PN-ABK-801

Infrastructure, Property Tax Mechanisms, and Regulatory Instruments for Growth Management

International Experience Applicable to Thailand

March 1991

OFFICE OF

HOUSING AND URBAN

PROGRAMS

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

W O R K I N G P A P E R

This working paper represents a non-official publication of the Office of Housing and Urban Programs. Working Papers are distributed unedited in order to ensure their timely availability.

AGENCY FOR INTERNATIONAL DEVELOPMENT
PPC/CDIE/DI REPORT PROCESSING FORM

ENTER INFORMATION ONLY IF NOT INCLUDED ON COVER OR TITLE PAGE OF DOCUMENT

1. Project/Subproject Number:

2. Contract/Grant Number: DHR-1008-C-00-0108-00

3. Publication Date: March 1991

4. Document Title/Translated Title:

Infrastructure, Property Tax Mechanisms, and Regulatory Instruments for Growth Management

International Experience Applicable to Thailand

5. Author(s)

1. Kissick, Duane
2. PADCO
3.

6. Contributing Organization(s)

PADCO, Inc.

7. Pagination: 34

8. Report Number:

9. Sponsoring A.I.D. Office: Office of Housing and Urban Programs

10. Abstract (optional - 250 word limit)

See Attached

11. Subject Keywords (optional)

1. Thailand
2. Infrastructure and Urban Services
3. Municipal Finance and Taxation
4. Urban Development
5.
6.

12. Supplementary Notes

13. Submitting Official: Mike Pulley

14. Telephone Number: 663-2558

15. Today's Date: 4-15-92

DO NOT write below this line

16. DOCID:

17. Document Disposition: DOCRD [ ] INV [ ] DUPLICATE [ ]

AID 590-7 (10/88)

ABSTRACT

Infrastructure, Property Tax Mechanisms, and Regulatory Instruments for Growth Management: International Experience Applicable to Thailand

This study is a follow up to the 1990 Bangkok Land and Housing Market Assessment which found that lack of affordable housing, lack of adequate infrastructure and inconsistent development and poor land utilization are major obstacles to effective land and housing market utilization in the Bangkok Metropolitan Area.

This report, and its sister study (*Infrastructure Financing and Cost Recovery Options*) describe various mechanisms to increase infrastructure provision. The sister study focuses on fiscal tools to finance infrastructure development.

This study consists of three sections. Section 1 describes the evolution of spatial planning techniques from static written documents to dynamic and flexible processes which utilize infrastructure to guide development. Section 2 describes specific non-fiscal or fiscal tools which have been used to guide development. International experiences with zoning and other forms of regulatory control are described in section 3. An appendix of growth management tools and experience is provided for reference.

PN-ABK-801
ISN 76293

INFRASTRUCTURE, PROPERTY TAX MECHANISMS, AND REGULATORY INSTRUMENTS FOR GROWTH MANAGEMENT

INTERNATIONAL EXPERIENCE APPLICABLE TO THAILAND

March 1991

Prepared by:

PADCO, Inc.
Washington, D.C.

for the:

U.S. Agency for International Development
Regional Housing and Urban Development Office/Bangkok

PADCO, Inc. ■ 1012 N Street, NW ■ Washington, D.C. 20001 ■
Contract # DHR-1008-C-00-0108-00

The views expressed herein are those of the authors and do not necessarily reflect those of the Office of Housing and Urban Programs

For a copy of this or other A.I.D. documents contact:

USAID Development Information Services Clearinghouse
AID/DISC
1500 Wilson Blvd., Suite 1010
Arlington, Virginia 22209-2404

Phone: (703) 351-4006

TABLE OF CONTENTS

PREFACE

SECTION ONE
INFRASTRUCTURE AND GROWTH MANAGEMENT 1
1.1 Spatial Planning 1
1.2 The Evolution of Growth Management Approaches 2
1.3 Principles for Growth Management 3
1.4 New Directions in Infrastructure Policy 4
1.5 Infrastructure as a Leading Tool for Growth Management 5
1.6 Infrastructure and Related Mechanisms to Slow Growth 7

SECTION TWO
FISCAL AND NON-FISCAL INSTRUMENTS FOR GROWTH MANAGEMENT ... 9
2.1 Fiscal Mechanisms for Growth Management 10
2.1.1 Abatements and Exemptions 10
2.1.2 Use Value Assessment 12
2.1.3 Site Value Taxation 13
2.1.4 Land Valorization 14
2.1.5 Land Readjustment 16
2.2 Other Fiscal Mechanisms: Selected Case Studies 18
2.2.1 Comprehensive Land Taxes: Korea 18
2.2.2 Capital Gains Taxes: Nepal 19
2.2.3 Land Tax (Proposed): Japan 19

SECTION THREE
PLANNING AND REGULATORY INSTRUMENTS 20
3.1 Incentive Zoning 22
3.2 Enterprise Zones 24

APPENDIX A

BIBLIOGRAPHY

This study was prepared by Duane Kissick with assistance from Burke Moriarty. Supporting inputs were provided by Jerold Kayden, John Dalton, and William Doebele.

PREFACE

The 1990 Bangkok Land and Housing Market Assessment provides an up-to-date assessment of existing obstacles to effective land and housing market utilization in the Bangkok metropolitan area. The major problems observed are:[1]

- Lack of affordable housing and slum evictions
- Transportation deficiencies and land supply constraints
- Strip and leap-frog development
- Inconsistent spatial development and poor land utilization
- Lack of adequate infrastructure

The assessment concludes with a series of recommendations for improving the quality of housing and urban development. Recommended policies center on making the land market operate more efficiently by cooling speculative demand for land, implementing appropriate planning and building controls to encourage higher-density urban development, and increasing the supply of serviced land by improving the development of distributor roads and infrastructure. These recommendations, especially the development of distributor roads and other transport infrastructure, will facilitate the implementation of programs to achieve Master Plan objectives in the Bangkok Metropolitan Area.

In addressing land and housing development problems, the final report proposes a variety of infrastructure and property tax related policy tools which can serve as incentives and disincentives to housing and urban land development. A brief summary of these fiscal (F) and non-fiscal (N) recommendations contained in this report include:

Promoting Affordable, High Density Housing Development

1. (F) Adopt regulations limiting bank financing of land acquisition for speculative purposes;

2. (F) Impose property tax policies to increase the costs of holding land for speculative purposes;

3. (F) Impose taxes, user charges and betterment levies to finance the construction of roads and other infrastructure;

4. (N) Program infrastructure (mainly distributor roads) projects to increase the supply of land for residential development;

5. (N) Prepare and implement planning and development controls to ensure that higher density development is compatible with existing land uses and causes minimal environmental impacts;

---

[1]Dowall, David. *Bangkok Land and Housing Market Assessment* - Joint report of Land Institute Foundation, Bangkok, and PADCO, 1990.

6. (N) Draft and adopt standard laws and procedures for the establishment, financing and operation of condominium owners associations;

Increasing Development Potential by Expanding Distributor Streets

7. (N) Prepare "specific plans" for development in suburban areas;

8. (N) Adopt effective zoning and development controls which compel developers to follow regulations in order to receive building permits;

9. (N) Implement "retrofitting programs" in the urban areas to expand roads and increase land supply, including the use of land readjustment, land pooling and land sharing;

Increasing the Supply of Serviced Land for Housing

10. (N) Decentralize the financing of infrastructure to local governments and service districts;

11. (N) Increase local capacity to design, program and finance infrastructure systems;

12. (F) Reform property tax systems to fund infrastructure;

13. (F) Establish special assessment districts to recover costs of new services;

14. (F) Levy developer fees and exactions to pay for needed off-site services;

Spatial Development Strategies

15. (N) Undertake a special study to design and implement land use, zoning and infrastructure plans to encourage the growth of suburban activity centers;

Tax Policies to Promote Efficient Land Use

16. (F) Levy a tax on income derived from short-term trading of land;

17. (F) Increase taxes on properties withheld from development;

18. (F) Lower income taxes for low-income housing projects; and

Better Intergovernmental Coordination is Needed

19. (N) Increase the power of the BMR Committee to allow it to set and coordinate zoning and land use decisions and to determine where and when infrastructure should be developed.

The Study of Options for Financing Infrastructure Expansion (SOFIE), also intended as guidance to the Seventh Plan, authorized two inter-related studies of international experiences in the use of fiscal and non-fiscal mechanisms to encourage the use of infrastructure to guide Master Plan implementation.

This report's "sister study", titled Infrastructure Financing and Cost Recovery Options: International Experience Applicable to Thailand, concentrated on the "fiscal" tools used to provide infrastructure which guides growth and development. Many of the fiscal tools require non-fiscal mechanisms to accomplish their purpose. Accordingly, Volume I identifies the fiscal (and non-fiscal measures which local governments have used to finance infrastructure. These measures either act as incentives to private investment or disincentives to limit growth, depending on specific development objectives and/or resource constraints.

A variety of innovative tools for financing infrastructure are described. These financing techniques have increased dramatically over the past two decades as local governments have searched for non-property tax related methods of financing infrastructure. Each tool was assessed as to its purpose, legal requirements, policy implications, and applicability to Thailand. The tools described in that volume are:

- General tax revenues
- User charges
- Betterment levies
- Bonds
- Loans
- Tax increments
- Special districts
- Development impact fees
- Consumer connection fees
- Capacity allocations
- Development exaction
- Assessment districts
- Land readjustments
- Valorization
- Excess condemnation

This study consists of three sections. Section 1, Infrastructure and Growth Management, describes the evolution of spatial planning techniques from static written documents to dynamic and flexible processes which utilize infrastructure to guide development. Section 2 describes specific non-fiscal or fiscal tools which have been used to guide development. International experiences with zoning and other forms of regulatory control are described in Section 3. An appendix of growth management tools and experience is provided for reference.

SECTION 1

INFRASTRUCTURE AND GROWTH MANAGEMENT

1.1 Spatial Planning

Spatial planning, whether within or among cities, is a subject area which has been subjected to new thinking as old ideas have largely proved ineffective. The August/September 1986 edition of the World Bank's Urban Edge "Facing the Challenge of Urban Growth" is primarily aimed at national urban spatial policy. However, some of its conclusions are relevant to city specific spatial concerns as well. **It notes that greater attention must be given to economic incentives and policies that influence the decisions of the many thousands of businesses and individuals about where to operate and live rather than on drawing up models for urban growth.** It further notes that conventional efforts to direct urban growth often fail because they do not take into account broader macro-economic and other policies that operate to influence the nature of urban form. Perhaps its most incisive observation, however, is that **conventional spatial plans emphasising containment, or growth in designated areas, fail because they assume a level of control which is virtually unattainable in places with a substantial level of economic autonomy.**

The paper draws the following broad conclusions:

1. Spatial strategies must take into account macroeconomic, credit, agricultural and other sector strategies (e.g. infrastructure). The paper notes that the spatial effects of these policies are often misunderstood.

2. The concentration of economic activity and population in major cities is not in itself an economic issue because of the potential which agglomeration affords.

3. Problems associated with high density development are often best addressed through policies aimed at the cause of specific problems such as congestion, pollution, etc. rather than attempts to prevent population growth.

In addition, the paper concluded that policies to halt sprawl around major metropolitan areas—through decentralization to other urban centers—have been largely ineffective and have often served to discourage industrial deconcentration, which is an important intermediate step in decentralized growth of secondary settlements.

According to Andrew Hamer,[2] in a specific urban setting, patterns of land use and development depend on the degree and ease of interaction in time, cost, and convenience of various activities. In a free market economy, commercial functions, which are able to pay higher prices for well situated land, generally congregate and drive out other uses. Commercial uses are, by nature, closely linked to transportation systems producing dynamics that generally result in increased densities and congestion.

---

[2]World Bank, "Facing the Challenge of Urban Growth", *The Urban Edge: Issues & Innovations*, Vol. 10, No. 7, August/September 1986.

Residential uses generally seek cheaper land on the periphery which, unless accompanied by deconcentration of economic activities, leads to greater distance to places of employment and puts added pressure on transportation systems and infrastructure networks.

Hamer argues that traditional urban growth management techniques, such as height and density ceilings in the city center, have not altered the fundamental competition which exists between land uses. A twofold approach is proposed:

- On a city-wide scale, deconcentration of central area activities is recommended along with a balanced mix of other uses. To achieve this objective appropriate levels of infrastructure investments—including transit systems—are suggested.
- Secondly, deconcentrated or polycentric metropolitan growth is common in the United States suburbs and is emerging in most metropolises in the developed world. Similar patterns are also emerging and or planned in the developing world (e.g. Bogota, Singapore).

1.2 The Evolution of Growth Management Approaches

There has been a clear pattern in the evolution of growth management techniques over the past several decades. Increasingly, these mechanisms are involving infrastructure as either a positive incentive for growth or a negative control.

Zoning and regulations, among the first urban management tools, have had a limited affect on controlling growth—particularly in the developing world. As a result, many infrastructure-related mechanisms have evolved over time to assist in development orientation.

Growth control and growth management programs: In the 1970's, cities found they could restrict the provision of new services as a means of controlling growth. If service costs for new developments were too high, the cities restricted or postponed development approvals.

Shifting costs to new development: In the late 1970's and early 1980's , the combination of increased construction costs, higher financing costs and reductions in grants from higher levels of government led to a shift in the burden of development costs to developers and ultimately the beneficiaries of these schemes. This, in turn, led to a variety of techniques designed to directly shift the burden of new services onto future beneficiaries.

Joint Development with the Private Sector: A growing number of cities throughout the developing world are experimenting with various types of joint development in which the public and private sector act as partners in new development.

In Asia, while Hong Kong and Singapore (with severe land limitations) have emphasized land use planning as a means of controlling urban growth, cities such as Madras, Bangkok, Manila, Karachi, and Bombay have tended to defer land use planning and focus on deficiencies in infrastructure provision instead. In these cities, infrastructure and housing authorities have traditionally been the main instruments of public intervention. Planning agencies have played a very passive role. However, in neither case has infrastructure been used as a tool to channel development into desirable locations.

This situation is not unique. In virtually all developing countries, infrastructure planning has largely focused on meeting service deficits rather than being used as a strategic spatial planning

tool. A basic lesson from these experiences is that sectoral and spatial planning and policy must be linked even when relieving deficits.

> In Karachi, Pakistan, sectoral planning of infrastructure has largely focused on expansion of bulk capacities and to a lesser extent on supplying deficit areas needed for consolidation of the built-up area. As a result, more than 500,000 residential plots have only been partially developed. Of these, 300,000 are vacant mainly due to a lack of supporting infrastructure—particularly water. Karachi's inability to make serviced and affordable development schemes available to low income households has also led to massive growth of illegal settlements in which about one-half of the city's population resides. Clearly, future infrastructure investment must be redirected towards a consolidation program to address this imbalance.

It is not within the scope of this paper to sufficiently treat metropolitan management as an important spatial and infrastructure concern. However, as is noted in Section 1.3.1 it is a continuing preoccupation of the World Bank and other donors. Over the years a host of approaches have been attempted, including the establishment of sectoral and metropolitan development authorities, and increasingly, municipal management as the driving force behind donor lending programs. A common problem has been the lack of coordination among sectoral programs which has contributed in a significant way to the haphazard and inefficient urban development patterns which have occurred.

In the 1970s Metropolitan Development Authorities were perceived as an important urban management tool. However, concentration of authority for planning and infrastructure development within a single agency has not worked well. The following example illustrates the types of problems which emerged.[3]

1.3 Principles for Growth Management

To conclude this section, excluding many of the points made above, a number of broad principles have been drawn from a recently published USAID document on urban environmental management. In essence, the document emphasizes the need to direct urban growth through improved mechanisms for land delivery and infrastructure investment. Among the guidelines suggested by the study are:

- Improving the management of public land by property inventory improved land information systems and related measures;
- encouraging public-private partnerships in land development that brings the strengths of both sectors to bear on the delivery of adequate and appropriate lands for urban development
- improving or revising the regulatory and legal framework including the provision of tax incentives as well as enforcement capacity.
- channeling extensions of infrastructure and roads as well as the location of public facilities in such a way as to encourage or discourage private economic and other investment in desired directions and areas.

---

[3] Metropolitan efforts in urban management, planning and infrastructure provision are common throughout Asia through various metropolitan development authorities. This experience is well documented in Sivaramakrishnan, K.C., and Leslie Green, *Metropolitan Management: The Asian Experience*, World Bank, 1986.

- providing incentives (and supporting infrastructure) for increased density and or infill in existing urbanized land
- encouraging community/neighborhood action efforts as part of capital assistance projects based on the premise that effective programs must involve community participation in decision making and that communities and households will invest and pay for improvements in which they directly benefit.
- choosing infrastructure and urban services investments that have strong impacts on economic growth and revenue generation potential.
- providing local and central governments with information about the range of tested technologies, organizational systems which can reduce capital costs and facilitate cost recovery for urban services.
- providing infrastructure before development occurs, where possible, thereby preempting haphazard development.
- encouraging private sector provision of urban services with increasing emphasis on an enabling role of the public sector for growth management and service provision.
- integrating environmental management and protection into urban development and capital investment planning and programming.

1.4 New Directions in Infrastructure Policy

The provision of infrastructure (or failure to provide it) is a spatial planning tool that is yet to be fully exploited. In rapidly growing urban areas, the provision of public services can be used to facilitate orderly growth or thwart it depending on the existing knowledge of urban dynamics and the degree of investment and control exercised.

The infrastructure financing tools described in Volume I of this report serve in an indirect but absolutely fundamental way to promote growth management through the use of infrastructure. In and of itself, infrastructure is probably the most potent tool which can be used to guide growth.

Broad recommendations for the 1990s from the World Bank's forthcoming "Urban Policy and Economic Development - An Agenda for the 1990s" suggests that past emphasis on neighborhood-level projects and/or sector emphasis on city-wide infrastructure should be replaced with better targeted infrastructure at the city-wide level and strengthened management. Among the guidelines recommended are:

- targeted increases in infrastructure investment (and spatial location)
- improvements in the composition of investment such as the balance between primary networks and neighborhood distribution systems
- improvements in the operational performance of investments; and
- improvements in the maintenance and rehabilitation of existing investments.

Curitiba, Brazil, is noted as a successful example of coordinated urban management. Guided land development involving closely coordinated transport operations linked with new settlement development was noted as the chief reason for its success. However, the document noted that this process was supported by effectively applied zoning regulations and building controls as

well as building and land information systems to monitor growth and to support a rapid approval process. A development application takes just five days to process.

The Municipality of Curitiba has established an agency for planning and research which is responsible for coordination, priority setting for public works and information provision. It coordinates infrastructure investment, multi-program reviews, and operates a metropolitan financial information system.

Recife, Brazil, represents a well-known but relatively undocumented effort to rationalize the use of metropolitan space. It involved a new spatial strategy for urban development, a new metropolitan sub-center, and concentration of growth on two axes. The city (one of many in a broader metropolitan context) was in great need of land, as well as key infrastructure and services, to promote expansion. The land management program involved major metropolitan management, planning, and capital investment programs.

Metropolitan infrastructure schemes included large scale investments in urban highway links, new urban sub-centers, housing and commercial developments, large industrial parks, and reclamation schemes that were designed to significantly increase the supply of land. The 1976 development plan emphasized the strategic placement and use of metropolitan infrastructure and services and the need for a metropolitan "umbrella" development agency to implement it. Approximately $250 million in investment was realized between 1982 and 1989.

The program was successful in the upgrading of about ten thousand housing units; the implementation of about 12.5 kilometers of freeways and related transport, a decided impact on urban growth and the development of the metropolitan sub-center-the latter of which unfortunately did not live up to desired expectations due to an unanticipated shift in the direction of urban growth.

In the Brazilian context the metropolitan management did not succeed. The supporting federal ministry was dissolved and local authorities over which the authority had control lobbied effectively for the authority's dissolution as well.

1.5 Infrastructure as a Leading Tool for Growth Management

In most cities, urban roads and transport systems are likely to have a more dramatic impact on urban growth and land use patterns than any other infrastructure system. For example, in the 1970s a major north-south road was constructed through Jakarta. It rapidly became a major generator of linear development composed of high-rise, high-density commercial and hotel structures, contributed to the lack of a clearly defined urban core, and established a strong north-south direction of growth. Partly to correct this trend, the capital investment plan for the Jakarta metropolitan region in the 1980s was conceived. A key concept of the plan was to shape urban growth through the introduction of trunk roads and water and sewer lines to shift growth to a more desirable east-west axis. Singapore and Curitiba, Brazil, are also notable applications of integrated transportation/land use planning using similar approaches.

In Washington D.C. the development of the subway/light rail (metro) system and related transport facilities was carried out in such a way as to have a dramatic effect on the metropolitan area. Publicly-privately planned and implemented commercial and office centers have blossomed around each metro center and linkages with other transport modes, notably buses, have expanded the breadth of the metropolitan area and access to the city center and outlying centers.

Guided land development is increasingly seen as a useful growth management tool. In the World Bank sponsored Tamil Nadu guided land development project one of the key objective was to overcome land acquisition problems. In this program a public development agency formulates guidelines for development schemes. It then identifies a number of responsible private developers to carry out elements of the program. Site planning is either done by the public agency or private developers. The developers acquire and service the land according to pre-determined standards with a set-aside arrangement of some plots for low-income households. Land owners wishing to participate directly in the scheme have the option of giving the developer authority to execute what is in effect a land readjustment scheme on their behalf. After development, the public agency may purchase the low income plots at prearranged prices and developers are permitted to sell the remaining plots as they see fit. As part of the public-private agreement, if necessary, the public agency grants development permissions exempting the project from town planning standards where appropriate.

The Toronto subway is also an example where capital investment was combined with planning, regulatory initiatives, and a knowledge of land market to effectively shape land use in the city. Special variances and bonus incentives were enacted to encourage development near subway stations and to create a compact downtown financial and business district.

The location of international airports and related transport facilities to city centers have long served as engines for directed urban development. Numerous examples exist throughout the developed and developing world (Paris-Charles de Gaulle, Cairo, Bangkok, Washington/Dulles. etc.)

The effect of roads on land development is often underestimated by public authorities. The construction of a ring road around the metropolitan area of Kathmandu in Nepal, for example, had the opposite effect of that intended. Rather than defining the limits of the metropolitan area (with an accompanying green belt), it served to open up new areas for development. As a result, the city doubled in area in about ten years. Arterial/linear development to outlying villages was further hastened by the extension of bus lines. Similar situations have developed in Cairo and many other cities throughout the world.

In virtually all cities, arterial roads commonly serve as corridors for linear development. Without the introduction of secondary roads and related services, land consolidation does not occur. Rather, pockets of underdeveloped areas evolve and congestion on feeder roads and arterials result. This has been the case in Bangkok, Kathmandu, Karachi and a multitude of cities worldwide.

The Interstate Highway Program in the United States, launched in 1953, was one of the major contributors to changes in the configuration of American cities. In addition to intercity expressways, urban ringroads and arterials carried out as part of this program led to the extension of large areas in the urban fringes which became more accessible to city centers. Meanwhile, businesses, industries, and other facilities took advantage of the low cost of land and access to these networks to relocate in suburban areas thus, contributing to the decay of the inner cities. This movement was reinforced by mortgage insuring mechanisms, enacted at the same time, to support the development of relatively inexpensive housing constructed in large numbers in suburban locations.

The development of Ankara, Turkey was also largely made possible by highway construction programs aimed at stimulating its growth while restricting capital investment in the major

cities of Izmir and Istanbul. On the other hand, efforts to resolve transportation bottlenecks through the construction of the Bosphorus Bridge linking the European and Asian segments of Istanbul ignored the land use significance of this facility. Had the impact potential been assessed, haphazard growth and speculation might have been avoided and some of the development benefits of the bridge might have been capitalized on by the city.

Access to telecommunications facilities and power are key determinants for the location of economic enterprises both within a metropolitan area and among cities. In Tunisia, for example, provision of good telecommunications and telex facilities have limited economic and industrial expansion to a few planned areas. As a consequence, cities with industrial development potential and available but underdeveloped industrial zones have stagnated due to a lack of telecommunications, power, roads, drainage, and other services. Throughout the world, in fact, the lack of adequate telecommunications in many urban places has been shown to be a major factor leading to congestion of existing road networks for business related errands and communications.[4] Communications and transportation systems are interrelated and must be designed in a complementary way.

Access to potable water is also a determinant of urban spatial development. It is the chief determinant of growth in arid cities like Karachi. It is also a factor of urban influence in places such as Bangkok where ground water pumping is leading to subsidence and costly flood protection measures.

1.6 Infrastructure and Related Mechanisms to Slow Growth

The mechanisms described below can be used to limit growth to a manageable rate.

Phased Growth Management: Ramapo, New York, within commuting distance from New York City, has been faced with rapid growth which has strained its ability to provide urban services. To reduce pressure on its growth, the city passed an ordinance in 1969 aimed at pacing residential development. The Ramapo ordinance provided for ranking proposed developments according their demand on urban services. Permits were granted or postponed depending on the demand these developments would have on urban services. The approach had only limited success due to the difficulty of determining the true economic costs of development impacts. A similar approach in Petaluma, California, was determined to be illegal.

Rationing Sewerage Capacity: Fairfax County, a suburban area of Washington D.C., has also experienced rapid growth. One of the means it used to slow growth has been to put controls on its sewerage treatment capacity: reduction in its sewer plant capacity, design of smaller plants than originally planned, design of pipe collection systems with limited capacity, etc. As a result of this strategy, housing construction was cut back 40 percent in the county.

Development barriers: In Cairo (the concept plan of 1982) military installations and communications facilities requiring large surrounding areas of non-built-up area were proposed

---

[4] In a study conducted by the World Bank in São Paulo, Brazil, the availability of public services, especially power and telecommunications, easy road access, and skilled labor, were among the chief priorities expressed by firms that were making decisions about where to locate.

as development barriers to urban expansion in fertile and other areas requiring special protection. In Kathmandu, Nepal, to protect fertile flood plains, a moratorium was placed on public investment in drainage facilities and construction as disincentives to development. Road and infrastructure provision in desired development areas were proposed to promote alternative sites for development. In some cases the disincentives resulted in greater hardships for informal settlements.

SECTION 2

FISCAL AND NON-FISCAL INSTRUMENTS FOR GROWTH MANAGEMENT[5]

This section concerns itself with non-revenue related effects of fiscal instruments with specific emphasis on their application to land planning and growth management objectives. The World Bank's "Urban Land Policy: Issues and Opportunities" notes that one of the key ways the public sector can intervene in land markets is through the taxation of land or its improvements. A wide variety of tax instruments have been used for this purpose. Property taxes and betterment levies are highlighted in the paper as two such mechanisms for land reform. However, the land policy paper also provides examples of how a vacant land tax was attempted to stimulate development in Taiwan and Chile; how property tax rates were designed to reinforce zoning in Jakarta, Indonesia; how capital gains taxes were used in an attempt to curb speculation in Korea. As our research has shown, however, fiscal and non-fiscal measures must often work together to promote master plan objectives.

The World Bank land policy paper recommends that the public sector design land tax instruments very carefully so that they either (a) remain neutral in their effects on land development, or (b) clearly promote desired development patterns. It should be noted that in many of the countries identified in the land policy paper, land taxation has not yet been proven to be an effective instrument of land policy. While many local governments depend on some form of property tax as a source of revenue, its potential is largely unexploited as a spatial planning tool. Many countries still use an inadequate form of property taxation based on annual rental value for which tax bases are notoriously out-of-date. Properties are therefore under-valued and tax yield is limited. This provides further justification for the use of non-fiscal measures to reinforce tax policies.

A select number of property-related fiscal and non-fiscal mechanisms with direct linkages to land development are discussed below. Each mechanism was selected because of its relevance to policy analysis in Thailand. The mechanisms selected for discussion are:

- **Mechanisms for Growth Management**
  - Abatements and Exemptions
  - Use Value Assessments
  - Site Value Assessments
  - Valorization
  - Land Readjustment

Each of these is presented in a standard format consisting of (1) Basic Description, (2) Operational Issues, (3) Examples, and (4) Evaluation.

---

[5]The World Bank's Staff Working Paper (No. 283), "Urban Land Policy Issues and Opportunities", is one of the best references on land policy related issues. Volumes I and II were published in May 1978.

2.1 Fiscal Mechanisms for Growth Management

Local and state governments in the United States have employed four basic property tax mechanisms to influence the location and type of land use activity: (1) abatements and exemptions, (2) use value assessment, (3) site value taxation, and (4) valorization. These four techniques have been used as both incentives and disincentives to development. By reducing or increasing the cost of certain land use relative to other land uses, broad policy objectives, such as growth management, can be promoted.

Property tax mechanisms have been employed to encourage specific desired land uses such as job-creating industrial factories, low income housing, historic buildings, and open space. These fiscal mechanisms have not been employed as broad planning tools to guide and control land use patterns throughout a local jurisdiction. Rather, American cities have relied upon zoning and similar regulatory techniques to accomplish these broad purposes.

The effectiveness of fiscal mechanisms to influence land use decisions presupposes a functional administration of property tax. In the United States, where certain landowners may pay annual property taxes equal to 5 percent of the fair market value of their property, reduced property taxes through abatements and exemptions may offer real incentives to landowners to behave in ways that advance the public interest. Whether similar behavior can be motivated in developing countries, where taxes are often an insignificant factor in economic analysis associated with land development, is one of the basic questions which PADCO's research and analysis will attempt to address for the NESDB.

2.1.1 Abatements and Exemptions

Basic Description

Property tax abatements and/or exemptions reduce or eliminate the amount of property taxes due from certain landowners in order to encourage them to utilize land in the public interest. By reducing, or sometimes eliminating, property taxes the taxing authority reduces the carrying costs for specific land. For example, local governments may reduce property taxes to encourage construction of job-creating industrial factories or low-income housing, or to encourage the preservation of historic buildings or open space.

Operational Issues

Property tax abatements and exemptions each reduce the effective tax. Laws defining tax abatement or exemption programs will usually specify amount, length of time, and eligible land uses. The length may range from a specified period of years to "in perpetuity". In some cases, the abatement or exemption will last as long as the land meets the established criterion. In others, the abatement or exemption will decline over time. Abatements or exemptions may be administered as matters of right, i.e., landowners qualify by law or by administrative discretion, where a designated agency determines eligibility of landowners for the desired abatement or exemption. Sometimes, abatements and exemptions are available only within designated districts or sub-districts of urban areas.

Examples

Many U.S. cities and states have widely employed property tax abatements and exemptions to achieve a variety of land use objectives. The following are indicative of fiscal tools to motivate land use decisions:

- **New York City**
  The city's "Tax Incentive Program" provided partial property tax exemptions for newly constructed or rehabilitated commercial or industrial buildings. For new construction, 50% of the assessed value was exempted from taxes in the first year following project completion. For rehabilitation, 95% of the increase in assessed value of the rehabilitated building was exempt from property taxes, decreasing by 5% annually over the next 19 years. The city exercised substantial discretion in defining which projects would be eligible for abatements, considering such factors as need for services provided by the project, employment opportunities, the project's need for the exemption, and the project's economic impact on the area. Rehabilitation projects were required to have costs at least equal to 20% of the existing assessed value of the property in order to be eligible.

  Another New York City program, entitled J-51, encouraged rehabilitation of existing multiple dwelling buildings as well as the conversion of non-residential buildings into residential ones.

  A third New York City program designed to encourage industrial retention required applicant businesses to demonstrate that they would leave the city or not expand facilities if tax aid were not forthcoming.

- **New York State**
  New York State authorizes property tax exemptions for a variety of business investments. Most new commercial or industrial construction or rehabilitation may receive a 50% property tax exemption the first year, which decreases by 5% in the following nine years. Local governments may also exempt commercial or industrial improvements from property tax payments for ten years.

- **Michigan**
  Michigan allows local governments to abate the property taxes of manufacturers who replace or rehabilitate obsolete industrial facilities. Eligible facilities include buildings, equipment, machinery, furniture, fixtures, offices, and warehouses. Rehabilitation or replacement of obsolete facilities qualifies for a 100% tax abatement on the value of improvements for a 12-year period. Construction of new facilities qualifies for a 50% reduction. Land, however, is fully taxable at all times. To qualify, businesses must demonstrate that the proposed investment will create new jobs or maintain old ones in the same area.

- **Massachusetts**
  Through its Chapter 121A program, Massachusetts allows cities to offer a full tax exemption for up to 25 years on land and building for qualifying commercial and industrial development. Although Chapter 121A properties are technically tax exempt, in practice their owners make payments-in-lieu-of-taxes (PILOT) to the local government. These PILOT payments are based on a formula establishing the tax rate at between 20% and 25% of effective gross income generated by the project.

Evaluation

- Incentives
  - Property tax abatements and exemptions have never been used as a primary tool for broadly guiding land use. They instead are meant to encourage the provision or preservation of a narrow range of usually uneconomic land uses. Land use regulation remains the principal tool for implementation of land use planning.
  - Property tax abatements and exemptions have influenced the behavior of individual landowners to develop properties in ways desired by the public sector.

- Disincentives
  - Property tax abatements and exemptions result in loss of tax revenue to local governments, and thus make it more difficult for local governments to conduct their activities.
  - Property tax abatements and exemptions are relatively easy to administer.
- Other Features
  - Property tax abatements and exemptions may encourage corruption in local government administration, just like other public subsidy programs.

2.1.2 Use Value Assessment

Basic Description

Use value assessment is a mechanism by which a parcel of land is assessed at its current use, rather than its fair market value—to encourage preservation of agricultural, open space, and other land uses that tend to be economically marginal. The reduction in taxes makes it possible for landowners to retain the property in its current use and thereby reduce land speculation and/or prevent more intensive land use.

Operational Issues

Governments have developed and implemented three basic types of use value assessment mechanisms:

1. Preferential assessment - certain types of property (open space, agricultural land) qualify for tax abatement as long as the preferential use continues.

2. Deferred/rollback assessment - recaptures taxes forgone in prior years when the preferential use ends.

3. Restrictive agreement assessments - contractual agreement in which property taxes are abated for a specified period in exchange for a preferential use.

Examples

Most States have enabled local governments to employ some form of use value assessment to preserve farmland, open space, and sensitive environmental land. The State of Delaware, for example, offers preferential assessments for land parcels over five acres in size that have been actively devoted to agriculture, horticulture, or forest use for at least two successive years immediately prior to the tax year in question. The state of California provides for restrictive agreement assessments, where landowners enter contracts with local governments restricting use of their property for ten years to the qualifying use.

Evaluation

- Incentives
  - Use value assessments (a) assist in the preservation of farmland and other environmentally sensitive land and (b) control urban sprawl by decreasing the financial burden to landowners maintaining those uses.
- Disincentives
  - Use value assessments operate at the margin and do not directly address the landowner's loss of potential profits from sale of farmland or open space for higher and better uses.
- Other Features
  - Use value assessments result in a loss of property tax revenue and may mean that taxes on other parcels will be higher in order to recoup this loss.
  - Use value assessments are relatively easy to administer, as long as the government has a functioning property tax system.

2.1.3 Site Value Taxation

Basic Description

Site value assessment (land taxation) permits governments to assess land at its potential or "highest and best use" value and to levy a property tax based upon that estimate. The tax is imposed on the value of land alone rather than on the aggregate value of land and its existing improvements. By assessing land on the basis of its highest use, site value assessment encourages landowners to actually achieve the most intensive use of land.

Site value assessment shares characteristics with so-called anti-speculative or vacant land taxes which are imposed when the public sector wishes to discourage holding land in order to reap future speculative gains. Site value assessment is potentially helpful in increasing the supply of land available for urban development, and may even result in a decrease in land values.

Operational Issues

Site value assessment operates most effectively where demand for developed land justifies public intervention in land market economies. Assessing vacant land according to its highest and best use may lead to higher than desired densities, particularly in the absence of zoning, subdivision, or building standards.

Site assessment may be highly subjective, often raising questions about the public interest in "forcing" some landowners to sell land for development which could be preserved as open space.

Examples

Many cities in both developed and developing countries have employed site value assessment. Sydney, Australia, for example, has actively enforced a site value tax to encourage the redevelopment of its central business district. In order to obtain as much revenue under the site value tax alone as would have been collected under taxes normally imposed on land and improvements, the site value tax rate is three times the tax rate imposed on land and improvements.

Taiwan has adopted a land tax program that utilizes site value assessment principles. The State of Hawaii imposes a site value tax in which the tax imposed on improvements is progressively

reduced relative to the tax imposed on land. The redevelopment of Pittsburgh over the past decade has been credited to a "vacant land" tax. A proposed vacant land tax spurred development in Jakarta, Indonesia, although the implicit threat of expropriation may have contributed to development as well.

Evaluation

- Incentives
  - Site value assessment can increase the supply of urban land by increasing pressure on speculators to more intensive use.
  - Site value assessment encourages landowners to rehabilitate dilapidated property.
- Disincentives
  - Raw land, more appropriate for agricultural use, on urban peripheries is less prone to development pressure.
  - Site value taxation requires hard-to-acquire valuation information.
  - It may discourage land consolidation for public purposes, especially open space and/or affordable housing.
- Other Features
  - Site value taxation may be conceptually difficult for legislators to accept, especially since it is predicated on assumed behavior rather than empirical evidence.

2.1.4 Land Valorization

Basic Description

Valorization systems (including traditional "betterment" levies) assess a fee on private land determined, by qualitative methods, to have benefitted from public improvements. Calculation of the valorization fee relies on special measures of increased benefit to the affected property. A direct, equivalent increase in market value is not necessary for fee assessment. Furthermore only the actual cost of the capital infrastructure improvement is recovered, not the full amount of value increase enjoyed by affected landowners. Betterments, on the other hand, may utilize value increases as the basis for calculating amounts due from beneficiaries.

Operational Issues

After capital infrastructure and related costs are determined, the cost "burdens" are apportioned to land parcels which derive "benefits" from public investments. Not all land parcels benefit equally from the investment (e.g., parcels with direct access to distributor roads will derive more benefits than those without such access) and, accordingly, the share of cost borne by individual landowners will be proportionate to benefit: not to market value, acreage, or other factors.

Examples

- **Bogota, Colombia**
  Bogota, Colombia, which first used valorization in 1944, is one of the most well-known examples of an operating valorization system. Each valorization project in Bogota requires both technical and political approval. A public agency is given general responsibility for preparing a valorization memorandum which includes a description of the project and its goals, project cost, a geographic delineation of the so-called "zone of influence" within which

valorization charges will be assessed, and a plan for landowner participation. Typically, wide zones are established, within which all lots are considered to benefit equally from the capital infrastructure project. Thus, the per-square-meter charge will be the same, and total valorization charges for each landowner will vary only according to lot size and frontage, if any, on the capital improvement.

Some valorization projects require a more complex method based on an individualized approach to each property. Ten factors are used to allocate benefits and costs, including not only lot size and frontage but also topography, changes in property use, proximity to low-income areas, and owner self-improvement. A coefficient, or multiplier, is used to measure the relative weight that factor deserves. A "final coefficient" per square meter is then derived to reflect the summation of individual factor coefficients.

- **General Betterment Strategies**
  Betterment levies may discourage land speculation if enacted and enforced in such a way as to capture, for the public sector, the increase in private value associated with its investments. There are three types of betterment levies:
  1. Levies to finance site specific public investment
  2. Levies on land value increases
  3. Betterment tax on the gain in value associated with a land use change

  Betterment levies represent a form of land value taxation which encourages landowners to maximize economic return from property investments. Thus, betterments could be an effective tool to both generate revenue (fiscal) and bring about desired changes in land development (non-fiscal).

  Betterment levies have been tried in many countries with mixed results. Problems in implementation are usually due to weak administration and enforcement. In India, betterment levies have been affected by extensive litigation. They remain unimplemented in Indonesia, and in the Philippines, designated powers remain to be enforced.

  On the other hand, betterment levies have been used extensively to recover costs in urban upgrading programs in Tunisia, the Ivory Coast, and many other African countries. A road tax in Korea has functioned effectively as a form of betterment levy to recover part of the public costs of road construction.

Evaluation

- Incentives
  - Valorization serves **efficiency** goals by allowing serviced land to enter the marketplace. It may also serve **equity** concerns by providing low income persons with increased commercial opportunities and access to employment. **Equity** concerns are particularly reinforced when valorization calculations take into account the ability of affected landowners to pay.
- Disincentives
  - "Ability to pay" may be difficult to determine since land holdings and wealth may not be directly calculated.

- The financing of infrastructure which depends on valorization for cost recovery and debt service is a higher "risk" due to uncertainty of collection.
- Land ownership may be difficult to determine in "informal" areas, limiting the use of valorization for urban development purposes.

- Other Features
  - Enforcement and penalty charges are often needed to achieve compliance with financing plans. Powerful interests may resist payment.
  - It is not certain to what extent valorization charges supplement other forms of public revenues, or merely substitute for them. To the extent they substitute, the system may be **inefficient**. To the extent they complement other revenues, then both **efficiency** and **equity** goals may be served.

2.1.5 Land Readjustment

Basic Description

Land readjustment, also known as "land pooling" and "land consolidation", is a land use and growth control technique enjoying increasing popularity in developing countries as an alternative to betterment levies, special assessment districts and valorization strategies. Instead of assessing a special fee to pay for the concomitant costs of infrastructure, the land readjustment technique reserves for the public sector a percentage of the total land area of the proposed development. Some of this reserved land is used to accommodate the public infrastructure (roads, parks, etc.) while other portions of it are sold to finance the cost of infrastructure. Actual land ownership is "readjusted", between the private and public sector and among several private parties, through a physical exchange of land. Such a technique may be regarded as a marriage of traditional subdivision controls, traditional expropriation and public land sales. As such it combines fiscal and non-fiscal tools to accomplish plan objectives.

Land readjustment was first developed in Germany and Japan, and more recently used in South Korea, Taiwan and Australia. Its objective is to recover public infrastructure costs associated with specific land development through increments in land value. In this way the public sector is able to plan and encourage efficient use of land, particularly in urban fringe areas, without regard to municipal budgetary consequences. The correlation of the costs and benefits of development is achieved on a project-by-project basis. It should be noted that land readjustment schemes can and have been carried out by private parties with no direct participation of the government.

Operational Issues

The land readjustment technique is designed for use in areas about to undergo development. When initiated by the public sector it operates much like tax increment financing in that a separate district is established for the purpose of defining costs and benefits of development. However, rather than using debt as the financing tool, land readjustment "capitalizes" current and projected land values to generate financing. Through private land dedication and public land sales the resources are generated to compensate for public sector infrastructure costs.

While installment approaches to cost recovery have been tried, the "burden-benefit" principle is important to land readjustment. Land owners should assume the cost burden before enjoying the economic benefits of higher land values.

Sophisticated versions of land readjustment calculate the marginal differences in costs and benefits that accrue to individual parcels. Land parcels that require higher unit costs for infrastructure would offset these costs. Similarly, land that benefits more significantly from servicing as measured by increased market value could also contribute more "cost-equivalent" land.

Examples

One of the most instructive examples of land readjustment is found in South Korea. South Korea has produced a sophisticated system of land readjustment that has contributed to successful urban development.

Private landowners, either singly or in groups known as associations, respond to the government's solicitation for participation in the land readjustment scheme. Most land readjustment activity has been organized by government. For example, in Seoul, individual and associated private landowners account for only 4.5% of privately-organized land readjustment, with the remainder organized by the city of Seoul (93%) and the Korea Housing Corporation (2.5%). However, the percentage of landowner-initiated projects has been substantially higher in other South Korean cities, with the average of 40% of all projects in K and Daego.

Much major residential development in South Korea today is accomplished through land readjustment schemes. At the end of 1976, 186 projects involving 181,023,000 square meres and US$246 million has been completed, with 88 projects still underway. (Kim, Hwang, Doebele, 1982). On average, landowners have contributed 40% of their land to provide basic land and "cost-equivalent" land for public improvements. This 40% can be further broken down, with 22% of land used for roads, 2% for parks and open space, 6% taken for national purposes, and 10% taken for cash equivalency and thus ultimate auction in the marketplace. The average landowner thus received 60% of his land back in the land readjustment plan.

The increase in value of the land returned to landowners was quite dramatic. According to statistics assembled through the Ministry of Construction, the average increase in value after completion of the land readjustment plan was 6.8 times in Seoul (1967-1975), 2.7 times in Daegu (1969-1975), and 2.5 times in Gwang-Ju (1968-1975).

Evaluation

- Incentives
  - Basic land readjustment is designed to assure that land development "pays its own way" so that government is not saddled with the burden of paying for infrastructure services.
  - Land readjustment has the great advantage of leaving the original landowner in place, both geographically and in terms of basic quantity of land.
  - Through cross-subsidization, the calculation of costs and benefits can include broader redistributional goals. The political and economic efficiency of such innovation in land readjustment will necessarily depend on the realization of increased value for retained land upon completion of the readjustment.
- Disincentives
  - Provision of public amenities in land readjustment projects may be sacrificed in order to keep infrastructure costs down. In South Korea, there has been some pressure to keep parkland and open space to a minimum in land readjustment projects

- Land readjustment may cut against innovation and risk to the extent it is seen as threatening certain and steady increases in land value automatically accruing to landowners in the marketplace. Landowners frequently favor certain little gains to uncertain big gains.

- Other Features
  - Land readjustment requires sophisticated administration. For many countries this means the training of officials conversant with land appraisal techniques and real estate development economics. This may not totally eliminate the basic complexity of the system, which has been the subject of some criticism.
  - Public information/community education is a precondition to successful implementation of land readjustment approaches.
  - A significant time period will usually be required to accomplish land readjustment. In South Korea the average time for final "readjustment" is six years.
  - Land readjustment works best in markets with a healthy demand for serviced land. This explains the success of land readjustment schemes at urban fringes where development is spilling over from the central cities. In rural areas where demand is not so great, land readjustment has been less successful.

2.2 Other Fiscal Mechanisms: Selected Case Studies

2.2.1 Comprehensive Land Taxes: Korea

The Korean comprehensive land tax was designed to address problems in Seoul which are similar to those confronting Bangkok today. The comprehensive land tax was a very strong public intervention to address problems associated with speculation which contributed to the problem of insufficient housing.

Problem: Land prices in major cities in Korea, particularly Seoul, are so high that even upper-middle-income persons cannot afford to purchase a small apartment. In 1989, a study showed that the increase in urban land values was equal to all of the wages earned in the country during that year. Testimony at a congressional hearing reported that 5% of the land owners own more than 60% of the land in Seoul and that 18% of the total land in Korea is owned by only 1084 corporations and individuals. The wide publicity given to this data created a great deal of political pressure to control speculation and the seemingly endless rise of urban land prices.

Attempted Solution: A new **Comprehensive Land Tax** was passed in the summer of 1990. It has four major features:

1. **Land Ownership Tax:** This tax is imposed on the individual instead of the property. A central computerized system of land registration, monitored by the Ministry of the Interior, has been established to determine how much total land is owned by any individual in each major city. (There are heavy criminal penalties for using nominal ownerships—that is, false names to conceal the true owner.) Above a specified size, there is a special annual tax on the fact of ownership alone, that becomes progressively more burdensome.

2. **Property Tax:** Since the 1960's the property tax has been heavily weighed to impose heavier taxation of industrial sites in the main metropolitan area (to encourage industrial

decentralization); on "lavish uses" like golf courses and luxury vacation homes, and on vacant or under-utilized land.

3. **Income Tax on Land Transfers:** For over twenty years there has been a nominally heavy tax on capital gains where property is transferred. However, assessments have been low and there have been loopholes. The new act tightened this system.

4. **Acquisition and Registration Taxes:** These now have a rate of about 5.6% (much higher than most countries) and represent about 38.6% of the revenues of local governments. Acquisition of land by corporations for "lavish" and non-productive uses have rates as high as 7.5 times the basic rate.

Evaluation: The new tax on the amount of ownership is intended to penalize land speculators (corporate and individual) without burdening ordinary land owners. The proposed tax revenues from the comprehensive Land Tax system are estimated to be about 2.6 times more than pre-1990 level. A simulation done of two leading corporations showed that they would be liable for five times more property-related taxes under the new system.

2.2.2 Capital Gains Taxes: Nepal

Taxes on land value increases at the time of property transfer is a form of capital gains tax. Such a tax is usually administered by a national agency rather than a local government and is not generally earmarked for any location-specific use.

In Nepal, a surtax on the land transaction tax in the Kathmandu Valley was considered as a possible revenue generating resource to plan and finance secondary road development. However, it was not implemented. In india, the capital gains tax has not yet proven to be effective due to under reporting of values and evasion. An evaluation of capital gains systems in Malaysia, the Philippines, Sri Lanka and Bangladesh were also not found to be effective for similar reasons. On the other hand, real estate sales taxes, such as that in South Korea has proved to be an excellent source of revenue for local authorities.

2.2.3 Land Tax (Proposed): Japan

Japan's recent proposal to enact a national land tax is aimed at reversing speculation, stabilizing land prices, and enabling more households to gain access to property. Business lobbyists have argued that a high tax on property prices, rising interest rates, and an official campaign to limit loans for real estate speculation may result in decreased land values but could result not only in the collapse of the real estate market but financial markets as well. Their extensive lobbying has resulted in revised legislation to lower the proposed tax on business owned property from 1 to 0.2-0.3 percent. The opposition of powerful, vested interests is seen as a major obstacle to any significant change in the system of urban land taxation.

SECTION 3

PLANNING AND REGULATORY INSTRUMENTS

Virtually all countries have adopted planning and land use regulations as instruments of land policy. In Thailand, as in most developing countries, experience in implementation of these mechanisms has been mixed at best. Land use planning is the most traditional means of establishing a framework for land use decisions. Planning may be undertaken at various levels of detail. Both British and French systems are based on extremely detailed land use, transportation, and density plans, none of which have been particularly successful in developing country settings. Some commonwealth countries such as Singapore, Malaysia, and Kenya, however, have shown results due to a clear public commitment to planning and regulatory control.

Guide plans in Brazil's medium and smaller sized cities are much more simplistic. In such cases gross areas are identified as suitable for various land uses which, in turn, serve as a basis for on-going decision making. According to Rivkin the following flexible guidelines are suitable to most developing country situations:

- a clear statement as to the goals and objectives for land use and facilities
- forecasts on population and economic trends and an assessment of physical needs
- generalized land use and transportation guidelines
- functional plans and programs which identify sites and capacity for public services
- guidelines for staging, timing, and linkages between investments
- implementation guidelines involving legislation and public-private action

The effectiveness of plans on day-to-day decision making is an important issue. This will partly depend on its linkage with capital investment, credit, and other public policies. If this is not the case, planning will become a largely academic exercise.

Land Use regulations are defined as "technical, legal, and financial norms and rules requiring given types, standards, and phasing of development on land at a plot, neighborhood, or city-wide scale. These most commonly include: building regulations, sub-division regulations, and zoning. Underlying all three is the issue of standards; the correct application of standards will have a crucial impact on the effectiveness of land use regulations as a whole.

Codes and standards are generally preventive rather than pro-active. In Turkey and commonwealth countries they are a component of a master plan. In Latin america they are separate instruments administered by local building departments. In almost all cases, they are not effective and prove difficult to administer.

A common problem is that land use and building regulations were often imported from other country situations which are not well adapted to developing countries: standards that lead to unaffordable development, inappropriate street widths, inefficient use of land, etc. As a result, these rules are often ignored or circumvented. The World Bank, for example, has questioned the land control law adopted for Bangkok noting that the law is based on conventional western style zoning and not local conditions.

Throughout the developing world, efforts are now being undertaken to render regulatory instruments more suitable to actual conditions. Sites and services and upgrading programs, sponsored throughout the developing world helped shed light on regulatory problems and affordability conflicts. However, correcting these problems will be a long and expensive process.

In addition to clear problems of inappropriate standards that result from many developing country regulations, is the problem of administration. This function is most often delegated to municipal agencies which do not have adequate staff and resources to implement them. Procedural requirements of existing administrative systems also result in corruption as well. Even appropriate regulatory systems would thus require adequate levels of resources and as well as higher pay scales to maintain qualified staff.

Summary issues of concern often include:

- Inadequate linkage between land use regulation and broader urban development concerns
- Inadequate correlation between the regulations and the existing realities of urban social and economic conditions
- Inflexible and unaffordable planning, environmental, and building standards which cannot be supported by the majority of businesses and residents

Regulatory instruments are based on the premise that without public intervention private land market mechanisms alone are not likely to produce an efficient or equitable use of land resources. While this is certainly the case, an unenforceable regulatory environment cannot serve to bring about these desired objectives.

Even the most limited planning and control effort must be based on information. This should include records on existing land use, development density and ownership, physical information (e.g. soil and geographic features), locations and capacities of existing utilities and services, socio-economic characteristics, land prices, etc. While information technology is now enabling countries to acquire and manage data more efficiently, most cities still lack sufficiently accurate and up-to-date data thereby inhibiting application of regulatory techniques.

According to the World Bank Urban Land Policy paper, the following objectives should be pursued by government in any land regulation and control system:

- Efficiency: ensure that there is a sufficient supply of affordable land available for all necessary urban activities and that these are appropriate accessible to one another.
- Health, Safety, and Welfare, protect the public through standards that limit over densification, provide for adequate utility design and capacity, safe building construction and environmental quality, and other measures to maintain an appropriate quality of life.
- Equity: intervene on behalf of the public to ensure that no segment of society is denied adequate access to other activities (e.g. employment) or urban services. Protect the rights of land owners against arbitrary government or private action which would diminish the utility or value of land.
- Adaptability: ensure that urban patterns can readily change in response to evolving population and economic pressures. This should provide for expansion of services and activities, but permit conservation of areas beneficial to the community at large to be preserved.
- Conflict Resolution: resolve conflicts between competing objectives and uses.

The land policy paper argues that land use problems resulting in high density ill-serviced land, distant displacement of low income housing, extreme congestion, etc. can only be resolved through some form of governmental intervention. The study argues, however, that traditional land use planning, regulation and control are not the instruments of choice. Rather, emphasis is suggested on "tools" associated with direct public capital investment and finance. It notes that governments need to be convinced of the "development-shaping" power of these tools and the need for selective application of regulatory instruments with more limited but useful potential to help carry out desired development policies.

The World Bank's paper on land policy concludes that "techniques" are not the answer to land use control. It stresses the need for quality of personnel in any government intervention, the need for clear government commitment, and necessary resources to be devoted to both investment and administrative measures required for this purpose.

Though not a direct objective of controls, regulatory approaches do have land value and fiscal implications which should be considered as part of a development control strategy. If, for example, designated type and density limitations are taken seriously by the market place, they have a direct affect on land prices and fiscality. As such, they become part of the public sector's "tool box" for helping to achieve the objectives noted above.

In this context, this paper has restricted itself to two tools of possible interest to Thailand; Incentive Zoning and Enterprise Zones. Such techniques can be used to help bring about desirable changes in land use.

3.1 Incentive Zoning

Basic Description

Incentive zoning is a regulatory land-use technique through which local governments legally ease restrictions in their zoning or subdivision control laws in exchange for compensation or concessions from private real estate developers. Incentive zoning may also be used to encourage desirable types of land development in designated, usually undeveloped, geographic areas. The ability of local government planners to negotiate a fair and just agreement which advances the government's total development strategy rather than concentrating exclusively on a single development site, is one of the powerful advantages of incentive zoning.

Incentive zoning creates financial incentives which encourage creative solutions to land use and development issues. However, incentives can only work effectively if there exists a clearly defined standard against which the variation can be measured and its monetary "value" calculated. The incremental cost to the public of the requested deviation can then be offset by an equivalent incentive payment. The developer's payment may take any of the following forms:

- Cash
- Amenities
  - Infrastructure
  - Social
- Development Support

In the latter instance, the developer may be offered an incentive to provide on- or off-site facilities which can support community revitalization, economic development or environmental protection objectives.

Obviously, the developer must perceive the equity of the incentive payment provision for it to work effectively. Incentive zoning is a positive tool for growth management, not a means of exacting excessive payments from private developers. The normal benefits offered to developers under incentive zoning schemes are:

- Density bonuses
- Height, setback and coverage waivers
- Use waivers

Formulas to calculate the compensation needed to offset the "cost" of each variance from the established norm are essential to an equitable system of incentive zoning.

Operational Issues

Once an effective standard has been established, the permitted incentives and their costs may be identified by the local jurisdiction. This requires a fairly sophisticated approach to development economics and an in-depth knowledge of the local real estate market. Few local governments have the capacity to institute incentive zoning without outside assistance. Incentive zoning may be established as a "matter of right", in which each permitted variance is identified and costed in advance, or it may be set up to permit close interaction between the public and private sectors to assure an equitable solution. The discretionary approach may be preferred if the time and expertise of the staff permit. The "matter of right" approach may use cost figures which are only averages of city-wide impacts, reducing the capacity of the government to use the tool as a true incentive to guide growth in varying sections of the city.

Examples

Local governments in the United States and Great Britain have used the incentive zoning concept with good effect. New York City has used the tool to generate a significant amount of public amenities, estimated as between 1-4 million square feet in exchange for 12 million square feet of "bonusable" office space. Miami used incentive zoning to encourage retail activity at street level, while Cincinnati granted incentives in exchange for historic preservation of important structures. In England the "planning gain" approach is designed to achieve gains for the public from private development activity. Gains have included roads, sewer and water pipes, bike paths and other community facilities.

Evaluation

- **Incentives**
  - Infrastructure can be provided by the private sector at no cost to the local government.
  - The overall local development strategy can be pursued as an element of every incentive zoning decision.
- **Disincentives**
  - Undesirable projects may be approved on the basis of the compensation rather than on its fundamental merits.
  - The requirement of an effective regulatory control system is a condition precedent to its use.

- **Other Features**
  - Negotiation and bargaining are formalized.
  - Skilled staff are needed.

3.2 Enterprise Zones

Basic Description

Enterprise zones, and other economic zones such as export processing or special development zones (e.g., Eastern Seaboard Economic Development Zone) are geographically designated areas within which government relaxes or waives land use and tax requirements in order to promote development activity. By combining techniques such as incentive zoning and tax abatements, an enterprise zone can be an attractive and profitable place to do business. In the U.S."theory" of enterprise zones, when the private sector provides basic on-site infrastructure, the cost is treated as an investment tax credit. There has been very little actual practice with economic zones in the U.S., although some State governments have co-opted the term to broaden the traditional concept of redevelopment districts.

Similar to incentive zoning in that it depends on the existence of strong laws and regulations (and their waiver) as the means of promoting broad economic objectives, enterprise zones operate best in either a highly regulated or a highly fragmented environment. The ability to achieve a comprehensive waiver of specified laws and regulations merely by moving into a specified area is assumed to be a real incentive.

Operational Issues

In local governments with a functioning property tax system, strong regulatory controls and other permitting requirements, the concept of an enterprise zone with its "one-stop-shop" approach to deregulation is compelling. But the ability to arrive at a consensus of what may be waived requires a great deal of public debate and intergovernmental coordination before it can be implemented. Defining the boundaries of an enterprise zone is also a highly technical determination since it will encompass both existing businesses (which thereafter would be exempt from taxes and other requirements) as well as open land suitable for business expansion and relocation. Marketing and managing the enterprise zone requires very competent staff, with skills much in demand in the private sector.

Examples

Great Britain has the most complete and useful approach to the designation of enterprise zones, although the special incentives granted to foreign businesses operating in some of China's cities may, in time, serve as another example of the benefits of economic zoning. In 1981 England designated 11 enterprise zones and offered exemptions from property and capital expenditure taxes to commercial and industrial interests which would locate in the designated area. An additional incentive was the promise of reduced government demand for statistics. Which of these was the greater incentive has not yet been assessed.

The State of Maryland, in the U.S.A., has established criteria for the designation of local enterprise zones which include poverty, unemployment, declining property values, etc. The "redevel-

opment" orientation of that approach is apparent. Tax credits and access to loans on concessional terms are only two of the types of benefits which are offered to locating industries.

Evaluation

- **Incentives**
  - Concentrated attention can be paid to a defined area and the local government can conserve its resources.
  - Economic zoning can assist in directing growth and investment to specific areas/development corridors.
- **Disincentives**
  - There may be no "net" gain in investment, only a shifting of the locus of business activity from one area to another.
  - Managing the zones is very labor intensive and costly.
- **Other Features**
  - Major subsidies are needed to encourage relocation and business expansion in depressed areas.

APPENDIX A. GROWTH MANAGEMENT TOOLS - A Variety of Techniques Applied Internationally

GROWTH MANAGEMENT TECHNIQUES						
LOCATION GROWTH MANAGEMENT TOOL	PURPOSE	FINANCING TECHNIQUE	PRIMARY COMPONENTS	ACTORS	IMPACT REMARKS	REFERENCE
Korea Real Property Speculation Check Tax	Tax intended to penalize land speculation that has induced land price inflation	Comprehensive Land Tax: Land Value Increment Taxation - Land Ownership Tax - Property Tax - Land Transfer Tax - Acquisition and - Registration taxes	The speculation check tax imposed to tax "marginal" profits from land transfers Taxes on the amount of land ownership are intended to penalize land speculators without burdening ordinary land owners.	National Government: imposes taxes Ministry of the Interior: monitors land ownership through computerized land registration system Land Owners: penalized progressively on ammount of land holding	Although intended to reduce short-term speculation the tax has drastically reduced land supply on the market.	*Land Policies in Human Settlements - A Regional Overview on Current Practice Toward More Effective Utilization on Urban Land* Asian Development Bank, 1985
Taiwan Land Value Increment Tax (LVIT) Surtax on Vacant Land	To capture unearned increments for public use. To curb speculation	Two main types of tax: - Land Value Increment Tax - Surtax on vacant land	A progressive tax on increase in land value Surtax on private land that has been designated for building but remains vacant.	National Government: imposed tax Land Owner: tax imposed only on selected sites.	Between 1966 and 1973 the vacant land tax led to half the owners subject to the tax to construct improvements on their land. The LVIT has been unable to capture much betterment for social use or control the growth of land prices.	Shoup, Donald C. *Taxation and Public Ownership* "Urban Land Policy: Issues and Opportunities" Dunkerley (ed) World Bank Publication
Singapore A Tax on Density Charges and Zoning Charges	- to appropriate betterment for social use - to ensure building in accordance with land use planning guidelines	The increase of land value due to density or zoning change is taxed.	Taxes are levied on: - change of land use - densities that exceed the average. - changes in zoning	National Government: imposed tax Land Owners: are liable to tax if they apply for a density or zoning change	Land Value taxation has been less successful than advanced land acquisition policies in appropriating betterment.	*Urban Land and Public Policy: Social Appropriation of Betterment.* World Bank Working Paper No. 179 1974
Hong Kong "Contract B" System Equity Financing	Uses rising land prices to finance housing and New Towns	"Contract Bs" are equity securities backed by landholding. As land against which securities are issued increases in value, the securities also increase in value.	Pay landowners compensation based on "current use value" only. Contract B issued to compensate for lost "development value" which gives owner right to increases in property equity realized in future project development.	Government of Colony: reduces land acquisition costs by issuing Contract B documents in place of full cash compensation. Private Land Owners: continue to benefit from rising land prices even though property has been expropriated	Has prevailed in Hong Kong for 20yrs. An ingenious tool to acquire land in an inflationary land market.	William Doebele 1990 *Fiscal Instruments used for Urban Growth Management.*

GROWTH MANAGEMENT TECHNIQUES

LOCATION GROWTH MANAGEMENT TOOLS	PURPOSE	FINANCING TECHNIQUE	PRIMARY COMPONENTS	ACTORS	IMPACT REMARKS	REFERENCE
Honduras San Pedro Sula Strategic Land Development Process	To promote land supply for future growth, particularly for low-income households	- Improvement Districts - Betterment Levies - Highway Tolls - Expanded Tax Base - Land Readjustment - Land Sharing	- Development plan - The Strategic Land Development Process - Strengthen Institutional and Financial Capacity - Remove impediments to efficient land and housing market operation - Promote private sector initiatives	Municipality - DIMA - Water and Sanitation Authority Private Sector - Patronatos (Community Organizations) & semi-formal land developers National - (minimal)	Proposal appraised as a far-sighted and sophisticated use of public/private partnerships.	Lee Baker 1990 *PADCO - San Pedro Sula Study*
Nepal Birgan| Guided Land Development Plan	To guide urban development through provision of trunk infrastructure and utility networks for urban expansion.	Similar to Land Readjustment schemes - a portion of private land is given up for public infrastructure and new housing sites. The increased value of land compensates original land owner.	land development is initiated through provision of trunk infrastructure. Cost recovery is achieved through sale of plots and/or sale of infrastructure 'access rights' to private developers	Town Panchayat - carries out project planning, on-site demarcation and enforce GLD plan local landowners, land brokers - donate some land for project but recoup lost asset through increased land value	The GLD project has completed the first two stages of the process; the site surveys and planning and the obtaining the legal and institutional support. As of February 1990 the actual on-site implentation had not yet begun.	World Bank, UNDP Project 1990 *Birganj Guided Land Development Wards No. 18 & 19*
Cote d'Ivoire Abidjan Settlement Upgrading	To direct development through settlement upgrading	Infrastructure investment to stimulate economic development in area Cost Recovered through increased real estate taxes on land, built property and undeveloped property	Provision of infrastructure and settlement upgrading Strengthening of municipal capacity to collect revenues	Municipality: invested in upgrading of key infrastructure - roads, reliable water and electricity Private Sector: generated a range of new commercial and service activities	Upgrading projects enhanced municipal revenuse through; additional real estate taxes due to appreciated land values; additional commercial taxes from induced expansion of economic activity.	Serageldin, Mona *The Impact of Investments in Urban Infrastructure on Municipal Revenues and the Integration of Informal Sector Activities - the Abidjan Experience* USAID, 1990

GROWTH MANAGEMENT TECHNIQUES						
LOCATION GROWTH MANAGEMENT TOOLS	PURPOSE	FINANCING TECHNIQUE	PRIMARY COMPONENTS	ACTORS	IMPACT REMARKS	REFERENCES
India Taiwan Japan Korea Land Readjustment	Method of developing fringe urban land without large outlays for land acquisition	Municipalities capture appreciated value of land due to their infrastructure investment. Easier than trying to recover value through betterment taxes.	Fringe land owners contribute land which is serviced. They receive back smaller amounts of developed land as compensation. Serviced land is sold by municipality to recover cost of infrastructure.	Municipality - condemnation of properties on urban fringe, replotting of land, installation of infrastructure Private Land Owner- property is redistributed to original owners in proporion to their original holdings.	In Japan, 27% of the country's urban land area and in Korea, 60% of the land around Seoul has been developed through such schemes. One of the most successful techniques for recouping betterment costs.	
India Tamil Nadu Plot Reconstruction	Planned development and the recovery of cost of infrastructure.	Landowners part with up to 50% of the incremental value of land as contribution to cost of infrastructure and land acquisition. This is paid in cash to the agency for project costs.	Regularization of individual plots within an area and the provision of infrastructure.	Public Agency: land is appropriated for roads, schools etc. Private Land Owners: realizes a net gain in land value due to infrastructure provision	The technique is essentially a combination of betterment taxation and land readjustment.	*Land Policies in Human Settlements - A Regional Overview on Current Practice Toward More Effective Utilization on Urban Land* Asian Development Bank, 1985
India Tamil Nadu Guided Urban Development GUD	Formulated to overcome land acquisition difficulties	Cost recovery is achieved by re-capture of increased land value by both public and private partners. After development, the public agency purchases plots at prearranged prices and developers dispose of remaining lands at market prices.	Sites and service schemes are planned by public agency and then developed by private sector. Public agency would grant development permissions exempting the projects from normal town planning standards and exemptions from the ULCRA (Urban Land Ceiling and Regulation Act of 1976)	Public Development Agency - formulates guidelines for sites and services type project Private Developers - responsible for land assembly and service provision	The ULCRA had the negative effect of freezing development rather than just controlling speculation. The GUD project allowed for needed land parcel assembly.	
Sao Paulo Brazil Changes in FAR	To promote more intensive use of land as well as re-house evicted low-income residents.	Law of Squatter Removal and Re-housing - 50% of value of increased FAR is returned to government in form of land, infrastructure or housing. Government uses funds to construct new housing.	Changes in FAR zoning to carry out more intensive land use development.	Municipal Government: grants developer a change in zoning Private Developers: must provide infrastructure or new low-income housing in exchange for higher land value.	The Sao Paulo law is a formalization and broadening of the concept of land sharing first used in Bangkok.	W. Doebele 1990 *"Fiscal Instruments for Urban Growth Management"*

GROWTH MANAGEMENT TECHNIQUES

LOCATION GROWTH MANAGEMENT TOOLS	PURPOSE	FINANCING TECHNIQUE	PRIMARY COMPONENTS	ACTORS	IMPACT	REFERENCES
Thailand Bangkok Land Sharing as a Housing Strategy	land sharing agreements between slum dwellers and the land owners as an alternative to eviction.	Inner city slums are cleared. The high value land is re-developed to its maximum revenue potential. Squatters are rehoused on a portion of the site financed through a cross-subsidization approach.	The basic requisites of land sharing are: - Community organization - Land Sharing Agreement - A Development Plan - Denelification - Reconstruction - Capital Investment	The partnerships involve: National/Municipal Housing Authorities who support the negotiation process, plus some infra-structure costs. Private land Owners/ Squatters - establish equitable land sharing agreement Private / Public developers who build on the cleared land.	6,000 housing units are served by the 5 current land sharing projects. With 300,000 people in Bangkok slums the projects demonstrated that land-sharing is a viable alternative to their potential eviction.	Angel, Shlomo & S. Boonyabancha *'Land Sharing as an Alternative to Eviction - The Bangkok Experience'* Third World Planning Review - Vol.10, 1988 Liverpool Univ. Press
England London Docklands Enterprize Zone	to develop land and stimulate economic revival through public/private investment parnerships	Direct finance from Central Government during period of finance cuts to local government. Tax holidays and other fiscal concessions for ten years (Enterprize zoning)	Land; acquisition, reclamation, and infrastructure provision Finance; public/private investment Enterprize Zone Status - tax holidays Planning Powers taken over from local government	Central Government; provision of finance, land, infrastructure Private investors; building office, commercial, light industry and housing	22 sq. kilometers of central London. 115,000 employees 200,000 new offices in 60 mill. sq. ft 40,000 private homes. Largest urban redevelopment area in the world.	Docklands Consultative Committee - 1990 *The Docklands Experiment - A Critical Review of 8 Years of LDDC*
Colombia Betterment Taxation	"Valorization" charges are used to finance public improvements that benefit specific areas.	The Betterment Levy is a method for the public sector to recover the "differential" benefits generated by public works projects and derived by landowners in the form of increased property values.	The charges are based on the increases in land value caused by the public improvement. Land cannot be transferred without a certification that all valorization charges have been paid.	Local Government: imposes a special assessment on properties benefiting from public investment Property Owners: pay taxes in cash but realize no compensating cash benefits until they sell their property	One of the best examples in Latin America of betterment levy taxation. There are difficulties in determining the area benefitted by the public expenditure, the total betterment to be recovered, and dividing the levy among benefitted properties.	Macon, Jorge & Jose Manon *Financing Urban and Rural Development through Betterment Levies - The Latin American Experience* Praeger Publishers, New York 1977
Fort Collins Colorado Development Fees	To ensure that new development pays for itself	Development fees are paid by the developer when building permit is issued and placed in fund designated for new infrastructure	Development fees are set to cover the extra costs for public facilities that development will cause.	Municipal Government: sets fees to pay for growth Private Developers: pay fees assessed for new project infrastructure and are responsible for the construction of all local facilities. Private Owner: covers cost of services in house purchase price.	These fees add $3,000 to $4,000 per new unit. Fees are a growth management tool - differential rates can encourage development in selected areas. The fee encourage more compact development - fees are lower for higher density	Porter, D. & R. Peiser *Financing Infrastructure To Support Community Growth.* Urban Land Institute Washington, 1984

GROWTH MANAGEMENT TECHNIQUES						
LOCATION GROWTH MANAGEMENT TOOLS	PURPOSE	FINANCING TECHNIQUE	PRIMARY COMPONENTS	ACTORS	IMPACT REMARKS	REFERENCE
Prince George County Maryland Tax Increment Financing (TIF)	to attract private / commercial investment and development.	State law enables counties to create special TIF districts Public investment is through issue of tax allocation bonds to finance infrastructure, and use the increased revenues (the tax increment) to pay off the bonds. Private development is thus encouraged by public investment.	Public capital expenditures increase land values by providing infrastructure and the impetus for private investment. Private investment increases assessed value in the area; increased tax revenues pay for the public capital expenditure that made the private investment possible.	County Government: initiated infrastructure schemes. Private Developers: are attracted to region due to upgraded infrastructure.	TIF districts raise substantial monies over and above what could have been raised otherwise for public improvements. TIF was first introduced in California in 1952 and has since been used in more than 20 other states.	Porter, D. & R. Peiser
New Jersey: The Infrastructure Bank (proposed)	To create a long-term, dependable mechanism for infrastructure finance, and lessen reliance on general obligation bonds.	The concept of pooled debt help communi-ties gain access to the bond market. They could borrow funds at no interest and repay through user charges or other revenue sources.	The Bank provides; 1) a revolving loan fund for community projects at low or no interest; 2) issues bonds on behalf of local projects.	Federal / State funding was through grant funds, bonds and direct appropriations. Federal/State/Municipal amendments of legislature were required for the Bank Local Public community borrowing is expanded beyond limits of federal aid for needed projects	(no data as concept of infrastructure bank is only in proposal stage)	Porter, D. & R. Peiser
Los Angeles County Asset Management Program	To develop publicly owned land and to raise capital for municipal projects.	The county offers publicly owned property for private commercial development.	A developer will build on a public site formerly occupied by the Long Beach General Hospital.	County of L.A. the land owner will lease for 66yrs City of Long Beach controls the land use planning and zoning. Private developer will finance and build	The 26 acre site will be developed into a 645,000 square foot office and retail space. The public sector control land that offer much development potential. Port, rail yards, school sites, military bases, and rights of way have been joint developed.	Dowall, David E. *Public Land Development in the United States* Institute of Urban and Regional Development Berkeley, 1987

GROWTH MANAGEMENT TECHNIQUES						
LOCATION GROWTH MANAGEMENT TOOLS	PURPOSE	FINANCING TECHNIQUE	PRIMARY COMPONENTS	ACTORS	IMPACT REMARKS	REFERENCE
Washington Metropolitan Transit Authority (WMATA)	Reduces need to finance system through public funds or capital market.	Uses the increased land value its stations confer on local property to finance the metro system. Capture the value its transit stations confer on property.	Programs involves the sale or lease of public property to private developers.	Public utility company -the transport authority buys land using expropriation powers. Private Developers - leases land or air rights for commercial development purposes	The sites are located at station entrances and range in size from 8,500 to 156,000 square feet. Revenue-producing sites include: Farragut North, Van Ness, McPherson Sq., Bethesda, Metro Center, and New Carrollton.	Dowell, David E.
Escondido: Florida Sewer Access Rights	To finance construction of wastewater facilities.	An alternative to bond financing, user fees and conventional forms of privatization,	The city sold sewer access rights on a voluntary purchase principle.	Municipal/Private - 'Voluntary' partnership The public partner, the city offered access rights to developers Private developers, in return f.. sewage access that is needed for development supplied funds to expand sewage capacity.	In 3 months, the sale of sewer access rights to developers and local citizens raised funds to finance the cost of construction with funds left over for future rehabilitation.	*Profiles of Success in Providing Environmental Services* Environmental Protection Agency Report, Sept. 1989
Municipalities in Colombia Urban development financing through Municipal Development Funds.	To facilitate municipal investment lending for infrastructure financing	Financing provided through; Value Added Tax (IVA) transfers; property, industry, commerce and vehicular tax provided FFDU capital.	Central Mortgage Bank's Financial Fund for Urban Development (FFDU) was established as a specialized development credit fund that re-discounts loans issued by commercial banks.	Foreign Aid - sector loans through USAID, IBRD and IDB. National - Municipal decentralization of planning and financing capability are central to municipal capacity to fund infrastructure. Private sector taxation laws allow funds generated locally (IVA) to be invested locally.	The MDF's have improved the financial capacity of 90% of the nations municipalities. FFDRU continues to receive income its own investments, and loans from the Interamerican Development Bank, the World Bank and USAID,	Rivera, Mario Calderon 1988 *A New Role for Municipalities in Colombia* USAID's Washington Policy Conference, 1988 (PRE/H , Urban Institute)
Washington DC Pennsylvania Avenue Development Corporation (PADC) Public/Private Urban Development	The revitalization of Pennsylvania Avenue	Urban redevelopment through innovative public-private partnerships.	Land - PADC assembles property and leases or sells back to private investors Financing through Federal Appropriations, U.S. Treasury borrowing, proceeds from sale of real estate and donations.	Federal - PADC leases/rents land to private investors and provides financing Private- joint ventures to buy land directly from an owner and develop according to master plan.	$97 million public funds invested have generated $1.5 billion in private commitments The re-development of the Avenue from the White House to the Capital is an innovative model for cities around the world.	*Pennsylvania Avenue Development Corporation Annual Report 1990*

BIBLIOGRAPHY

Anas, Alex, and Kyu Sik Lee, 1988, *Infrastructure, Investment and Productivity: The Case of Nigerian Manufacturing*, World Bank Discussion Paper, World Bank, Washington, DC.

Angel, Shlomo, 1988, *Land and Housing Markets of Bangkok: Strategies for Public Sector Participation*, Bangkok Land Management Study, PADCO.

Angel, Shlomo, and S. Boonyabancha, 1988, "Land Sharing as an Alternative to Eviction - The Bangkok Experience," *Third World Planning Review* 10 (1988), Liverpool University Press.

Arnold, David S., 1979, *The Practice of Local Government Planning*, International City Management Association, Washington, DC.

Bahl, Roy, and Johannes Linn, 1988, *Urban Public Finance and Administration in Less Developed Countries*, World Bank.

Bartach, C., and D. DeVaul, 1989, "Utilities and Economic Development: New Partnerships for Growth," *Economic Development Commentary* 13, No. 1.

Davey, Kenneth, 1988, "Municipal Development Funds and Intermediaries," Working Paper, *The World Development Report*, World Bank.

Dillinger, W., 1988, *Urban Property Taxation in Developing Countries*, World Bank.

———, 1988, *Urban Property Tax Reform*, World Bank.

Doebele, William A., ed., 1982, *Land Readjustment*, Lexington Books.

Doebele, William A., Orville F. Grimes Jr., and Johannes F. Linn, 1979, "Participation of Beneficiaries in Financing Urban Services: Valorization Charges in Bogotá, Colombia," in *Land Economics* 55, No. 1.

Dowall, David E., 1987, *Public Land Development in the United States*, Institute of Urban and Regional Development, Berkeley, CA.

———, 1990, *Bangkok Land and Housing Market Assessment*, Joint Report of Land Institute Foundation, Bangkok, and PADCO, Washington, DC.

Durand, Lasserve, 1988, *Land and Housing in Third World Cities: Are Public and Private Strategies Contradictory?*

Erbach, J., 1990, *Land Tenure in Jordan - Informal Markets and the Resolution of Problems*, PADCO.

ESCAP, 1984, *Expert Group Meeting on Land Policies*, Bangkok 2-5 Oct., unpublished.

Foster, David, 1989, *Viewing Environmental Protection as Investment in Urban Infrastructure*, Research Triangle Institute.

Grimes Jr., Orville F., 1982, "Financing Urban Infrastructure in Developing Countries," in William A. Doebele, ed., *Land Readjustment*, Lexington Books.

Jones, David C., 1986, *Financial Appraisal of Public Infrastructure Projects and Implementing Institutions: Guidance for Financial Intermediaries.*

Kim, Ik-Jin, et al., 1982, "Land Readjustment in South Korea," in William A. Doebele, ed., *Land Readjustment*, Lexington Books.

Kayden, Jerold S., 1978, *Incentive Zoning in New York City: A Cost-Benefit Analysis*, Lincoln Land Institute Monograph.

———, 1988, "Planning Gain in Great Britain," in Rachelle Alterman, ed., *Private Supply of Public Services: Evaluation of Real Estate Exactions, Linkage, and Alternative Land Policies*, New York: New York University Press.

LaNier, Reeve and Young, 1989, *Urban and Environmental Management in Developing Countries - Toward a Policy and Program Agenda*, USAID, Washington, DC.

Lincoln Institute of Land Policy, 1990, *Successful Land Development: Public and Private Sector Strategies for Developing Countries*, Conference Proceedings, Berkeley, CA.

Linn, Johannes F., 1983, *Cities in the Developing World*, World Bank and Oxford University Press.

Macon, J., and J. Manon, 1977, *Financing Urban and Rural Development Through Betterment Levies: The Latin American Experience*, IADB.

Payne, Geoff, 1989, *Unregulated Urban Submarkets in the Third World - A review of the Literature*, ODA, London, UK.

Peterson, G., T. Kingsley, and J. Telgarsky, 1988, *Urban Economic Development - Orientation to Policy*, Monograph, USAID.

———, 1990, *Urban Economies and National Development*, Monograph, USAID.

———, 1990, *Multi-Sectoral Investment Planning*, Monograph, USAID.

Porter, D., and R. Peiser, 1984, *Financing Infrastructure To Support Community Growth*, Urban Land Institute, Washington, DC.

Prest, Alan R., 1982, "Land Taxation and Urban Finances in Less-Developed Countries," in Mathew Cullen and Sharon Woolery, eds., *World Congress on Land Policy*, 1980, Lexington Books.

Renaud, Bertrand, 1982, *Housing and Financial Institutions in Developing Countries*, World Bank.

Rivera, Mario Calderón, 1988, "The New Role for Municipalities in Colombia," mimeo from USAID's Washington Policy Conference, PRE/H, Urban Institute, Washington, DC.

Rivkin, Malcolm D., 1983, "Intervention Through Direct Participation," in *Urban Land Policy Issues and Opportunities*, Harold B. Dunkerly, Ed., World Bank.

Rondinelli, Dennis, 1990, *Decentralizing Urban Development Programs - A Framework for Analyzing Policy*, Research Triangle Institute.

Roth, Gabriel, 1987, *The Private Provision of Public Services in Developing Countries*, Oxford University Press, New York

Savas, E.S., (1987), *Privatization: The Key to Better Government*, Chatham House Publishers, New Jersey

Shoup, Donald C., (1983), "Intervention through Property Taxation and Public Ownership," in *Urban Land Policy: Issues and Opportunities*, Harold B. Dunkerly, Ed., World Bank and Oxford University Press.

Sivaramakrishnam, K.C., and Leslie Green, 1986, *Metropolitan Management: The Asian Experience*, World Bank.

Snyder, T.P., and M. A. Stegman, 1986, *Paying for Growth: Using Development Fees to Finance Infrastructure*, Urban Land Institute, Washington, DC.

Suchman, Middleton & Giles, 1990, *Public/Private Housing Partnerships*, The Urban Land Institute, Washington, DC.

Urban Edge, 1986, *Facing the Challenge of Urban Growth*, World Bank, Vol. 10, No. 7 (Aug/Sept 1986).

UNCHS (Habitat), 1989, *Urban Management Program: Integrated Action Planning Analysis and Synthesis Report*, First Draft, Nairobi, Kenya.

———, 1986, *Rehabilitation of Inner City Areas: Feasibility Strategies; Bombay & Bangkok*, Nairobi, Kenya.

———, 1990, *The Global Strategy for Shelter to the Year 2000*, Nairobi, Kenya.

USAID, 1989, *Urbanization in the Developing Countries, Interim and Final Reports to Congress.*

World Bank, 1975, *Urban Transport*, Sector Policy Paper, World Bank.

———, 1990, *Poverty - World Development Report 1990*, World Bank.