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IN SAN JOSÉ, COSTA RICA, EFFECTIVE METROPOLITAN PLANNING AND SELECTIVE INFRASTRUCTURE INVESTMENT CAN IMPROVE THE QUALITY OF LIFE FOR THE POOR.

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This paper presents some of the physical planning challenges facing the Metropolitan Region of San José, the main metropolis of Costa Rica. Emphasis is given to the needs and solutions for a better quality of life for the poor.

Costa Rica is an outlier in the conceptual space of the most used dimensions for development: social, economic, political, environmental and institutional. Costa Rica is difficult to classify by reductionists because does not fit well their prejudices. The country has been successful in (a) effective democracy; (b) social development (health, education), (c) infrastructure provision (electricity, water, telephone lines), (d) steady but moderately fast economic growth process during almost sixty years, and (e) protection policies to the environment. The Costa Rica State is still powerful and influences significantly Costa Rican society and economy.

However, there are big failures in the Costa Rican development path. Relevant to this work there are six very significant weaknesses: (a) very weak local governments, (b) lack of public investment due to low tax revenues for its level of development; (c) very inefficient and relative ineffective use of the territory, (d) significant deficits of urban infrastructure, in particular transportation and sewage, (e) growing social inequities and (f) lack of adequate urban and regional planning.

Costa Rica is confronting many difficult issues, that could change it forever, and maybe not for the better. Among them, the need to transform its taxation structure, and the Free Trade Agreement of Central America with the United States (CAFTA in the USA), that implies big changes in the way the country has structured its social and economic institutions.

This paper provides results of a disaggregate analysis at the census tract level of the social, economic and demographic characteristics of the population. The analysis includes data on densities, land values, transportation travel times and social characteristics of different areas for the Metropolitan Region of San José (GAM) and some of the cities and towns located less than one hour from at least one of the four more important centers: San José, Alajuela, Heredia y Cartago.

This paper is organized in the following form: after the introduction, there is a brief description of the Costa Rican context for the Metropolitan Region of San José (GAM). The patterns of development of the metropolis are presented later, followed by a discussion of social segregation, densities, transportation infrastructure and land values. There is a section integrating all this realities in a conceptual argument about the importance and potential for good physical planning. Conclusions and recommendations are presented.

Conceptual framework

The issues of land availability and equity impacts are much more complex than an excessive or inadequate regulation. The optimum set of urban policies will depend very strongly of the specific contexts in every country and metropolitan region. Very important contextual realities are the distribution and average of personal income; the development of the legal system and its compliance level; the degree of technological development and the fragility and value of the environmental systems supporting the urban areas.

It is impossible to generalize fixed rules about development or urban improvements to every developing country. One of the critical issues is how much “cheap and flexible solutions” can block future development and generate big costs in the future. This has to be solved based on the current and expected wealth in the future, and on the natural systems vulnerability in the urban fringe. In any case, the rapid growth of the area of a city will mean longer journeys for the people forced to live in the border areas. Their real integration in the urban markets for labor and goods will require very heavy investments in transportation infrastructure.

An effective analytical and practical strategy is to insist that land is the scarcest resource in many cities and that its intensive use is important for the current and future vitality of the city. The effectiveness in the use of urban land is a critical criterion of urban sustainability. In the cities of Central America, there are many opportunities for increasing land use intensity. However, a more intense land use requires simultaneously a better infrastructure, paid usually with higher total public investments, even though they would be lower per inhabitant. And the intensification cannot simply mean the destruction of poor neighborhoods to build flats for the higher income groups.

A broader regional urban system perspective can also improve, in some circumstances, the analysis and design of adequate metropolitan policies for land use. Especially important is to include the city above in the hierarchy (if exists), and the nearby towns immediately below in the urban hierarchy. Many of the paradoxes about urban land provision, transportation accessibility, urban growth, land regulations, and job opportunities can be partially solved with a broader territorial perspective.

BRIEF INTRODUCTION TO COSTA RICA

Costa Rica is a centralized country politically and economically. The city of San José and in particular its Metropolitan Region (GAM) dominates the country from its central location in the Central Valley. (see Map 1)

There are abundant explanations about the causes of the differentials between Costa Rica and other countries. It is possible to present a summary of key facts about its society and its economy.

Known factors on Costa Rican level of development

- No military expenditures.
- Working democracy
- Relatively effective judicial institutions.
- High levels of social investment and good quality of public services.
- High Human Development Index.
- Good environmental behavior in comparison with the rest of the developing world.
- Very open economy (exports plus imports are close to the value of the national product).

With respect to the Latin American region

- High levels of Foreign Direct Investments per capita.
- High levels of exports in relation to the domestic product.
- Significant attraction of foreign tourism especially in the ecotourism market segment in which Costa Rica is highly competitive, product of preservation of extraordinary resources, accessibility and innovation in the product development.
- Low rates of crime, per example, in the period 2000 to 2003, the annual rate of homicides was 6.54 per 100 000 people for Costa Rica and a similar value for the GAM. In the county of San Jose, with more than 330 thousand people, the rate is close to 14,6.

Costa Rica Hidden treasures that influence the Metropolitan Region of San José.

- Steady, although moderate economic growth around 4,4% from 1992 to 2002.
- Rapid transformation of the Costa Rican economy with great diversification of exports products and services but not yet in foreign markets.
- Very good air transport connections that provide very good accessibility to incoming tourists, visiting businesspersons and cargo exports.
- Competitive price of electricity produced mostly from renewable sources such as hydro, geothermal and wind.
- Very low local telephone fares.

- Rapid reduction of very high rate of population growth. Costa Rica is the second country in Latin America, after Cuba, in which the natality rate is just the replacement rate, i.e., constant population in the long run. Immigration could change significantly this reality.

- Many old small towns which allow organic urban growth using the existing infrastructure
- Many small landowners that provide directly urban lots for their next generation
- For decades relatively small migration to the Metropolitan Region of San José – Gran Area Metropolitana (GAM).
- Costa Rica does not “expel citizens” in search of a livelihood in other countries in Central America, Ecuador, Bolivia or Colombia. It attracts foreigners from Nicaragua, but also from Colombia, Venezuela and other countries.

- Abundant underground water reserves charged at extremely low prices.

Hidden problems of Costa Rica relevant to urban growth

- The best urban land has been misused at relatively low densities
- Costa Ricans pay few taxes, less than 12% of the national product to the central government, due partly to evasion, but also to legal exemptions for certain economic sectors (INTEL, tourism, export oriented industries located in the Zonas Francas).
- There is corruption in the high spheres, but also at other levels of the public and private sectors.
- There are significant income differentials and they are growing.
- The adaptation to the growing globalization has created internal tensions within the country. There is a political paralysis created in part by political extremists at both ends of the spectrum.
- The recently opened corruption processes against three former presidents, two of them in jail have increased the political crisis, in particular within the traditional two parties: the Christian Democrats (Social Cristiano or PUSC) and the Social Democrats (Liberación Nacional or PLN).

- There are many immigrants entering to Costa Rica to stay or in transit toward the United States of America, they present challenges to the social security systems and the social balances within the country

PATTERNS OF URBAN DEVELOPMENT OF THE SAN JOSE METROPOLITAN REGION

The Metropolitan Region has grown from the spatial integration along several decades of four provincial capitals (San José, Alajuela, Heredia and Cartago) and dozens of towns into almost a continuous urban space in the Central Valley of Costa Rica at approximately 1100 meters of altitude. The first three are located in the Río Grande de Tárcoles watershed that drains into the Pacific Ocean, and Cartago is part of the Reventazón Watershed that drains into the Caribbean. (See Map 1, Pujol, 2003c) In the last sixty years of the nineteenth-century the economy of the region and of the country was based in the production and export of coffee, much of it produced in small farms (Hall, 1976). After the independence from Spain in 1821, San José soon became the most powerful and dynamic city, relegating the former colonial capital Cartago to a secondary position.

In the last half century the growth of the city changed slowly toward the infilling of the areas between San José and the towns surrounding it using the main roads as the axis of development and later with big housing projects. (Pujol,1988) The process destroyed thousands of hectares of fertile land, perfect for the cultivation of coffee.

The original commercial center of the city expanded into every direction but mostly toward the east and west, creating an elongated commercial area close to which many of the high income neighborhoods were created.

The poor were relegated to the borders of the rivers and later into the foothills of the southern and eastern border of San José. Eventually they took over centrally located but relatively isolated areas, located close to the main river canyons of the region (La Carpio in the La Uruca district, and the eastern tip of the Pavas district). Most of the housing construction for the poor has been contracted by the national State to private firms through formal channels.

The current patterns of urban growth have serious Environmental Impacts

Among the most important ones are:

- Urbanization of fertile soils specially in the north of the region.
- Transformation of moderate hydrologic hazards into relatively serious urban risks.
- Congestion and increasing travel times to work, universities, business and social activities.
- Increase risk of aquifers contamination in the northern part of the region due to septic tanks and the lack of sewage treatment that goes into the rivers.
- Insufficient opportunities for open space for recreation for most people in the region.
- Lack of recreational opportunities for young people, especially for the poor and in particular for the ones that live in the nucleus with many poor people.

Additionally it is very hard to find land for critical projects such as landfills, because the unplanned and disperse pattern of development shown by the Costa Rican human settlements.

URBAN SPATIAL REALITIES: SOCIAL AND ECONOMIC FACTORS

The Metropolitan Region of San José still has its main commercial areas in the centers of the four cities, especially San José, and the other towns of the 31 counties included. However the main radial roads from San José have attracted great number of commercial uses in a relatively unplanned form, hotel and industry are located side by side, and also hospitals and commercial areas, and many more odd combinations. The original Master Plan for the region from 1982 reserved areas for industrial development. Some of them were built, others had other uses. The solution was to allow the private sector to create their own industrial parks in certain areas of the metropolitan region, for example close to the international airport and the roads going to it.

In the last 15 years big shopping malls have been built, in the metropolitan area of San José but also in the outskirts of Cartago, Alajuela and Heredia. They are oriented to the people with automobile, even though most of them have relatively good access by transit. In the last decade several office parks have been built. Simultaneously significant commercial activity by both the private and the public sector move out of the center of San José (Pujol, 2003b)

Most of the residential areas of the Metropolitan Region are socially quite mixed. However, there are some big areas where rich people dominate. They are located specially in an axis east to west. The old ones are very close to the center of the city, the new ones are much farther. All of them are close to important roads (Décimo Estado de la Nación, Chapter 6th, 2004)

Social Characteristics of the Metropolitan Region of San José

Many years ago Costa Rican academics from the Institute of Economic Research of the University of Costa Rica such as Juan Diego Trejos did the operationalization of the concept of Non Satisfied Basic Needs (Necesidades Básicas Insatisfechas, or NBI). The concept was created for different basic needs categories: housing, hygiene, knowledge and consumption. Evaluation of the spatial pattern within the metropolitan region or GAM of these four complex variables using census tracks data indicates that housing NBI and hygiene NBI have non homogenous spatial distribution, while the other two knowledge NBI and consumption NBI are more evenly distributed. (Pujol, 2004)

The Metropolitan Area of San José has more social segregation than the rest of the Metropolitan Region that includes the areas around Alajuela, Cartago and Heredia. But in the secondary non-metropolitan cities the social segregation in walking distance is smaller even though it is possible to distinguish poor neighborhoods, some of them squatter settlements.

Spatial Distribution of Non Satisfied Housing Basic Needs

The Spatial Distribution of Non Satisfied Housing Basic Needs, or "housing NBI" is not uniform with the metropolitan region, that has almost 51 thousand of the 136 thousands deficient housing units. According to a recent study (Pujol, Estado de la Nación, 2004) there are 11 concentrations of poor people, with a total of 27460 housing units with 38% unsatisfactory. They represent approximately 5% of the housing units of the Metropolitan Region but more than 20% of the deficient ones. The worst concentration, Rincón Grande, has 86% of the housing units of unsatisfactory quality. See Maps 2 and 3. (Estado de la Nación, 2004). All these spatial concentration of poverty, except one belong to the Area Metropolitana de San Jose. The exception is Guararí just south

of the city of Heredia. However, there are cases with housing non-satisfied needs in almost every census track of the city.

In these eleven concentrations of unsatisfied human needs there are big numbers of poor people with deficient housing units live in crowded areas, where however, a significant proportion have reach a satisfactory housing solution. On the other hand, in the disperse human settlements on the periphery of the urban region, the proportion of inadequate housing is much higher event though its total number is smaller. This applies also to the many small rural communities with high proportion of poor people and unsatisfactory housing units. The addition of all of them is significant but does not affect so many neighbors as the cases in the Metropolitan Area of San José.

These concentrations are related also to very bad quality in the public infrastructure of those neighborhoods. Significant interventions seem to be convenient, and given the level of Costa Rican development, possible.

Spatial Distribution of Non Satisfied Hygiene Basic Needs

The hygiene basic need refers mostly to the presence of adequate evacuation of sewage from the housing unit. In the Metropolitan Region a total of 23500 have that problem, compared with almost 100 thousand for the whole country. This reflects indirectly the economies of scale in public sanitation infrastructure in urban areas.

The Map 4 presents with the detail of census track this composed variable for the center of the region. It reflects the efforts made in the old and consolidated areas of the city to provide for adequate sanitary infrastructure, even though is not being properly treated. The subdivisions of the middle class have septic tanks in each house, but many of them do not operate well and the shrinking size of the lots and some very impervious soils make the system non suitable for many areas of the city. The situation in the borders of the city is worse because the dispersion of the place and the lack of infrastructure.

Tendencies and changes.

There are some short-term elements that could have temporary effects, or open solutions to old problems never solved before:

- Relatively high prices for oil, in Costa Rica the price of gasoline is close to 80 cents per liter, this promotes public transportation and the return to the center.
- Special effort to bring again people to live in the center of San José.
- Desires, but not results of coordination between the different municipalities of the Metropolitan Region and in particular of its central core the Metropolitan area of San José.
- Lack of urban and regional planning which hopefully would be corrected in great part in the next five years with the financial support of the European Community.

Of course, it is required urgently to solve one of the key obstacles: lack of adequate investment in urban infrastructure and in particular in transportation investment by the National and local government. There are expectations that additional public investment could attract matching investments from the private sector if the right planning policies are in place.

Impacts of the current growth patterns over the quality of life of poor people living in the Metropolitan Region

- Jobs are being decentralized and many of them do not have good access by public transportation. Minimum salaries, close to 200 dollars a month, are not

enough to dream with a car that would give them “accessibility upgrading” in the short run.

- The availability of good recreational areas is decreasing.
- The poor and not so poor people that live in poverty concentration areas deal with significant problems:
 - Poor housing conditions for many.
 - Lack of adequate public infrastructure such as streets, drainages, sidewalks, green areas in many of the poor neighborhoods.
 - Relatively bad accessibility to main concentration of jobs
 - Poor quality of universal public services such as primary schools and high schools.

TRANSPORTATION SYSTEMS AND THEIR IMPACTS

Transportation Connectivity

The national road network and also the metropolitan region road network have a strong radial dominance as is shown in Map 1. Within the Area Metropolitana de San José that includes approximately the 40% of the metropolitan region population. The Circumvallation Route that circles the center of the city except for the northern side (where eventually will be built) breaks partially and insufficiently this pattern. There are plans to build an Anillo Periférico, which would connect the future main road to the Pacific Coast (27), with the main road (32) to the Atlantic Coast.

To cross the center of the city implies important delays because the radial roads to the center frequently have speeds below 15 kilometers per hour (Pujol, 2002a).

Metropolitan and interurban Public Transportation Characteristics

The public transportation route system is even more radial than the road network. This creates high accessibility for the center of San José, and also for the centers of the three secondary cities within the Metropolitan Region, i.e. Alajuela, Heredia and Cartago. See Map 5

Anyone with a non-radial trip by transit has to go to the center of the San José Metropolitan Area. To cross San José implies big delays because the final bus stops of the radial routes are not in the same place.

On the other hand, there are many secondary cities in the central valley at less than 90 minutes from the center of San José. Thousands of people travel every day to work in the Great Metropolitan Region but not necessarily to the center of San José. They chose jobs close to the national radial roads that connect those cities with the center of the center of the Metropolitan Region. The main sources of outside workers for jobs in the metropolitan region are Grecia, Atenas, Palmares, Naranjo and San Ramón toward the west, Puriscal in the southwest border, and Turrialba toward the east. These people can travel maybe 40 minutes to their jobs and that are “closer in transportation time” to them that to most of the inhabitants of the Metropolitan Region.

URBAN DENSITIES

This a critical variable in the creation of more sustainable human settlements. Densities are the combined result of land availability, land values, available technologies, existing natural hazards like earthquakes and floods, social traditions, institutional and social capital, rate of population growth and economic resources of each society.

For developing countries the challenge is to have better quality of life for all without investing too much in urban infrastructure and protecting the surrounding environment. Urban infrastructure allows different density levels, but the low altitude development path of the Costa Rican urban areas has very bad consequences and should be changed in order to provide more collective open space, protect environmentally critical areas, and provide more and better housing space for the poor.

Past mistakes can become opportunities for the future, through the densification of the areas better served by public transportation. Public – private partnerships could create enough supply and demand for new types of development.

Urban Density in the Metropolitan Area of San José

In the city of San José, as in every human settlement in Costa Rica, most of the housing units are one story, even though more two-story houses are being built in the last ten years for every social class. The old cities and towns were mixed use, but since the 1960s preference was giving to “housing projects” with almost no other land use allowed. This has slowly changed.

The population densities in the San José Metropolitan Area are very variable but low on average. The map 6 included in this work shows on white or gross densities of less than 20 people per hectare the commercial areas of the city specifically an east – west corridor. However, there are many neighborhoods with relatively high densities of more than 250 people per hectare. The richer neighborhoods have densities in the range between 50 and 100 people per hectare. Mixed use existed in the center of San José 30 years ago. Now the national and municipal government are trying to bring the people back to the center of San José.

Urban Density in Alajuela

Population density in intermediate centers within the Great Metropolitan Region of San José (GAM) is higher than in the center of San José. The center of the city of Alajuela has population densities mostly in the range of 51 to 100 people per hectare as shown in Map 7. But there are some census tracks within the boundary of the city, and close to the center in the range of 100 to 300 people per hectare as the map shows.

Urban densities outside the Metropolitan Region of San José (GAM)

This paper includes density maps per census track of the cities of Naranjo, Palmares, San Ramón y Turrialba as shown in the collage of Map 8. The data comes as in the other cases from the 2000 Costa Rican Census.

This four cities, examples of more than 10 small cities surrounding the Metropolitan Region indicate densities in many census tracks in the center of 21 to 50 people per hectare, many more with densities of 51 to 100, and even some in the range of 101 to 150. In the border areas of the cities there are certain areas that show densities of 151 to 200, like in the northern border of San Ramón and Naranjo, the south of Palmares and in the borders of the city of Turrialba in the northeast corner there are several census tracks with densities higher than 200 people per hectare and three over 251 people per hectare. In everyone of the four cities which maps are presented in this paper, there are densities below 20 per hectare, very close to the center of the city, opening opportunities for more dense residential growth.

Lessons from the urban densities of Costa Rican cities.

The city of San José is very different from the rest of the urban system

- There is almost no mixed land use
- The better served transportation corridors do not have many people living nearby
- There are areas with very high densities which clearly are associated with crowdedness
- There are many alternatives for densification in the center of the city of San José and other counties original urban area.

There are possibilities of keeping the restrictions in the border areas of the region through planning. The future demand for land can be solved with a more intensive and effective use of existing urbanized land in the San José metropolitan region. Significant infrastructure investment in the areas near the secondary cities of Alajuela, Cartago and Heredia, and eventually a more rapid growth of many cities to less than 40 minutes from the border of the metropolitan region.

LAND VALUES

The land values of the Oficina de Normalización Tributaria, a centralized valuation office for real estate are old and small compared with the current market values of urban land. Even worse, the spatial distribution of land values for 1997 is somewhat different at the current ones. New high-class subdivisions, some of them gated, have land values higher than many of the commercial areas of the region. This phenomena is related to growing inequalities of Costa Rican society (Décimo Estado de la Nación, 2004)

The land values of the national real estate assessment office indicate that San José still has higher values than most of the region. It also indicates that the centers of the old towns, which originated the metropolis, have still higher values, but at the same time new roads and commercial corridors in Escazú for example have higher values than the center of town.

Significant for this paper is that land values in the secondary cities outside of the Metropolitan Region have land values much lower than inside it. The small size of these towns, the prevalence of many small property owners, and the relative good transportation services toward the metropolitan region create automatically an alternative for many people.

Land Values in the Metropolitan Region of San José

The official 1997 land values for the county of San José, are presented in Map 9. The units are US dollars. The highest values in the center of the old comercial area of San José oscilated in the range of 1000 to 1208 US dollars per m². There was a very fast reduction toward the north and south and a much smaller toward the East and West with values in the range of 300 to 500 US dollars per m². The areas south of the center near the river had values below 50 US\$/m². But most of the south center had land values in the range of 50 to 100 US\$/m².

The Map10 presents official land values for the counties of Santa Ana, Escazú and Alajuelita, in the southwest corner of the San José metropolitan Area. Santa Ana and Escazú have been for many years preferred locations for high income people. This an

interesting case because land prices in their old centers was in 1997 officially in the range of 41 to 100 US\$/m². However land prices along the route 27 and in the fashionable district of San Rafael de Escazú reached values close to 475 US\$/m². Most of the area was in 1997 in the range of 200 to 400 475 US\$/m². In the last years in the area have appear for the first time in Costa Rica, residential towers for very high income people, some of them inmigrants for other Latin American countries such as Colombia and Venezuela.

On the other hand the values for the center of Alajuelita are also in the range from 41 to 100 US\$/m². But most of the county, a relatively homogeneous and working class area is between 11 and 40 US\$/m² with the land values decreasing with smaller physical accessibility.

The Map 11 presents the officinal land values data for the city of Alajuela. The higher values are in the center of the city and the new main entrance road. They were in 1997 in the range 201 to 388 US\$/m². The rest of the original city that conserves a lot of mixed use were in the range of 41 to 150 US\$/m². The second group of high values is along the main roads crossing the county and close to the Juan Santamaría International Airport that serves almost 90% of the commercial international flights entering into the country. There the values were in the range of 26 to 40 US\$/m².

Land Values in urban areas outside of the metropolitan region

The land values in the small cities close to the metropolitan region are smaller. Two examples are presented here. San Ramón an important city in the western extreme of of the central valley showed in 1997 official land prices in the range of 201 to 259 US\$/m². Most of the areas for future development close to the city of San Ramón are in the range of 41 to 100 US\$/m².

Naranjo had the highest official land values for 1997 in the range of 101 to 104 US\$/m². An area of potential future growth south of the city had values of 41 to 100 US\$/m². Another area with certain existing development west of the city show values of 11 to 25 US\$/m² in 1997.

The critical point is that the centers of those cities had relatively high land values but they decrease significantly at very short distances.

Additional comments about land values and their changes

In recent years land values have increased significantly in new developed areas for very high income people, many of them working for multinationals. As a consequence the current map of land values, that officially does not exist, is probably different from the ones presented here with the official 1997 assessment values. Some current data has been also collected for this paper, but it is not enough, to give the full picture of the rapid change.

It is important to say that the serious weaknesses of the local governments of Costa Rica in charge of real estate taxation indicate that not even the 0,25% of the assesed value that the law indicates is being fairly collected. In the metropolitan region and in the whole of the country market values and declared values to the local taxation offices have differences in many cases of around one order of magnitude.

LOCATIONAL DECISIONS

There are more interesting and well paid jobs within than outside the GAM

Costa Ricans have high participation rates on the labor force for people above 18 years old and open unemployment has been oscillating around 6% for several years. The search for jobs however is not simple and presents them with challenging realities: few jobs in small cities for professionals and industrial workers, no cheap land or housing in the GAM, and social and family networks available specially in the original city more than 60 minutes away from the center of the region but only 40 minutes from its border.

There are different solutions to these dilemmas: do have two homes and travel the week end to your original place, travel every day to your work, find a less rewarding job or be unemployed. Except for the first one, none is optimal but many people do have to choose between them

Many young people and families do **search for a place to live**. Sometimes the decision has short-term impacts in others, when it implies the purchase of a house or an apartment it has impacts for several decades, especially in a country with low housing turn over. The decision is then a very important one including as an essential element the interest rate in colones and dollars (much lower) but also many factors that constraint the opportunities available. Among them it is possible to indicate the following:

- Land prices are growing rapidly everywhere in the country.
- The center of the city of San José has been losing population since the census of 1963. There are many problems that motivate moving out from the center: noise, lack of cultural activities, and more dangerous than the rest of the city and the country. However, some neighborhoods near the border of the center are alive and well. They house different social classes, but most are for middle class or low income, the latter located near the margins of the rivers. Many research work done on the topic indicates that the central location to jobs and other activities and tradition are the main reasons to stay.
- The spatial structure of the public transportation system does not provide adequate services for trips suburb to suburb.
- The middle class does not qualify for government subsidies to get housing and does not earn enough to have many alternatives.

For poor people the decision is related to the possibility of moving into the city, renting in some place, sometimes just a room, and eventually moving into a squatter settlement and sometimes to a formal housing project with the financial support of the Costa Rican state.

In every case, but much more for poor people, the opportunities of finding the right place are limited. Supply is limited and could be that none of the available alternatives are perfect but... people have to find a place to live. Choices are then made under very limited opportunities, they are not optimal, they are only and powerfully constraint by the availability of possibilities. Those possibilities are related to construction and productivity and also to planning or lack of it in every city.

Decisions by Employers

The location of a firm depends on its characteristics; some are looking for markets, other for inputs, and many for workers. The location decision has several dimensions: which country, which city or area of the countryside, which specific location. In many occasions all these decisions are done simultaneously.

Some firms, especially multinationals have chosen sites near the secondary cities in the Central Valley but not in the Metropolitan region as Turrialba, Grecia or San Ramón. Many of these manufacturing plants have closed recently due in part to the Chinese competition. Some of the people working there now are traveling every day to jobs in the Metropolitan Region.

INTEGRATIVE ANALYSIS

The integration of the data of environmental challenges, density, transportation, land values and spatial location of poor people in the Metropolitan Region of San José provides some hints of a sometimes hidden reality.

Poor people with different needs live in the middle of most neighborhoods of Costa Rica, that allows civil society, through very different types of organizations, to act directly in favor of their “local poor”.

However, society through the State has to create policies that widen opportunities for all people, compensating in greater degree those with smaller sets of opportunities. The provision of public services of enough quality for every inhabitant of the country is an essential component. Good public services in rural areas will retain people and would slow down urban growth. Even more important and effective for the urban system, is to improve the quality of life, and the job and educational opportunities in intermediate cities. They serve as regional capitals, can help to improve their regions and avoid excessive migration toward the main metropolis.

With most of the Costa Rica and Latin American populations living in cities, to create urban dynamics that improve the quality of life and the opportunities for urban inhabitants is an important challenge. Maybe poverty is more prevalent in rural areas, but Costa Rican cities have the biggest concentrations of poor.

To improve the city is to open better opportunities for their inhabitants and visitors. The higher densities and agglomeration of people allows to lower the unitary costs of many services and urban infrastructure. Housing and jobs are essential elements of the quality of life. A healthy urban economy provides both. This demands certain balance between the growth of the city population and the growth of economic activities. Even more important, is to diversify the type of jobs and education available, through a more sophisticated set of economic activities, that allows people to find productive activities that fit better their abilities and dreams. A good design of a city makes it more efficient and attractive to new economic activities, Singapur, Curitiba and other cities show that reality.

When the cities are very small, the distances from home to jobs and social activities can be walked. When cities grow bigger, public transportation is necessary. Good public transportation is essential for the social equity and economic efficiency of cities of the developing world, where it is very hard to provide enough roads and highways for the cars of the middle class and the higher income people. The excess of vehicles per kilometer of road in peak hours generates much higher fuel consumption and emissions of pollutants.

Good public transportation requires enough customers per kilometer of line, during as many hours as possible, almost every week of the year. This requires higher densities of jobs close to the bus stops but also, even though more difficult, is to have high residential densities close to the bus routes. A good transportation network amplifies significantly the job opportunities for the people, and the potential employees for business and institutions.

Poverty, specially concentrated in small parts of an urban region presents very significant challenges to societies that are striving to get into a more sustainable path with greater economic efficiency, social equity and environmental respect. Many interventions are possible. Lack of resources should not be an acceptable excuse. Pilot projects, which should include reflection components, with a small group of communities would be very important learning experiences that would prepare many actors involved for bigger projects in the future.

When the cities grow over very valuable natural systems the growth of the urban areas or direct impact area creates very significant negative environmental externalities with the destruction of fertile soils, paving water infiltration areas, pollution effluents infiltrate the soils and eventually the aquifers underground, that represent significant natural resources for the present and the future.

Urban growth and renewal has to have good quality, this is more than a mere set of data for academic economists. Regulations restrict development, but regulation can and should provide better urban developments. It is well known that in some countries restricting housing densities is a way of social segregation. But social segregation and low densities occur every where, in particular in San José, where the level of regulations is small. The design solutions should be an integration of general knowledge about urban development, human behavior, and of course economic and social resources available.

THE ROLE OF PLANNING: REALITIES AND DREAMS

Urban Planning in the city of San José: a box full of paradoxes

Costa Rica has planning regulations, but most of them are ineffective, limited and not enforced. Most of the housing construction in Costa Rica is in the formal sector. Effective zoning exists in less than half of the thirty-one counties of the metropolitan region. However, national construction regulations are followed. Seismic hazards induce to have buildings with well-designed structures, but historically have being a excuse to choose “safer one story buildings”. The green area around the city and big areas for its expansion has been relatively respected for more than two decades, even though individual houses are being build on it and the agriculture production, specially coffee, is decreasing.

One of the most significant paradoxes is that, while planning is weak, and sometimes badly designed, the construction of many housing projects; most of them small with governmental subsidies, has shaped significantly the city. It has reduced the amount of funds available for urban infrastructure, and the land available for future development. The slow pace in the construction of roads and sewage networks, and in particular of specialized public transportation infrastructure makes difficult to increase population densities along their axis, and to have a more efficient urban region, as Curitiba and Bogotá have shown possible.

In Costa Rica, there are plenty of cases of planning decisions and granting natural resources use to the powerful and the rich. There are all kind of cases: very low price for the extraction of water from aquifers for industries and private users, destruction of the national roads by overweight trucks, not charging for the benefits of road construction, very small tax to diesel compared with gasoline, abusive concession in the coastal areas and of course the serious limitations of the public urban infrastructure in hundreds of poor neighborhoods in the metropolitan region and the rest of Costa Rica. So the problem is not excessive planning, is the use of power to favor small groups through planning and other means.

The potential role of good planning

Good planning does not mean more planning, or all the planning that was not done before. Planning results, at the end, depend strongly of the social consensus built about collective interests expressed over the territory in form of open space, urban infrastructure, residential neighborhoods, and commercial developments. The social consensus, or more appropriately the results of partially resolved conflicts, should guide planning decisions, and they change with time. Planners argue that they have lost most of the battles. However, there is enough evidence, unfortunately, that bad planning ideas win in many cases. The bad results are not immediately obvious, but take decades to be corrected. On the other hand, good ideas can be captured for powerful special interests, which dilutes them and sometimes ends up promoting other objectives.

At this point in Costa Rica, almost everybody would agree that the quality of urban life has decreased compared with 30 years ago, but another critical question is if the newcomers or the movers from the central areas to the new neighborhoods in the surrounding municipalities feel better now. And the answer would also positive. Urban issues are paradoxical and a grain of salt is required.

What is the meaning of no planning?

No planning is an impossible dream that pursued with great effort and greater naiveness could make things much worse.

The territorial conceptual broadening to surrounding cities, the intensification of land use and the protection of environmentally sensitive areas has to be complemented with the inclusion of the intercity transportation and its cost and time comparisons with the urban transportation system, and in particular with massive public transportation.

The challenge is to create a planning policy for the urban system and in particular for the Metropolitan Region of San José which solves the following issues:

- a. Provision of additional land for housing and other urban uses (industrial and commercial, recreational, institutional),
- b. Promotion of a disperse but integrated urban growth,
- c. Real integration of labor markets and other urban opportunities within a metropolitan region,
- d. Reduction in the time required to access adequate jobs and educational opportunities which influence dramatically the quality of life of the inhabitants.
- e. Improve the impact of migration to the urban system from the countryside or small towns.
- f. Protection of fragile and valuable environmental systems.
- g. Provision of adequate quality of urban development with an effective use of resources for infrastructure services provision.
- h. Improve the efficiency in the use of new and old urbanized land.

From the policy perspective to broaden the perspective of land supply close to the cities outside the limits of the metropolitan region, permits a significant increment in the potential land available, decreases the impact of excessively powerful landowners in some cities, and permits a more balanced urban growth. This perspective is realistic and explains partially individual and market responses in many countries of Latin America: Costa Rica, El Salvador, Paraguay; to the challenge of finding a place to live with better quality of life at a reasonable commuter time. This pattern, under the adequate policies could help in the promotion of a successful organic decentralization and a reduction of transportation costs.

Another important element is the role of transportation in investments within the metropolitan region itself, its interaction with land purchases and urban expansion policies, and its impacts on land values. The construction of public transportation infrastructure services to poor areas would provide a value transfer to those poor neighborhoods that would be more accessible to the rest of the metropolitan region.

Costa Rica is in some areas a social development success story. Significant social investment has been expended on housing for the poor. Densities in poor crowded one story areas area around 200 people per gross hectare. However, there are many indications that a narrow perspective, that not includes better urban settlement practices has limited significantly the social effectiveness of those investments.

The expected results are that intelligent regulations and better investments can be effective in increasing the long-term sustainability of the cities, improve the quality of life of their citizens, and a deterrent to high land prices per unit of low income housing.

The unit of analysis should be the urban system and its interactions with the rest of the country and the economy.

It is very important to provide possibilities for flexibility to urban policies. Land supply for future development should be found in many different places. To avoid very expensive land is possible to combine several policies: open the search, partially to the borders of intermediate cities outside of the metropolitan region, renew the urban development in the central areas and in places with high current ofr future high accessibility through public transportation, increase real estate taxes to unused urbanizable land, and decrease land taxes to land that should be protected.

The Costa Rican experience can be relevant for other areas of the world.

Positive aspects

- Urban developments with basic infrastructure are less expensive than correcting informal settlements.
- Urban policies can be improved and facilitated with national policies about infrastructure, taxation, and environmental protection.
- Effort to build solutions within a legal framework are worthwhile and effective in the long run.
- Accountability is very positive even though is not complete and totally effective.

Negative Implications

- Too much environmental damages in the process of urban growth.
- Fragmented decision making which makes decision making slow and solutions that arrive sometimes too late.

SOME FINAL CONCLUSIONS

- The success, that is, the efficiency and effectiveness of an urban system, and of the major metropolitan region within it, requires as an indispensable requisite, to decrease the social inequalities to tolerable levels, that are consistent with minimum degrees of social solidarity and cohesiveness.
- Urban and regional planning can help in making the urban systems more efficient and effective. The effectiveness of urban and regional planning efforts increases significantly when they are combined with public investment, real estate taxation, and environmental and health regulations.
- Transportation investments open new areas, an adequate planning can make that process more effective and efficient if promotes higher densities with higher development quality.
- The developing world has great diversity. It is important to accept it and build a better world and much better cities based on this great opportunity.
- The poor require specific interventions in their favor. The opening of job and educational opportunities is important. Also is important to make available health, running water, electricity, telephone, and sewage to every one in an urban area, usually crowded, for the preservation of safety and security for all inhabitants and visitors. In most developing countries, that is not possible, but to explicitly defend that goal is essential.
- It is critical to provide the neighborhoods where poor people concentrate at higher densities with minimum urban services that includes education and health, electricity and running water, but also sewage and recreational areas. This presents critical challenges for financially weak governments; but to confront those needs, as soon as possible, is a long term very effective sustainability strategy in every dimension: economic, social, environmental, political and institutional.
- Urban interventions have to be seen as experiments which are designed for success but can help to provide learning elements for bigger and more ambitious projects in the future.

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