food or a lack of access to some combination of basic education, adequate health services, clean water, safe sanitation system, and a safe area where to live.

Poverty impact assessments are poverty analyses used to identify the future and likely consequences of a current or proposed action at country or regional level.

Poverty map refers to spatial representations that show the geographical distribution of poverty and wellbeing, generally with various disaggregated levels and with indicators that show one or more dimensions of poverty.

Social housing policy is one of the redistribution mechanisms that governments have. It is implemented mainly by facilitating, supporting or providing citizens' access to housing improvements, top-structures or new housing. The implementation of this policy normally requires land acquisition, extension of roads, electricity, water and sanitation, and/or provision of recreational spaces and social services such as schools and health centres.

Urban governance covers both the formal government apparatus and the informal alliances and networks through which business groups, environmental groups, neighbourhood groups and other types of social organisations interlink with formal government to manage aspects of the collective affairs of the urban region life.

Urbanization refers to the transition process from a rural to an urban society, in which the proportion of the total population living in urban centres increases while the proportion living in rural areas decreases. This process is often accompanied by the growth of its urban footprint and the decrease of agriculture-related activities.

Urban planning (also known as city or town planning) comprises governmental functions of local government that address land as a key resource for society such as the design, coordination and monitoring of physical infrastructure programmes and projects (housing, sanitation, water, transportation and land use) and planning the location of, and maintaining, social service properties (parks, education and health centres). It takes into account aspects of aesthetics, conservation, safety, slums, urban decay, transport and the environment, among others.

Urban planning practice refers to the exercise of urban planning, which comprises those governmental functions that deal with built environment and land-based affairs in towns and cities.

Urban residential segregation is one of the mechanisms of social exclusion, in which the dwellings of majority and minority population groups cluster together in their groups and apart from other groups.

Abbreviations

Appendix B

Acronym	*Name **	*Name in its original language*
D	Index of Dissimilarity	
CBO	Community-based Organization	
CIPPEC	Center for the Implementation of Public Policies Promoting Equity and Growth	Centro de Implementación de Políticas Públicas para la Equidad y el Crecimiento
DACD	(Bogotá's Cadastre Department)	Departamento Administrativo de Catastro Distrital
DANE	(Colombian National Statistics Department)	Departamento Administrativo Nacional de Estadística
DAPD	(Bogotá's Planning Department)	Departamento Administrativo de Planeación Distrital
ECLAC	Economic Commission for Latin America and the Caribbean	Comisión Económica para América Latina y el Caribe
ENHR	European Network for Housing Research	
GDP	Gross Domestic Product	
GIS	Geographic Information Systems	
GNI	Gross National Income	
HDI	Human Development Index	
HDM	Housing Development & Management	
HIE	High-Income Economies	
HIPC	Heavily Indebted Poor Countries initiative	
IADB	Inter-American Development Bank	
IAIA	International Association for Impact Assessment	
IBF	Institute for Housing and Urban Research	Institutet för bostads- och urbanforskning
ICE	(Costa Rican Institute of Electricity)	Instituto Costarricense de Electricidad
IFAM	(Municipal Promotion and Support Institute of Costa Rica)	Instituto de Fomento y Asesoría Municipal
IGAC	(Colombian National Statistic System)	Instituto Geográfico Agustín Codazzi
IMF	International Monetary Fund	
INE	(National Statistical Institute of Honduras)	Instituto Nacional de Estadística
INEC	(National Institute of Statistics and Census of Costa Rica)	El Instituto Nacional de Estadística y Censos
INVU	(National Institute of Housing and Planning of Costa Rica)	Instituto Nacional de Vivienda y Urbanismo de Costa Rica
LAC	Latin America and the Caribbean	
MDG	Millennium Development Goals	
MECOVI	Program for the Improvement of Surveys and the Measurement of Living Conditions in Latin America and the Caribbean	Programa para el Mejoramiento de las Encuestas y la Medición de las Condiciones de Vida en América Latina
NGO	Non Governmental Organization	
PATH	Honduras Land Administration Project	Programa de Administración de Tierras de Honduras
PNUD	United Nations Development Program (see UNDP)	Programa de las Naciones Unidas para el Desarrollo
POT	(Colombian Territorial Plans)	Plan de Ordenamiento Territorial
PPP	Purchasing Power Parity rate	
PRGF	Poverty Reduction and Growth Facility	
SBE	School of the Built Environment	
SDD	Sweden's Statistical Databases	Skånes demografiska databas
TSTP	Tool for Strategic Territorial Planning	
URS	Urban Residential Segregation	
UN	United Nations	
UNCHS	United Nations Centre for Human Development	
UNDP	United Nations Development Program	
US	United States of America	
USAID	United State Agency for International Development	

* Note that names in parenthesis are the author's translations

Appendix C

Interview process and guides for the development of the conceptual angle (key concepts)

This appendix presents the selection criteria, the interview process and the guides applied in the conceptual angle step.

The selection of the interviewees followed a purposeful sampling aiming at selecting information-rich informants, with knowledge of the understanding of the studied concepts in the Latin American context, from whom to learn a great deal about these concepts. A chain sampling strategy was applied, in which a first set of informants was selected from the literature review and the possibility to interview them, and the second set of informants came from asking the first informants "*who knows a lot about _____?, Who else should I talk to?*"

The interviews were conducted following an in-depth interviewing process, which involved asking open-ended questions, listening to the answers, taking short notes, and then following up with additional relevant questions. The interviews were recorded and subsequently transcribed. The transcripts were then used to clarify the concept under discussion and establish relationships between different aspects related to the concept, such as cause-effect relationships or variations and development of the concept.

The interview guides varied depending on the concept to be discussed and the unfolding of the interview itself, but in general terms the following guide was applied.

Background information and questions

- Presentation of the interviewer and the purpose of the interview
- Permission for recording the interview
- Name, profession, experience, current position and department of the interviewee were consulted prior to the interview

Discussion of the concept

- Presentation of my understanding of the concept to be studied and the literature revised
- Understanding of the concept by the interviewee: What do you understand by ____?
- The development and roots of the concept: What is the origin of the concept of ____? Where has this concept led to?
- Confirmation and sometimes clarification in relation to different views of the concept
- Standpoints in relation to different views of the concept
- Applications and measurements of the concept (if relevant)
- Relevance of the concept in Latin America

Conclusions

- The interviewer presented a summary of the development and views of the concept that were raised in the interview and asked for confirmation: Is the understanding correct?
- Additional literature to be consulted

Workshops material and analysis

Appendix D

This appendix presents the criteria applied for the selection of the participants in the workshops, the process followed in a typical workshop, and the methods used for the analysis of the material collected.

Invitation to workshops

Lists of potential participants were prepared based on the contacts acquired during the case studies and suggestions from host organizations. Then, personal letters of invitation were sent to a list of potential participants, followed by confirmation calls. Posters (see an example below) were sent and placed in strategic points (universities, ministries, NGOs, CBOs)

The last workshop (Lund, 2007) was carried out as part of an International Training Programme course held in Lund, with the participation of planners, architects, civil engineers, administrators and others working with construction, housing and human settlements, thus invitation was not required.

Together with the personalized invitations, potential participants received a copy of a published paper written in Spanish as background material for discussion during the first four workshops. Participants of the fifth workshop received a course reader in English developed for the course based on the published paper.

	Published paper in Spanish
Title	¿Una vivienda social incluyente en Liberia? El caso de una ciudad intermedia de Costa Rica
Journal	Revista *INVI* (Institute of Housing, Faculty of Architecture and Urban Planning, University of Chile) 22 (59) 69-92
Year	2007
	Reader
Title	The Effects of Low-income Housing on Promoting Urban Residential Segregation: *Shelter Design and Development: Shelter Design Module*

Process of the workshop

Workshops were normally scheduled for 3 hours. They started with registration, in which attendants were asked to fill in a form with their names, position, institution, and e-mail address. Then, a short presentation of HDM followed by the presentation of the study was delivered. Subsequently, a questionnaire (see below) was distributed and the questions explained. Then, time was given for the participants to discuss the presentation and the questionnaire, after which they filled in and handed in the questionnaire. The session finished with some time for questions and discussions.

Questionnaire

Validation of the TSTP™
(Tool for Strategic Territorial Planning)
September 7, 2007, Lund, Sweden
Shelter Design and Development

Housing Development & Management
HDM
LUND UNIVERSITY

RESPONDENTS

Type of institution:
- ☐ National or regional authority
- ☐ Municipality
- ☐ Academic or research institute
- ☐ Private sector
- Others

Country:
City:
Main activity:
- ☐ City planning
- ☐ Social housing
- ☐ Statistics or cartography
- Others

1. What methods do you know for comparing the effects of area-based actions on poverty reduction? _____
2. What are the limitations of the methods you know? _____
3. What are the advantages of the methods you know? _____
4. Do you use poverty maps to compare the effects of area-based actions on poverty reduction?
   Yes ☐ No ☐ Please elaborate: _____
5. In your context, is there a need for additional methods to compare the effects of area-based actions on poverty reduction?
   Yes ☐ No ☐ Please elaborate: _____
6. Could the method used in Liberia be implemented in your context?
   Yes ☐ No ☐ Please elaborate: _____
7. Would you find it useful?
   Yes ☐ No ☐ Please elaborate: _____

General comments:

Give a value from 1 to 5, where 5 is the highest value and 1 is the lowest *from 1 to 5*

8. How frequently do you use statistical data? ☐
   Please elaborate: _____
9. How familiarized are you with statistical data being presented in maps? ☐
10. How useful do you find using statistical data when presented in maps? ☐
11. How frequently do you have access to reliable and timely statistical data? ☐
    Please elaborate: _____
12. How frequently do you have access to reliable and timely cartographic? ☐
    Please elaborate: _____
13. How frequently do you have trained personnel for analysing statistical data? ☐
    Please elaborate: _____
14. How frequently do you have access to technology for analysing statistical data in maps? ☐
    Please elaborate: _____
15. How frequently do you have access to methods for analysing statistical data, which you consider to be useful for your work? Please elaborate: _____ ☐
16. How adequate do you find the method used in Liberia for concentrating statistical data in a cartographic format? ☐
    Please elaborate: _____
17. How often do you think the method used in Liberia could provide what you need when carrying out a poverty Impact assessment? Please elaborate: _____ ☐
18. How often do you feel the need for a new method to compare the effects of area-based actions on poverty reduction? Please elaborate: _____ ☐

General comments: _____

Analysis of information collected

Each questionnaire was tabulated in an Excel spreadsheet containing the purpose of each question (relevance, sustainability and feasibility). The 1-5 ratings of questions 8 to 18 were tabulated as "*1: strongly disagree; 2: disagree; 3: neutral; 4: agree; and 5 agree strongly*". The text answers to questions 1 to 7 were combined and a summary was extracted, which then was incorporated to the finding of the workshops when necessary. The information was then combined and analyzed, first in relation to each single workshop and then all collectively, to produce single tables that summarize the information collected.

Relevance

	Workshops				
	I	*II*	*III*	*IV*	*V*
Q1	comprehensive planning, cartography with ArchView, prospective methods, self-help housing with technical assistance and participation methods	comparative analyses, city planning, and the use of statistics and census data	micro-planning, statistical indicators, poverty maps, surveys, field visits, urban residential segregation index, area-based interventions	UBN, strategic planning, action planning, social zoning, participation and ethnographic methods, poverty maps, use of statistics to build and cross variables, surveys and interviews	income analysis, statistical data, qualitative surveys, poverty maps, interviews, UBN, literature review, focus group discussion
Q2	access and quality of data for designing POTs, capacity for implementing prospective methods, poor governance and sustainability issues regarding self-help housing and influences and manipulation of decision-making on participation methods	lack of budget to implement urban plans, urban plans led by undefined studies and qualitative aspects being left aside in comparative analyses	lack of institutional cooperation and continuity, a short-term vision for the implementation of plans, census tracts borders do not mach neighbourhood borders, some of the methods require long time to update their data, lack of connection between national policies and local actions, budget limitations for a representative survey sample	poor coordination during its implementation, availability, reliability and timely restrictions of data and technology, lack of flexibility of statistics, lack of an overall vision, actions tend to be punctual and seldom promote equality and manipulation of census data	lack of or unreliable statistics, statistics are not analyzed, census are expensive, representativeness limitations, data gaps, bias of the disciplines
Q3	the possibility to geographically define problems and solutions using ArchView, the possibility to include the voice of the people when using prospective methods, people's involvement and sense of belonging on self-help housing and the inclusion of different points of view when using participative methods	further studies can be shaped from urban plans and statistical evidence show a close representation of reality	participation, fluidity of micro-planning, easy analysis and communication characteristics, the possibility of geographically targeting problems and solutions on poverty maps and the possibility of deeply understanding the reality	participation methods providing a qualitative insight of problems, communication benefits of poverty maps, possibility of triangulating sources on UBN and action planning incorporate the voice of the people	map illustrations are clear, quantitative & qualitative methods ideal, income analysis is reliable, surveys improve the understanding of the community, can be used in the planning process, easy to propose actions
Q5	57% say YES	100% say YES	82% say YES	92% say YES	74% say YES

Sustainability

	Workshops				
	I	*II*	*III*	*IV*	*V*
Q16	86% strongly agree	86% strongly agree	55% strongly agree 27% agree	26% strongly agree 48% agree	55% strongly agree 27% agree
Q17	These questions were not part of the questionnaires				11% strongly agree 52% agree 30% neutral
Q18					33% strongly agree 26% agree 26% neutral

Feasibility

	Workshops				
	I	*II*	*III*	*IV*	*V*
Q4	57% YES	29% YES	27% YES	62% YES	44% YES
Q6	These questions were not part of the questionnaires				86% YES
Q7					86% YES
Q8	14% disagree 45% neutral 29% agree 14% strongly agree	29% disagree strongly 14% neutral 14% agree 29% strongly agree	18% disagree strongly 27% neutral 36% agree 9% strongly agree	8% disagree strongly 35% neutral 27% agree 27% strongly agree	11% very seldom 30% neutral 26% agree 33% strongly agree
Q9	This question was not part of the questionnaires				15% neutral 56% agree 19% strongly agree
Q10	14% neutral 29% agree 27% strongly agree	14% neutral 14% agree 27% strongly agree	9% neutral 36% agree 45% strongly agree	11% neutral 23% agree 62% strongly agree	22% neutral 30% agree 41% strongly agree
Q11	29% disagree strongly 14% neutral 29% agree 14% strongly agree	14% disagree strongly 14% disagree 14% neutral 14% agree 29% strongly agree	36% disagree 18% neutral 9% agree 27% strongly agree	8% disagree strongly 19% disagree 27% neutral 12% agree 31% strongly agree	30% disagree 41% neutral 20% agree 11% strongly agree
Q13	14% disagree strongly 14% disagree 14% agree 29% strongly agree	43% disagree strongly 14% agree 14% strongly agree	9% disagree strongly 9% disagree 18% neutral 9% agree 45% strongly agree	12% disagree strongly 15% disagree 12% neutral 23% agree 12% strongly agree	43% disagree strongly 24% disagree 33% neutral
Q14	29% agree 57% strongly agree	14% disagree strongly 43% disagree 14% agree 14% strongly agree	27% neutral 57% agree 18% strongly agree	8% disagree strongly 27% neutral 23% agree 31% strongly agree	15% disagree strongly 33% disagree 26% neutral 22% agree 4% strongly agree
Q15	14% disagree strongly 14% disagree 43% agree 14% strongly agree	57% disagree strongly 14% disagree 14% neutral	9% disagree strongly 9% disagree 36% neutral 18% agree 18% strongly agree	12% disagree strongly 15% disagree 27% neutral 15% agree 19% strongly agree	7% disagree strongly 33% disagree 37% neutral 11% agree 11% strongly agree

Questionnaires, interviews and surveys

Appendix E

(Las Cruces)

This appendix presents the selection criteria for the questionnaire, the interview process, and the guides applied in the survey of Las Cruces.

Residential dynamics questionnaire, Las Cruces

ENCUESTA "GENTRIFICACIÓN"
Marzo 3, 2007, Bogotá, Colombia

Housing Development & Management
HDM LUND UNIVERSITY

Diligenciado por: _____ Fecha: _____

Medio de acceso a info: ☐ Internet
☐ Visita
☐ Teléfono
Otros_____

Tipo de vivienda: ☐ Casa
☐ Apartamento
☐ Inquilinato
☐ Otro: _____

Dirección: _____

Años construida: ☐ 1-10 años
☐ 11-30 años
☐ 31 o más

Chip:_____ N. telefónico: _____

Tipo de tenencia: ☐ Renta
☐ Propia_
☐ Otro: _____

Valor mensual arrendamiento _____
Valor mensual administración _____

área vivienda: _____m^2 área lote: _____m^2

Hace cuantos años vive en la misma vivienda? _____
en el mismo barrio? _____

Quisiera cambiar de vivienda? ☐ SI
☐ NO
☐ Otro _____

3 razones principales para querer cambiar de vivienda: (ej.: mal estado de la vivienda; necesita una vivienda más grande/pequeña; o una vivienda más económica; puede pagar una vivienda más; costosa; el propietario le pidió la vivienda; razones de salud, etc.)

1._____
2._____
3._____

Quisiera cambiar de barrio? ☐ SI
☐ NO
☐ Otro _____

3 razones principales para querer cambiar de barrio: (ej.: deterioro del barrio; inseguridad; razones familiares (estudios, salud) razones laborales (muy lejos del trabajo); el sector es muy costoso; etc.)

1._____
2._____
3._____

Cuales son los 3 principales problemas del barrio?: (ej. deterioro social; deterioro físico; deterioro ambiental; ya no le gusta el barrio; aumento del costo de vida (servicios, mercado); etc.)

1._____
2._____
3._____

Comentarios_____

The questionnaire was filled in by one research assistant, who was previously instructed in the purpose of the questionnaire and the ways to collect the information. A first set of questionnaires was conducted to households approached to carry out a property-price survey in person (not to those done by phone). Additional questionnaires were conducted to households suggested by those first approached and by community leaders (priest, grocery shops' managers, etc). Then, the information was tabulated and analyzed in an Excel spreadsheet.

Interviews

Interviews were conducted with those respondents to the questionnaire who were selling a property, showed willingness and had time available to do so. Questions regarding the reasons for deciding to sell their property and the expected location where they want to move were posed. Notes were taken in the back of the questionnaire and a summary was produced thereafter.

Interview # 1: House for sale

Miss Irene (name changed for anonymity purposes) wants to sell her house because she feels it is difficult for her at her age, to live in a three floor house. She wants to move to a single floor property. Additionally, the property is owned by her and one of her sons, and since she does not want to leave problems after she dies, she prefers to sell this house and buy a new property only on his son's name.

Interview # 2: Apartment for rent

The buildings these dwelling form part of belong to the Garagoa Hospital and they are listed as historical buildings. The 20 dwellings were built for hospital employees and families, and they have been passed on through generations. The tenant wants to move away regardless of the very low rent they pay, because the neighbourhood has become very unsafe and expensive.

Interview # 3: House for sale

This property stands in a large plot and comprises a garage, a small apartment, a large apartment and 2 retail units. Miss Claudia wants to sell it because she is highly in debt, and she wants to retire from her job, which she finds very demanding. She does not know what she can buy with the money which may be left after paying all her debts.

Interview # 4: House for sale

This house was inherited recently and Miss Elizabeth wants to buy her brothers' and sisters' shares as an investment. She wants to repair the house and sell it in one or two, when she hopes property prices would rise in the neighbourhood.

Interview # 5: House for sale

This is a large property that comprises 7 bedrooms, 2 backyards and 2 toilets. This property can also be rented as tenement units getting a high profit on the investment. This property belongs to Miss Rosa and her brothers and sisters. She wants to sell to split the profit.

Interview # 6: House for sale

This house was recently inherited by several brothers and sisters, who want to sell. The family is now smaller than before and they want to use the profit to move to another city by the sea.

Interview # 7: Houses for sale

The houses belong to one lady who lives alone. She wants to sell because she believes prices would go up and she wants to split the money amongst her sons and daughters.

Interview # 8: Apartment for rent

This is an apartment that has been rented to the same family for more than eight years. The family is composed by Miss Rosa, her three sons, two daughters-in-law and one granddaughter. The apartment

includes three bedrooms and one bathroom. The owners have asked to have the property back claiming that they want to live there.

Interview # 9: House for sale

They are selling the house because it is now too small. The family has grown and now they are 4. Based on the hope that property prices in the area would rise, they want to sell and move to a larger apartment.

Interview # 10: House for sale

A family of 4 that has lived in Las Cruces for over 10 years. They want to sell because the house is in need of repairs that they do not want to do, and because the neighbourhood has become very unsafe, and they want to protect their children from any possible aggression.

Interview # 11: House for sale

Mr Gustavo (name changed for anonymity purposes) is the owner of the house. He claims being tired of the neighbourhood due to the rising insecurity. Additionally, there is a large strip of vacant land at the north boundary of the neighbourhood, where in the future they may construct an avenue. Thieves and guns use this vacant land as a refuge. Now he is waiting for the avenue to be constructed, to obtain a higher price for his property.

Surveys protocols

A rental price survey of tenants was conducted to households recommended by community leaders and then to households recommended by the initial interviewees.

Rental prices survey, Las Cruces, 2007

Aspect
CHIP:
Address:
Dwelling type:
Built area (m^2):
Rent paid in 2006 (USD):
Rent paid in 2007 (USD):
Rent / m^2, 2006:
Rent / m^2, 2007:

A commercial price survey was run with people selling their properties. The list of people was established from advertisements in local shops, community centres and local façades, and by asking building and condominium concierges.

Commercial prices survey, Las Cruces, 2007

Aspect
CHIP:
Month:
Dwelling type:
Age of the dwelling:
Property price:
Land area (m^2):
Built area (m^2):
# of bedrooms:
Initial construction value:
Annual depreciation (30 years):
Construction price:
Land price:

Lastly, a market land value survey was conducted using information in the press and in www.metrocuadrado.com (the largest internet-based real-state service in Bogotá).

Market land values survey¸ Las Cruces, 2007

Aspect	*Sub-aspect*
CHIP:	
Source of information:	
Date:	
Age of the dwelling:	< 10 years old
> 30 years old	11-30 years old
Market value (COL):	
Land area (m^2):	
Built area (m^2):	
Address:	
# of bedrooms:	
# of bathrooms:	
# of garage places:	
Strata:	
Price paid for administration:	
Comments:	Telephone number
	Dwelling in bad shape
	Bad maintenance
	Household has grown
	Household has become smaller
	I want to move to another neighbour-hood
	Others

Appendix F

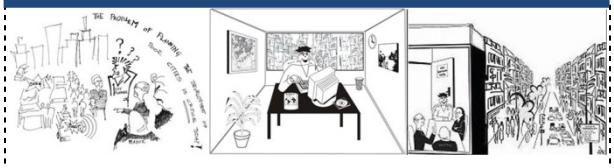
Development of the Internet trial version of the TSTP™

The trial internet version of the TSTP™ was developed through a collaboration between this author and two Internet experts. Databases, cartography, equations, steps, processes and layout were provided by the author. The two experts provided their expertise in Internet and GIS to develop the software.

The Internet trial version of the TSTP™ was developed using JAVA JSP (Java Serever Pages). It uses the Googla-maps Mash Up for navigation and the background map, on top of which census polygons stand. Microdata of these polygons are contained in a MySQL 5.1 database, which is accessed with the Tomcat 6.0.14 data motor. All technology used in the trial internet version is free access.

The following brochure introducing the TSTP™ and describing its concepts and functions was printed and distributed in seminars and congresses as discussion material.

TSTP™
TOOL FOR STRATEGIC TERRITORIAL PLANNING



The nature, speed and scale of urbanization in cities of the South, together with shortage of resources, make the tasks of managing these cities ever more complex.

The diagnostic functions also allow TSTP™ users to carry out poverty impact assessments and determine the relationship between one sectoral policy and the territorial distribution of poverty at inter- and intra-urban levels.

CONCEPTS BEHIND THE TSTP™

The TSTP™ is an Internet-based tool that aims to inform – using evidence – all actors of urban planning practice the extent to which their actions effectively reduce poverty.
The TSTP™ is structured to:

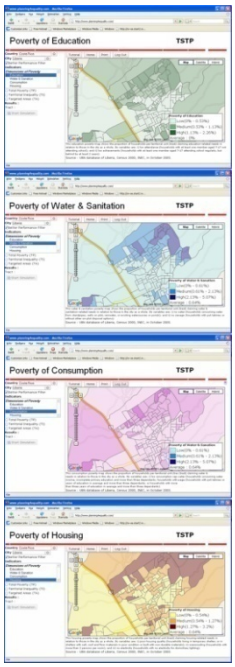
- Support the use of evidence in decision-making processes
- Support the integration and articulation of land-based actions
- Promote pro-poor land-based actions
- Support a long-term approach to urban planning
- Promote popular participation
- Strengthen accountability and transparency in urban planning and local governance

FUNCTIONS OF THE TSTP™

The TSTP™ includes three main sets of functions: navigation, diagnostic and simulation.

Navigation functions include zoom in or out to display more or less territory in the map; 'pan' to move the visual focus and display different areas of the city; satellite mode to show the aero-photography of the city; and print.

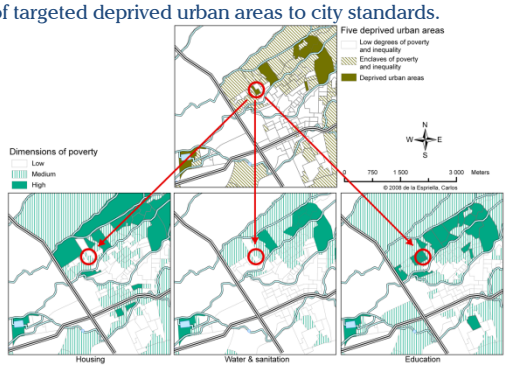
Diagnostic functions allow TSTP™ users to visualise *single* or *compounded indicators* in poverty maps. Maps of *single indicators* are displayed in relation to the concept of 'dimensions of poverty' and they apply the unsatisfied basic needs method. They show the proportion of households claiming needs of a list of variables composing a given dimension of poverty.



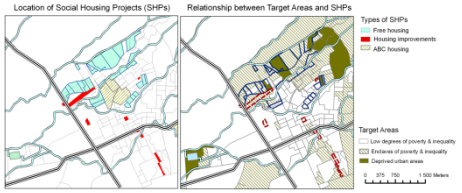
www.planning4equality.com
User ID: Invitado
Password: tstp
For more information,
contact Carlos de la Espriella at
c_delaespriella@yahoo.com

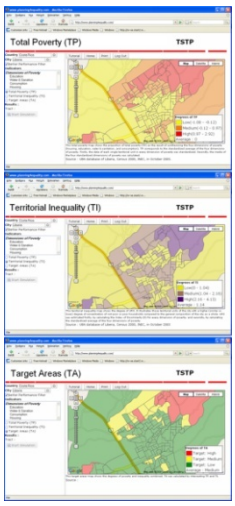
HOW CAN IT BE USED?

The diagnostic functions can be used to define and assign priorities to a list of land-based actions required to raise the characteristics of targeted deprived urban areas to city standards.



The diagnostic functions also allow TSTP™ users to carry out poverty impact assessments and determine the relationship between one sectoral policy and the territorial distribution of poverty at inter- and intra-urban levels.





The TSTP™ includes three *compounded indicators*: Total Poverty (TP), Territorial Inequality (TI) and Target Areas (TA).
- TP shows the proportion of total poverty in every territorial unit of the city.
- TI illustrates how high (similar or low) the proportion between not-poor and poor households is in every territorial unit in relation to the general composition of the city as a whole.
- TA identifies deprived urban areas where actions should be prioritized. TA is calculated by overlapping poverty- and inequality-maps.

Simulation functions allow TSTP™ users to modify the original census-tract data and display a 'simulated' poverty-map in which a studied dimension of poverty in the given territorial unit is reduced or increased. Users can also modifying several dimensions of poverty on the same territorial unit.