



MASTER'S PROGRAM IN URBAN MANAGEMENT AND DEVELOPMENT

(October 2005 – September 2006)

A comprehensive study of Land Rent, Value Capture and Local Government Finance

Name: F. Süphan Nakiboğlu
Country: Turkey

Supervisor: Charles van Marrewijk

UMD 2 Report number:
Rotterdam, September 11, 2006

PREFACE

This work developed out of a curiosity, which had been delayed since the first time I got a sense about *urban land rent*. As a graduate in urban planning, I have always been acquainted with this issue, but never felt confident enough to get a through understanding of it; most probably due to the complexity of land rent literature.

Ironically, I didn't know about a separate category of *value capture* until 2006 April, until Land Policy lectures in Institute for Housing and Development Studies. I really liked the approach and start thinking more about it. I was even more surprised when I realized that we have such schemes in my country, Turkey. In fact, some of the instruments that I know as land policy instruments were now being categorized as value capture instrument. But my experience with such instruments (i.e., land readjustment) would prove controversial outcomes from a value capture perspective. So the idea was nice but the practise were not always satisfactory.

At this point one alternative for me was to study an instrument, for instance, land readjustment instrument in Turkey. However, I didn't prefer doing that after reviewing literature and saw that problem prevailed more or less in every country. After all I didn't believe that the problem was fully a practical one but also a theoretical one. I have encountered with a bulk of theoretical discussions yet not linked with practice. In the same manner, the result of practises was not always convincing. I realized that this was the right time to go in to the issue.

It had been a challenging journey to review land rent and value capture literature. My first impression was the significance of Marxist theories in the field. However, I have seen that all value capture literature was built on Henry Georgian inspiration or neo-classical theories. Neo-classical approach had convincing arguments and was clearing the path from obstacles for practise. On the other hand Henry Georgian approach was quite inspiring but limited to pure land rent which bears technical problems for urban land. Marxists, on the contrary, were making the field even more complex especially for a practitioner. But, this was not enough to justify their ignorance in practise. Their elaborated arguments were absolutely very useful in enhancing and shaping one's perspective about *urban land rent*. Therefore, I could never overlook the useful discussions of Marxist theories, especially that of David Harvey's.

During my study, there had been many times that I stopped and thought if what I was doing is right or meaningful at all. But the more I read the more I got into it. Realizing some broader relations, and being able to incorporate them to the study as long as time allowed, helped me feel I was on the right track.

I still have doubts if it was a wise decision to try to cover such a big issue in such a short period of three months. However, it is necessary to start at some point in order not to get lost in multiplicity of issues. But the real challenge is *not* avoiding getting lost *but* avoiding fixing at one aspect and ignoring multiplicity. In this sense, this study is an outcome of a tension between getting lost and getting stuck in one aspect; an attempt to discover the magnitude without waking up the giant. Finally I should acknowledge the crudeness of such a preliminary study and my concerns about possible mistakes.

TABLE OF CONTENTS

Preface	i
Summary	iii
Acknowledgements	iv
List of tables	v
List of figures	v
List of boxes	v
Chapter1 Introduction and research methods	1
1.1 Research Topic.....	1
1.2 The Problem Statement.....	1
1.3 Objective and Scope of the Study	3
1.4 Research Questions and the structure of the study.....	3
1.5 The methodology	5
1.6 Limitations	5
1.7 Some Definitions and Concepts	6
Chapter 2 Literature review and Theoretical Framework	9
2.1 Urban Land Rent Theories.....	9
2.1.1 Ricardo’s land rent theory	9
2.1.2 Marxist School.....	10
2.1.3 Neo-Classical School and Urban Land Use Theories.....	14
2.1.4 Henry George- The Law of rent	16
2.1.5 Conclusion.....	17
2.2 Value Capturing as an Urban Land Policy objective	19
2.2.1 Urban Land Policy and its objectives	19
2.2.2 Value Capturing and its instruments	22
2.2.3 Conclusion.....	29
2.3 Evaluation	30
Chapter 3 Value Capture Practices around the world	32
3.1 Value capture with fiscal instruments.....	33
3.1.1 Tax Incremental Financing in USA.....	33
3.1.2 Impact fees in USA	37
3.2 Value capture with regulatory instruments	41
3.2.1 Land Readjustment in Spain, Japan and France	41
3.2.2 Transfer of Development rights in Italy and United States	46
3.2.3 Public Land Leasing in Singapore and the Netherlands	50
3.2.4 “Participacion en Plusvalias” in Columbia.....	54
3.3 Analysis of Value Capture practices	56
3.4 Evaluation	61
Chapter 4 Implication of value capturing for local government finance	64
4.1 Some Trends and Local Government Finance	64
4.2 Implications of Value Capture for a Sound Local Government Finance	66
4.3 General Evaluation and Conclusion Remarks.....	67
Bibliography	70
Annex	75

SUMMARY

The question of *who is going to get the value generated by means of urbanization* is a critical one related to distribution of wealth in urban areas. It is also the basic motivation of value capture approach.

This study replaced value capture as the core aspect and tried to develop a perspective that pursues a link between **rent** and **own resource generation** for local governments via value capturing.

Firstly, in the light of land rent theories, the problematic process was elaborated, and depicted as one starting with policy decisions and planning actions, triggering urbanization process which goes hand in hand with externality and rent formation. It has been identified that urban policy decisions and planning actions basically result in *differential rent-1, differential rent-2 and monopoly rent*; which has unearned character for individuals.

After the elaboration of problematic process, some possible remedies were sought in the second section of theoretical chapter. It was stated that this problem was a concern of urban land policy; and the basic motivation of value capture instruments. Value capture was identified as a means of land policy which specifically deals with *returning socially developed value to society*. It was also acknowledged that value capture should theoretically serve all three land policy objectives which are *efficient allocation of resources, raising public revenue* and *ensuring equity*.

Case studies helped to grasp better the value capture approach. It was remarked that there are some practices that comply with theory and serve all three objectives of land policy, yet, not without problems. On the other hand, for some cases, it was realized that the ambiguity in the objectives yielded undesirable outcomes from a value capturing point of view. Thus, the overall problem was stated as multiplicity and ambiguity of objectives for an instrument.

At this point, *Tinbergen rule*¹ provided a useful framework to develop some suggestions. It was recommended that instruments be designed according to the objectives they are meant to serve, and different instruments be used in an integrated and coordinated manner to achieve multiple objectives. Additionally, the importance of cultural, historical, political and economic context was acknowledged in the design of instruments.

An effective value capturing practice is just a means to ends. Therefore, with a forward looking approach, the implication of value capturing for sound local government finance were sought. It was concluded that, in an era of rapid urbanization and decentralization, it is vital for local governments to increase their own-resources and improve their financial structures. Given the rent is an inner dynamic and an ever existing characteristic of cities, value capturing is highlighted as a sustainable own resource for sound local government finance.

Key words: Urban land rent, value capture, local government finance

¹ The principle advanced by Jan Tinbergen, the Dutch economist and Nobel laureate (1969)

ACKNOWLEDGEMENTS

I would like to acknowledge my gratitude,

to Charles van Marrewijk *as my supervisor*, who has enhanced my perspective throughout this period and who provided invaluable comments from an economist's point of view.

to Charles van Marrewijk and Rolf Dauskardt, *as my "specialization teachers"*, who turned the two fields that I disliked most a year ago, into my favorites this year. Without them I would not have dared to incorporate any macro-economic and financial issues in this study.

to Carlos Morales Schechinger and Ricardo Nunez, who helped me to express and clarify the problem that I focused in this study. Without them it would be very difficult to find out where to start.

to Tolga and Eylem, nice friends, and wise fellows, who introduced me David Harvey's "*Social Justice and the City*", a milestone in the field, which fruitfully contributed to my conception of the rent phenomenon.

to Institute for Housing and Development Studies for the master course and all of the facilities it has provided.

to European Commission and Jean Monnet Scholarship Program that made such a year possible.

to fellows Jorida and Zouka, for their warm friendship during one year in Rotterdam, which I believe to last.

to my colleagues from the Municipality of Mamak, who were enthusiastic for this master course more than me, and supported me from the very beginning to the end.

to Ekipcan, who kept me in touch with real life problems and helped me to rest by pulling me out of theoretical concerns.

to my dearest friend Piraye for her great friendship and support that I always carry everywhere with me; and is always there to carry me wherever I am.

Finally to my family for their unconditional love; only such love can transfer profound meaningless to absolute meaning.

LIST OF TABLES

Table 2.1: Public Intervention and goals of urban land policy.....	21
Table 2.2: Policy Instruments of public intervention	21
Table 2.3: Value Capture Instruments based on Smolka and Amborski.....	23
Table 2.4: Value capturing mechanisms based on Doebele	24
Table 2.5: Value capture instruments based on Offermans.....	24
Table 2.6: Synthesis of value capturing instruments.....	25
Table 3.1: A hypothetic Incremental Revenue allocation	35
Table 3.2: Impact fees for Hudson, Wisconsin, 1996.....	41
Table 3.3: Land and Lease Revenues in Hong Kong, 1970-1991	53
Table 3.4: Lease Revenues and government schemes in Hong Kong.....	53
Table 3.5.a: Analysis of value capture practices	58
Table 3.5.b: Analysis of value capture practices (continued).....	59
Table 3.5.c: Analysis of value capture practices (continued).....	60
Table 4.1: Projected urban population in Developed and Developing Countries, 1990-1925.....	64
Table 4.2: Population trends in the World's largest 15 largest Mega-Cities, 1960-2000	64
Table 4.3 General Evaluation Diagram	69

LIST OF FIGURES

Figure 1.1: Problem statement	1
Figure 1.2: The thesis structure and methodology.....	4
Figure 2.1: Urban Land Policy and rent formation	18
Figure 2.2: Integration of two theoretical bodies as a solution to problem.....	31
Figure 3.1: Components of lease revenues.....	52

LIST OF BOXES

Box 1.1: Some empirical facts related to urban rent formation by means of public policies.....	2
Box 2.1: Differential Rent of Ricardo	9
Box 2.2: Differential Rent-2 of Marx.....	11
Box 2.3: Land rent as a function of distance and absolute rent.....	12
Box 2.4: Consumer surplus, externality and rent relation	13
Box 2.5: Bid-rent curves	15
Box 2.6: Tax theory and Incidence of a tax and fee.....	28
Box 2.7: Incidence of site value taxation	29
Box 3.1: Brief introduction to local governments in USA.....	33
Box 3.2: A generic Tax Increment Financing (TIF) process and basic terminology	34
Box 3.3: Opposing views on tax increment financing	36
Box 3.4: Some arguments on impact fees	39
Box 3.5: Steps of a typical land readjustment process, German model:	42
Box 3.6: Steps of land readjustment with cost recovery, Japan model.....	44
Box 3.7: Establishing a development rights market in Italy.....	49
Box 3.8: Framework of Participacion en Plusvalias	55
Box 4.1 Blocks of Local government finance.....	65

Chapter1 Introduction and research methods

1.1 Research Topic

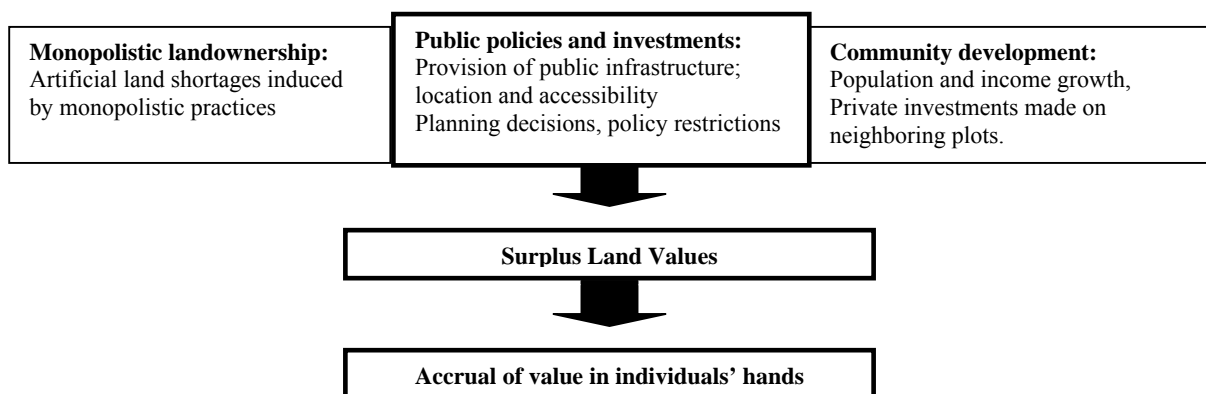
Despite the significant role cities play in economic development and wealth production of countries, they are not always able to enjoy this wealth creation. In many cases we face impoverished local governments that are incapable of meeting the requirements of rapid urbanization and increasing demand for serviced land. Considering the prospected 2.4 billion new residents over the next 30 years in cities, this problem is likely to prevail (Dillinger and Yusuf 2000).

The problem is fostered by the fact that land is not demand responsive. The immobility of land, monopolistic power of landowners and the necessity of coordinated action of various public bodies in the provision of infrastructure result in land supply constraints and bring about an additional artificial land shortage (Doebele 1982).

It is *not* the unique characteristic of urban land that causes the problem, but the ambiguous approach of mankind to land; which sees it as a natural resource on one hand, and as an investment tool on the other. For instance, there is a range of public investments that are brought about as a social need but benefited by some individuals more than the society does. Such an inequitable outcome is basically due to the lack of a strong-willed attitude for imposing effective value capturing techniques and redistribution channels. If local governments could develop a decisive point of view about unearned income generated by urban systems, then a substantial relief could be brought to local governments in terms of their own resource. *The present study aims to develop a perspective for value capturing that pursues a link between **rent** and **own resource** for local governments.*

1.2 The Problem Statement

Figure 1.1: Problem statement



Surplus land values, shown in figure 1.1, are primarily results of the public policies and investments, community development or monopolistic landownership. Such land values are unearned since they are not created by means of the savings of private landowner. They should accrue to public. In such a perspective *this study focuses on the accrual of value increments, yielded by public investments, in some individuals' hands.*

Box 1.1: Some empirical facts related to urban rent formation by means of public policies

A wide range of research has been conducted on the value increments yielded by public services, especially by transportation facilities. A bibliography prepared by *Victoria Transport Policy Institute (2006)* provides results of nearly 100 studies concerning the impacts of transit services on nearby property values and the feasibility of capturing this additional value to finance transit improvements. Some of the examples on the amount of value created in urban areas are as follows:

- After the construction of Helsinki Metro, property prices located within walking distance of the nearest railway or metro station increased 7.5% over other locations. It is also indicated that the impact was most significant within the radius of 500- 750 m., as opposed to adjacent locations outside of this area, where values dropped significantly (ibid. p.11).
- In New Castle, after the construction of Tyne & Wear Metro, housing prices increased by 2% within the neighborhood of its 44 stations (ibid.).
- In North America, in the immediate vicinity of the Portland Metropolitan Express, \$1.9 billion property development was recorded since its construction in 1986. (ibid. p.12).
- Around transit stations in Atlanta and Washington DC, a premium of between \$3 and \$4 per square foot is charged on real estate developments.
- Batt (2001), in his retrospective study, presents the added increment land value between 1950 and 1995, due to the Northway Construction in Albany County, USA.

distance	acres	50s \$/acre adjusted to 95	95s \$/acre	95 total value	Increase%	Gain(\$)
½ mile	5,928	103,301,480	211,008	1,250,855,424	1274	1,212,331,432
½- 1 mile	7,206	119,389,008	148,050	1,066,848,300	894	947,462,116
1-2 mile	17, 382	287,984,976	107,132	1,862,168,424	647	1,574,184,420
total	30,516	510,675,464	-	4,179,872, 148	831	3,733,977,968

Source: Batt, 2001

He also presents the construction costs which amounts to \$ **128,093,003** in 1995. He concludes that the added increment land values are **eleven times** more than the construction costs. They had, however, been left to owner's surrounding parcels instead of society.

- A feasibility study of the Washington Metro in 1980 showed that, along the 101 mile system, land values increased \$ 3.5 billion, while the federal funds invested in Metro up until that time was \$2.7 billion (cited in Batt, 2001).

Apart from transit projects, land transformation processes also yield astronomic value increases.

- In a municipality of around 50 thousand people in the suburbs of Barcelona, the average annual value-added on urban land by means of urban development was US\$ 100 million (Riera 2000, p.23).
- Comparison of the prices within the serviced and unserved areas of Bangkok in 1990 is a useful empirical demonstration of urbanization and transportation effect.

Distance from city centre (km)	Serviced plots (constant 1990 dollars per m ²)	Unserviced plots (constant 1990 \$ per m ²)
0-5	748.1	NA
6-10	439.0	203.9
11-20	216.8	94.2
21-30	153.6	59.2
Over 30	75.8	33.4
overall	341.3	91.9

Source: Dowall, 2003

- Residential land prices in Seoul increased by 26 times between 1974 and 1989. The increase is over 5 times greater than the overall rate of inflation, and over 6 times greater than the increase in GDP. The annual increase in land values in 1988 exceeded the annual wage income for the country's entire worker (quoted in Dowall 2003).

1.3 Objective and Scope of the Study

The aim of the study is to analyze value capturing issue in a comprehensive manner, whereby land rent theories accounts for the nature of the value-to-be-captured, and urban land policy framework accounts for the theoretical objectives of value capturing. Only on such a ground can some case studies be explored and a practical objective be defined.

What we observe in real life experience as value increases, are conceptualized in several urban theories, as *rent formation* process. Nevertheless, there is not still a common language in land literature; several different concepts are used to explain more or less same phenomenon. Accordingly, the first attempt in this study is to glance at different theories, which incorporate land rent as their basic subject. Only in this way it would be possible to differentiate between several concepts attributed to land value. Furthermore this would provide an insight of the nature and dynamics of *value* in urban areas.

After getting an insight of the nature and dynamics of value subject to capturing; *value capturing* issue itself should be clarified. We see different experiences in several countries in the name of value capturing, but it is not always easy to identify the rationale behind them. This requires emphasizing a common ground for these practices to refresh their objectives, and this common ground is going to be *urban land policy framework*. In this framework the aim is to introduce the concept of value capturing, its objectives and instruments.

Having developed a point of view with land rent theories and value capture aspect, some value capturing practices should be analyzed in order to assess the possibility in practice. The aim here is to assess whether practices are compatible with our point of view, or not. Only if they are a further step can be taken to extend the argument in another practical field; local government finance. By this way a coherent process is tried to be depicted.

It should be noted that the aim of this study is *not* to criticize land rent theories, or analyze the types of rent. Moreover, it is not to examine value capturing instruments closely. Public finance, indeed, is just a prediction based on theory. *The overall objective is to bring several aspects together coherently to get an insight of value capturing.*

1.4 Research Questions and the structure of the study

This thesis consists of several aspects that are held together for developing a comprehensive perspective to grasp *value capturing* issue: *land rent theories, urban land policy framework, and local government finance*. With six questions these aspects are unfolded:

1. What is it that we capture?
2. Where does “value capture” idea stem from?
3. Where does value capturing derive its objectives?
4. What are some value capturing instruments?
5. What are some value capturing practices around the world?
6. What may value capturing imply for local governments?

The whole study includes four chapters. Each chapter is divided in to sections, which are further subdivided in to sub-sections. When required, a conclusion part is incorporated after several sections in order to compile the bulk of argument for the following issue. At the end of each chapter there is *evaluation* part. *Conclusion* parts, to some extent, and “*evaluation*

parts” to a greater extent reflect the author’s ideas, and orient the arguments for the following topics.

The introduction chapter consists of seven sections through which a general look is provided on the topic and the thesis. This chapter is an important one in the sense that it represents the author’s perception of the problem and her specific objectives, as well as indicating her awareness of the scope of the overall issue, and likewise her recognition of the limitations of the study.

Second chapter is the theoretical one, which sets the perspective and theoretical objective. The first section is an exploration of what we are capturing, and it deals with the 1st question. At the end of the first section a conclusion is presented in which *the problem statement* is highlighted with theoretical knowledge. Second section deals with 2nd and 3rd research questions, in which the value capturing concept is introduced in the framework of land policy. Finally at the end of the chapter a general evaluation is presented through which some possible solutions are integrated to *the problem statement* at theoretical level, and which provides a point of view for case studies.

Third chapter can be depicted as the research part of the thesis and it examines the practice possibility of the theoretical objectives. In this chapter, some value capturing practices are presented in several country contexts, and the 4th research question is answered. At the end of this chapter the compatibility of these practices with the theoretical framework is discussed, and some recommendations are presented.

Finally in the last chapter, the 5th question is tried to be answered. After some critical issues of local government finance is mentioned briefly, the implications of value capturing for sound local government finance is assessed, which represents the practical objective

Figure 1.2: The thesis structure and methodology

	THEORETICAL OBJECTIVE		PRACTICE POSSIBILITY OF THEORETICAL OBJECTIVE		PRACTICAL OBJECTIVE
Chapter	2.1 Land Rent Theories	2.2 Value Capturing As an Urban Land Policy Objective	3. Value Capturing Practices Around the World		4. Value Capturing For Sustainable Local Government Finance
research questions	1. What is it that we capture? 2. Where does value capturing idea stem from?	3. Where does value capturing derive its objectives? 4. What are its instruments?	5. What are some value capturing practices around the world?		6. What may value capturing imply for local governments?
content	- Ricardo - Marxists - Neoclassical - Economists - Henry George	- Land policy objectives - Value capturing objectives & instruments: a) Regulatory: Government intervention & Joint development b) Fiscal: Tax & fee	Mechanism	Country	Given that: - Trends for urbanization, decentralization - Fiscal constrains of local governments for public services - Need for own resource generation
			Tax Incremental Financing; USA		
			Impact fee; USA		
			Land Readjustment; Spain, France, Japan		
			Transfer of Development Rights; Italy, USA		
			Land Leasehold; The Netherlands Hong Kong		
			Participacion en Plusvalias; Colombia		

1.5 The methodology

The arguments in this study are developed under a model with three fronts (fig.1.2): *theoretical objective*, *practice possibilities of theoretical objective* and *practical objective*, each of which covers a chapter.

To set a perspective and derive the theoretical objective, land rent theories and value capture aspects are presented based on literature.

In the first section of the theoretical chapter Ricardian approach, Marxist approaches; neoclassical approaches and Henry George's approach are presented, in sequence. Except for Marxist perspective, which is presented mainly with referencing to various Marxist thinkers, the other approaches are presented basically with their own works. Besides written explanations, graphics- which do not belong to thinkers' original works- are integrated for better expression of relatively complex issues. In the conclusion section the ingredients for setting an theoretical objective is presented: *Rent is an inner dynamic of cities, and has an unearned nature for individuals.*

The second section of theoretical chapter is devoted to about urban land policy and value capturing. Value capturing is presented in urban land policy framework, and its objectives are defined accordingly. Besides, value capture instruments are categorized to orient the case studies. In the conclusion section the hints for the theoretical objective is presented: *Value capturing as a necessity of land policy in general sense serves land policy objectives, and in specific sense pursues the objective of returning socially created value to society.*

Derived from these conclusions, the theoretical objective can be stated: ***Capturing unearned value increase and returning it to society based on land policy objectives.***

In the research part of the thesis, *the practice possibilities of theoretical objective* are examined. This is done with the analysis of several value capture instruments² in several countries. All practices are presented in a more or less similar structure which allows a further analysis of all case studies with same criteria. Finally the compatibility of these practices is evaluated. It is concluded that: *There are some practices but not without problems. The problems arise basically from the ambiguity in objectives, or technical inefficiency.*

After the theoretical goal is defined in chapter 2, and its practicality is verified to some extent in chapter 3, finally the *practical objective* of the study is mentioned in Chapter 4: "Implication of value capture for local government finance". An alternative could be focusing on the deficiencies of instruments and conclude the argument with recommendations. However, this is not pursued, as it is not the main objective. The main objective and the methodology is to bring several aspects together in a line of thinking which allows further contributions, and welcomes any critics, in order to develop.

1.6 Limitations

In this study several issues have to be overlooked mainly due to time constraint. This is inevitable for a whole representation of the framework within a short time.

² Selection criteria of instruments and countries are presented in the related part of the thesis.

Firstly, based on theoretical knowledge, “rent” is taken as granted, as an ever existing inner dynamic of cities in the study. It is welcomed as long as it can be captured. However, its existence is not questioned. For instance, such a question could be asked, “*can we plan rent-free cities, would it be desirable?*” The answer itself apart the attempt to answer such a question would definitely provide new openings, and help unfolding some other dynamics.

Secondly, although monopoly rent is depicted as problematic, *the private ownership* issue is not examined in this study. Yet, being a natural resource; ownership of land shouldn’t be considered simply as ownership of any other economic commodity. Developing a point of view on this aspect could provide researcher a more decisive perspective about value capture.

Beside these value judgments, there are also some limitations pertaining to research data. Although various countries and examples are covered as case study, some abstractions cannot be avoided. In such a study, which looks for some relations in broader sense, this is indispensable in order to keep in track. As a matter of fact, the motivation to adopt case study approach is not a critical analysis, but instead to get an overview of practices, and asses their compatibility with the theory. Nevertheless, if time allowed covering more case studies; would definitely enhance our perspective.

Finally, the level of critics has to be kept shallow firstly due to time constraint and secondly due to the characteristic of the study, which looks for synthesis of several aspects instead of their analysis. However, the way the ideas are brought together in one framework inevitably requires a critical perspective, which can arrange arguments to make a consistent framework.

In general this study bears the limitations of a preliminary study of quite a complex issue. However, the study can justify limitations as long as the framework is adaptable.

1.7 Some Definitions and Concepts

In the literature (and in this study as well) some concepts, especially those which related to *rent* and *value*, are used interchangeably. The aim of this section is to present the some of these basic concepts *as they are defined* by several thinkers, who are also mentioned in the content.

Land Rent Definitions:

“Rent is that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil (Ricardo, p.33)”.

This is known as **economic** or **differential rent** in literature. Land economists and neoclassical land use theories adopt Ricardian definition.

“That part of the produce which accrues to the owners of land or other natural capabilities by virtue of their ownership. It is the share in the wealth produced which the exclusive right to the use of natural capabilities gives to the owner (George 1879, pp.165-166)”.

“A sum of money paid by the capitalist to the landowner at definite periods fixed by contract, for instance annually (just as the borrower of money-capital pays a fixed interest) for the permission to invest his capital in this particular sphere of production...This sum of money is

called **ground-rent**, no matter whether it is paid for agriculture, soil, building lots, mines, fishing grounds, forests; etc (Marx 1909, vol. 3. p.725).”

In land economics, the amount of money paid for the use of land is called rent and the changes in rent with distance is called **location rent**. The return on urban land is sometimes referred as **site rent** which dates from Marshall.

Value of land:

Land can be commoditized and given an economic value by imputing a fictitious price, which is equal to the capitalized money value of its rental revenues (Harvey, 1982)”.

This argument derives from the idea that land is not produced. If it were, the price of land would be determined by the cost of production or the number of laborer, as Classical and Marxist value theories suggest.

Highest and best use is another way to determine a value of land or a building. It is not necessarily the present value of land. It is the highest value given at the end of a bidding process in the land markets. In urban land use theories, the value of land reflects the capitalization of transport cost savings into the price of land.

Marshall (1890) mentions **the public value of land** that is the product of three things: nature; government; and spillover values from development of adjoining and linked lands.

Use value: Marx states that use values become a reality only by use or consumption (Harvey 1973). It is related to the satisfaction provided to a user via the intrinsic characteristics of a good.

Exchange value: According Marx, it is the proportion to which use values are exchanged, it is the quantity of a commodity divided by the quantity of commodities it would exchange for. Considering use and exchange value together provides a deeper understanding of rent concept (which is going to be mentioned in section 2.1.2)

Surplus value: in Marxist economy; the unpaid surplus labor that accrue to capitalist producer, the essence of capitalist accumulation. Surplus values, in our context refer to unearned increments in land values that accrue to landowner. This term is used, interchangeably, with **rent, value increments, value increases**.

Value capturing:

It refers to the process by which a portion of or all land value increments attributed to the 'community effort' are recouped by the public sector either through their conversion into public revenues through taxes, fees, exactions and other fiscal means, or more directly in on-site land improvements for the benefit of the community (Smolka & Amborski, 2000)”.

Externalities (spill over effects):

Externalities occur when firms or people impose costs or benefits on others outside the market place (Samuelson, 1948).

It is non-pecuniary/ non-priced effects of an element in urban system on the other elements. Government intervention in land markets basically derives from the argument that market cannot provide public goods and deal with externalities.

A positive externality accounts for a situation in which the social benefit is higher than the private benefit (the demand in the market) because of spill over effects. In this case the prices don't represent the social benefit, and there is free-rider problem.

Similarly, a negative externality is a situation in which social cost is higher than the private cost. In this case a cost is imputed on society that is not paid by the producer.

Urban planning:

“It is the process of preparing a set of decisions for action in the future directed at achieving goals by preferable means (Dror 1973, p.330)”.

“In the broadest sense, planning is the allocation of scarce resources to achieve certain goals, and it therefore includes most functions of government. The common use of the term, however, refers to the process of making decisions about the physical environment and evaluating how changes in this environment affect people and the economy, in relation to some specified objective. The plan (master plan or implementation plan and etc.) is then put into operation with the use of the regulatory instruments (Yomralioglu, 1993)”.

Chapter 2 Literature review and Theoretical Framework

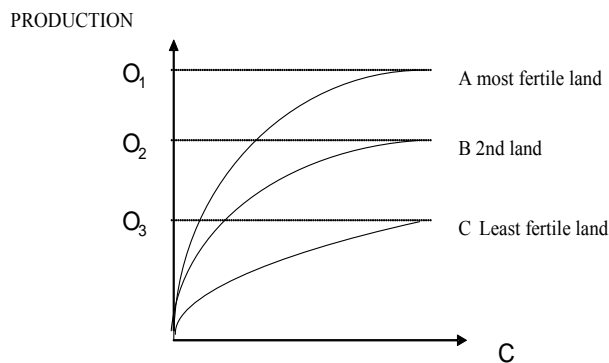
2.1 Urban Land Rent Theories

Since the late 17th century, land rent has been an object of serious theoretical interest (Keiper 1961). While writings of mercantilists' marked 17th century, the Physiocrats³ marked the 18th. However, Keiper states that the subject of land rent for those was never the object of their sustained attention or effort (ibid: 13). In classical period, starting with Adam Smith, the analysis of land rent was for the first time elevated to an important position, and it was David Ricardo who, in the beginning of 19th century, presented the foundations of land rent theory that evolved up to present day (ibid).

2.1.1 Ricardo's land rent theory

Ricardo defines land rent as “the portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil⁴ (Ricardo, 1817). Briefly, he argues that with the development of society, more land is taken under cultivation to meet the increased demand. Yet, the application of same amount of capital yields different returns on different land as a result of different fertilities. On this basis, Ricardo assumes a progressive occupation of land from best to worst; attributing the worst land the role to determine the market values of products. In this sense, there occurs an excess profit, *a surplus*, on better land. This excess profit is called *rent*, and it is transferred to land, owner equalizing the profit rate for all capitalists. Worst land bears no rent as a result of competition from idle land (Fine 1982).

Box 2.1: Differential Rent of Ricardo



According to Ricardian theory, in an economy in which there is demand for a specific product, first the most fertile land (**land A**) is taken in to cultivation. At this stage there is no rent. But when the demand increases, other plots of land that are inferior to A in terms of fertility (**respectively land B and C**) are taken into cultivation.

This inferior land, with the application of same amount of capital, gives lower levels of output. Ricardo says that the excess return as a result of output differences is transferred to landowners as “rent” (**the difference between O₁ and O₂**). This transfer equalizes the profit rate for all capitalists. This type of rent is in function in extensive uses of land.

Source: By author based on various resources

³ Physiocrats is a school of economists existed in the late 18th century in France, who recognized the power of collecting ground rent for public purposes. A physician, François Quesnay, and finance minister Jacques Turgot were the economists who gave the name to this school.

⁴ This type of rent is known as economic rent or differential rent.

When Ricardo referred *rent* he expressly distinguishes between the payments to land-itself (rent) and the payments to the investments on land (interest). He treats land rent as a means of distributing the surplus between landlord and the investor; a transfer payment from the capitalist to landowner (Deak 1985). He claims that abolishment of rent payments wouldn't increase production, reduce market prices, or increase real wages, but it would enable some farmers (capitalists) live like gentleman (Ricardo 1817, p. 38).

On the foundation of Ricardo's theory, two main schools have evolved on land rent: Marxist School and Neo-classical School. While Marxist approach developed on Ricardo's ideas critically, the latter developed more on the adoption of his principals. Throughout these schools the focus has shifted gradually from agricultural land to urban land. The following two sections are going to explain these theories briefly with specific emphasis given to urban implications.

2.1.2 Marxist School

Marx's critique of Ricardo in his Capital volume 3, have contributed a lot to Land Rent Theory. First of all he disputes Ricardo's view that rent is a payment for *the original and indestructible* powers of soil. He believes that productivity of land can be engendered by capital, and so he argues that the powers of land are as much the product of history as they are of nature (Harvey 1982). In this framework he mentions two types of differential rent; differential rent-1 and differential rent-2. With incorporating differential rent-2 in to the theory, he accounts for his opposition to Ricardo with the fact that rent is a cause for investors to invest less which affects profit and wage rates.

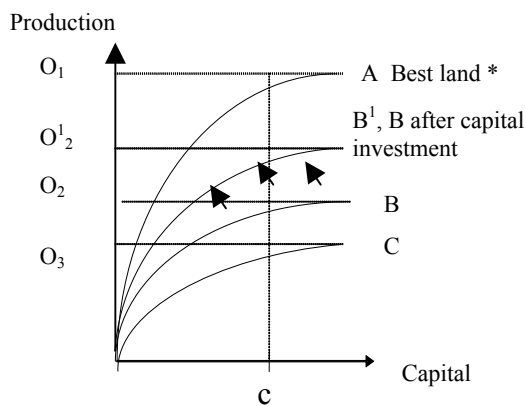
Marx's conception of *Differential rent-1*, in principle, is no different than that which Ricardo advanced (Harvey, 1982). But he modifies Ricardian rent by incorporating *location* as another reason for different returns on different lands. In this case Ricardo's assumption of progressive occupation of land from most fertile to least fertile is not justified: Location advantages of less fertile land might lead it to be taken into cultivation before the more fertile ones. Considering these arguments, Evans (1999) defines differential rent, as the rent existing at one location or site because of its better location, fertility or other attributes, deriving from the fact that it would yield higher profits than some other locations in the absence of any rent payment

With *Differential Rent-2*, Marx points to the fact that additional capitals can be applied to any land that is yielding a higher return than the average. On such land, further investment increases output and increased output engenders Differential Rent-2. Ricardo also have considered this possibility of making additional investment on existing land instead of taking new land in to cultivation. But he thought that investors would stop investing additional capitals *at the point of average rate of profit*, which had been determined by the worst land, and he didn't account why the capitalists wouldn't invest further (Deak 1985, p.28). Marx's challenge at this point is the idea that the additional capital can be further invested until it yields less return than average, and until there is no rent. In such a case the worst land would be driven out of production, the production would increase, and overall price of production for society would decrease. Consequently this would increase either the real wages or profit rates. Considering both types of differential rent; Marx argues that, with the passage of time it

becomes very difficult to distinguish two forms of rent; *what is due to the flow of capital and what is due to the permanent effects of natural differences in fertility* (Harvey 1985, p. 357).

Marxist view doesn't not agree that differential rent is enough to explain rent phenomenon in capitalist economies. In the same manner, Marx's depiction of landlords in the process of rent creation is not passive, as in Ricardo's. He sees some relations between rent and private ownership, and tries to account for this concern by incorporating the categories of Political Economy to his theory, which are Absolute Rent and Monopolist Rent, which are not sufficiently defined by him, and which would later become a matter of dispute among Marxist thinkers.

Box 2.2: Differential Rent-2 of Marx



* degree of land depends on the combination of fertility and location

In the same context as box.1.1, in case of a further demand increase, there are two options to be taken and the capitalist chooses the less costly option:

- to take any inferior **land D** into cultivation
- or making further capital investment on **land A or B**.

In the latter case, the output increase is again captured by the land landlord and this is called **differential rent-2**, equal the excess profit yielded between O_2 and O_1' .

Marx says that if there were no rental payment, further investments on A and B might continue until the average rate of return is smaller than the return of C. So there would be no need for C and it would be driven out of production, leaving B as the worst land. This denotes a decreasing price of production for whole society which means an increase either in real wages or in profit rates. This challenges the passive role of Ricardian rent.

Source: By author based on various resources

As defined by Evans (1999) the *monopoly rent* is the higher rent that can be obtained from a particular piece of land because of the monopoly which the owner may have over *the product* of this land. Such a product must be distinctive, scarce and valuable—such as a vintage wine—so that the demand curve is inelastic and the product is therefore monopolisable. Marx characterizes monopoly rent as a *deduction out of the surplus value* produced in society as a whole, a redistribution through exchange of aggregate surplus value (Harvey 1982, p.350).

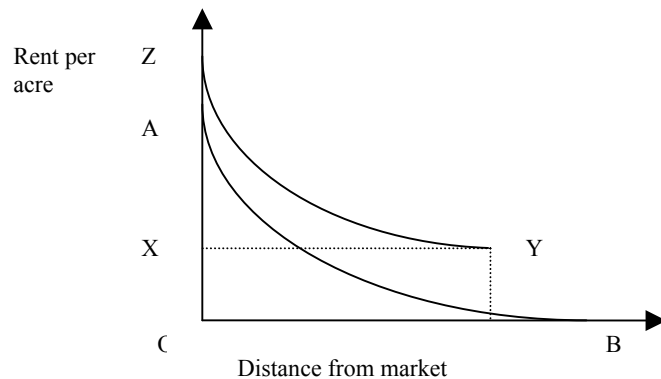
Absolute rent differs from differential rent and monopoly rent in that the concept is only met with Marxian economics (Evans 1982). Ball (1976) mentions absolute rent as the category which has created the greatest controversy⁵. In simple sense, it is the minimum amount which landlords would accept as rent. Fine (1982) depicts absolute rent as an intervention that landed property makes on competition between sectors, on the flow of capital to equalize the rate of profit. Absolute rent is an explanation why there is rent even in the worst land which was said to bear no rent⁶.

⁵Evans (1999) makes an elaborate presentation of theoretical discussions about the formation of absolute rent.

⁶ Marx recognizes situations where there is no rent but refers them as exceptional (see Evans, 1999).

Absolute rent is related to monopoly of all landlords, whereas monopolistic rent is related to the monopoly on a single product of a single landowner (ibid.). However especially in urban context, there are arguments about the irrelevance of a distinction between the monopoly rent and absolute rent (see Lipietz 1985, Jager 2003). For instance, Jager (2003) doesn't find absolute rent as useful in urban context, and states that urban phenomena can be analyzed with the other categories.

Box 2.3: Land rent as a function of distance and absolute rent



Evans (1982) illustrates the effect of absolute rent with distance from market place. He explains that if, competition derives rents to zero at the margin of cultivation; then the rent gradient will be as shown by the curve AB.

But, he says;
“If landlords do not allow land to be cultivated unless a minimum absolute rent is paid, say OX in figure, then the rent gradient will be as shown by the curve ZY”

He continues:

Some land at the margin wouldn't be cultivated if no minimum rent had to be paid. But when there is monopoly rent, less is produced than otherwise would be, and both the price of the product(s) and the rents paid for used land is higher.

Source: Evans 1999

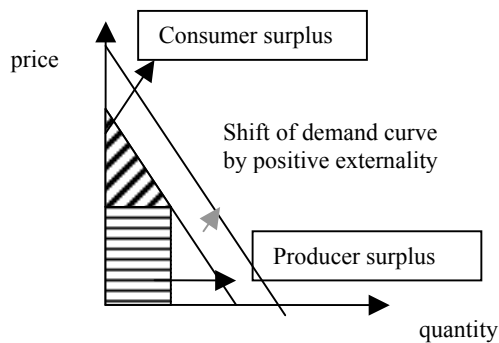
Harvey (1973) conceptualizes urban areas as the places where social surplus value is produced. In his theory his definition of space is critical for understanding rent phenomenon. He categorizes space in to three as absolute, relative and relational. **Absolute space** refers to a place on its own. Ownership, says Harvey, forms absolute spaces. **Relative space** refers to a space with reference to other spaces. For example, the movement of population, commodity or service takes place in relative space. Location is formed in relative space. Finally, **relational space** is derived from a perspective that sees things embedded in each other. The returns on some urban plots, for example, can be explained by its being together with and in relation to other plots. In this perspective, Harvey says that relational space finds its existence in the form of “rent”.

Externality factor is important in relational space. According to Lowry (1965), everything in the city affects each other (Harvey 1973, p.59). Externalities in the city, in the same manner have important effects on individual's income. Harvey pulls attention to the externality concept as potential reason for income inequity. An externality is materialized in rent through its absorbance by several plots and its transformation into consumer surplus.

Consumer surplus can be explained by the relationship between use value and exchange value. The use value determines the amount of money that a consumer would be ready to pay for a plot or building regardless of its exchange value. The excess of use value over exchange value is called consumer surplus. In some conditions, for instance when there is monopoly in supply of a good, the surplus value is transformed to rent or profit, in the form of **producer's**

surplus. In this sense rent is formed within the relation of use value and exchange value, and, externalities have important effect in the formation of surplus value, rent or profit. .

Box 2.4: Consumer surplus, externality and rent relation



Harvey uses these concepts to explain the situation in which some people, under monopolistic conditions, have to leave their consumer surplus to landowners in the form of producer surplus.

A positive externality, increases real income of people and shifts up the demand curve, which in return, increases the total sum of consumer and producer surplus, which is consist of rent, interest. However, Harvey doesn't find it practical to split down the sum (profit) as rent and interest.

Source: By author based on various resources

Jager's (2003) work, attempts to compile several discussions and develop a consistent typology of Marxist rent theories. He points to the fact that there is no one coherent and widely accepted theoretical corpus, and that there is a high level of abstraction which makes empirical and more concrete applications more difficult (ibid: 234). He aims to show how land rent theory may still provide fruitful insights into central aspects of urban processes and developments.

Firstly, Jager wants to reconcile the two perspectives; first of which narrows the role of rent to distribution, neglecting its role in production (Ricardian view); and the second of which treats land as a financial asset and a fictitious capital (Harvey). Jager finds both of the traditions' conceptualization as mechanistic and argues that they cannot account for changes in the structure of demand of consumption that is a result of land rent.

He proposes an integrative theory that tries to connect between urban space and the process of accumulation. He accepts a dialectical conceptualization of rent that states that land rent is structured by urban space and at the same time structures urban space. Accordingly he develops an institutional embedding of land rent, and sees rent itself as a social relation in a wider context which is composed of some other institutions such as property laws, rent regulations, urban planning, taxes, etc.

Jager also tries to develop a typology of land rent to reach a common language in the definitions of categories because; he believes that the ambiguity in definitions made many authors abandon any typology of rent.

Firstly, Jager doesn't see absolute rent useful in urban context. According to him, some phenomena that recall absolute rent can be explained with other categories. Secondly, he points to the increasing role of monopoly rent in city centre due to the competition for central locations, fostered after the transformation from Fordism to Post-Fordism and the growth of the service sector.

As to other categories, Jager finds differential rent-1 useful in explaining urban expansion. Expansionary policies play an important role in formation of this kind of rent. For instance suburbanization policy brings about substantial amounts of differential rent increase. On the other hand, differential rent 2, also has an important influence on the spatial structure of the city. Some regulations on the use of land, such as zoning and building restrictions are of decisive importance in the formation of this type of rent..

Marxist theories in general try to account for the formation of rent phenomenon. They attribute rent a complementary role in the capitalist mode of production. On this basis, they use this phenomenon to explain inequitable formations in urban space. They see rent as an unearned income which is transformed from consumer surplus to producer surplus with the facility of monopolistic private ownership. Marxist also depicts rent as an obstacle to production, and states that capitalism would function under state ownership of land the best. According to Marxists this is a trade off problem for capitalists between the merits of private ownership and abolition of rent. A different perspective on rent is presented in neoclassical theories in the following part.

2.1.3 Neo-Classical School and Urban Land Use Theories

In this part some main neoclassical urban land use theories and their approaches to rent will be explained. Neoclassical economics in general sense focuses on microeconomics, examining individual profit-maximizing choices, and interpreting all economic phenomena as aggregations of such individual choices.

At the beginning of 19th century, short after Ricardo, J.H. von Thünen developed the *theory of location differential rent*. According to theory, the various agricultural land uses around a market place bid for the use of land, and land is assigned to the highest bidder in each case (Alonso, 1964). For every type of crop, there is a bid rent curve, which indicates, according to the distance to the city how much the farmers are willing to pay for the land (Brakman et al, 2001). Centrality and transportation are key elements in the theory. In this context the most distant land in cultivation yields no rent as there is no savings in transportation. Rent, in nature, is the residual, after the production and transportation cost is subtracted from the value of the product.

Marshall adapted the theory for different land uses. In addition to the original theory, he added aspects of height and size of the site, saying that if the land is expensive, high buildings on small land is built and if it is cheap, vice versa. On the same line of thinking some studies emphasized the strong correlation between rent and transportation costs, and some other tried to incorporate residential land to theory (Hurd 1903, Haig 1926cited in Alonso, 1964)

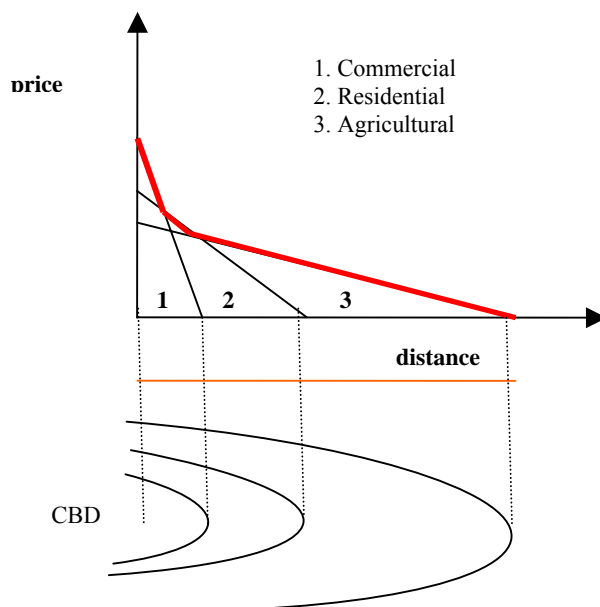
Alonso (1964) extended the von Thünen's model to urban land uses in a more comprehensive manner. In fact, *urban land use theories* have been developed mostly based on his work and Muth's work (1969). These studies look for the relation between the values and the land uses within the city. Alonso builds his theory based on the assumption of a flat-featureless plain, where a perfect market exists with no legal complexities and with complete information. He takes "distance" as the only physical factor. He adopts bid rent function approach that was introduced by von Thünen, which suggests that a bidding process determines prices of land such that the highest bidder for a parcel of land will occupy that parcel. Each activity is assigned a bid-rent function, and the aggregated bid rent functions forms the *rent gradient*.

The relevant rent gradient in this context is shown by AB⁷ in Box.2.3 (p.12), depicting a declining value with distance from the city centre. The theory suggest that the intensities of land uses also decreases as we go further from central business district to outskirts, denoting a close relationship between density and rent.

Fujita (1985) also uses bid rent function approach in his *theory of land use and city size*. His study is a search for an explanation to regularities in spatial structure despite billions of unregulated individual actions taken in the past. In his study he develops urban land use theories by incorporating some extensions such as externalities, monopolistic and oligopolistic competition, referring these two as common features of cities. He also considers agglomeration aspect in his theory. In addition to these, considering the long durability of buildings and infrastructure, he points to the necessity of a dynamic framework instead of a static theory.

Fujita depicts household's housing choice as a trade-off problem. In addition to budget and time constrain, he mentions three basic factors that a household has to give relative weight: *accessibility* referring to pecuniary aspects and transportation cost associated with other activities, *space*; referring to size and quality and *environmental amenities*, referring to natural features and infrastructure.

Box 2.5: Bid-rent curves



In the theory, at a point in time, a spatial equilibrium is reached. It refers to the situation where there is no incentive for any economic functions to outbid another.

If the conditions, such as real income, population, etc., that prepare equilibrium don't change, equilibrium doesn't change.

The rationale of the equilibrium can be explained with the concept of "highest and best use", which refers to the notion that land is allocated to the use which returns the highest location rent.

Source: By author based on various resources

Likewise *agglomeration* is another common phenomenon in cities. Agglomeration economies are likely to occur in city centers or locations when there is tendency for clustering. The effect of this trend on bid-rent curves is a steeper demand curve which reflects higher prices and densities. Brakman et al (2002) argues that there is a significant relationship between public

⁷ Neoclassical urban land theories do not consider monopoly and absolute rent, therefore AB becomes the relevant rent gradient, in box 2.3, p.11

good production and forces behind agglomeration or spreading. Based on the assumption that “public infrastructure” enters the production function of firms, they show that a public good provision, provided that it is increasing returns to scale, foster agglomeration, and agglomeration of human capital in a region, in return creates *agglomeration rent* which enables this region to apply a higher tax rate. Put in another way; public goods reduce the cost of production for firms, and the more it reduces, the more agglomeration and agglomeration rent occurs. Taxing of this rent allows further public spending financed by income tax.

It has been seen that Neo-classical economist accept the rent as given and develop their theories on this basis. Yet, one neo-classical thinker Henry George could never reconcile with the monopoly of landowner and the existence of rent.

2.1.4 Henry George- The Law of rent

Henry George can be grouped under neo-classical economists; however he shares some common concerns with Marxist theorist as well.

Although he developed his theory on Ricardian rent using neoclassical assumptions; as Marxists, he incorporates *scarcity* aspect as a socially determined phenomenon, and private ownership being the condition of rent (Harvey, 1973). But, different than Marxists, he depicts rent as a residual. He argues that wages and interest do not depend upon the produce of labor and capital, but upon what is left after rent is taken out.

He analyzes land rent under his theory of distribution in which he looks for the reason *why wages are decreasing although there was material progress*. In his theory, he defines laws of distribution as laws of proportion between wages, rent and interest; accordingly all produce of a society is distributed among land, labor and capital. That part, which goes to landowners as payment for the natural opportunities is called rent; that part, which constitutes the reward for human exertion is called wages; and that which constitutes the return for the use of capital is called interest. According to George (vol.3, p.162), these terms mutually excludes each other.

He depicts the problem as the increase in rent that impedes increase in wages or interest; no matter what be the increase in productive power, if the increase in rent keeps pace with it, neither wages nor interest could increase (George, vol.3, p. 171). Rent and value of land is explained by George as such:

Rent, in short, is the share in the wealth produced which the exclusive right to use of natural capabilities gives to the owner. Wherever land has an exchange value there is rent in the economic meaning of the term. Wherever land having a value is used, either by owner or hirer, there is rent actual; wherever it is not used, but still has a value, there is rent potential. It is this capacity of yielding rent which gives value to land. Until its ownership will confer some advantage, land has no value (ibid. 166).

He suggests a single tax on land, with no other taxes on wages or interest. He believes that the single tax, in broader sense, would raise wages, increase earnings of capital, abolish poverty, give employment, and relieve the other economic ills, through a massive redistribution of wealth (Rothbard 1997). In addition, a single tax on land would be sufficient to finance the entire needs of government.

His ideas affected many thinkers, practitioners, politicians and still effective in present day. Today, the land value tax and single tax theory has been modified so as to be a supplement to, while not entirely replacing, such taxes as the sales, income and other state local taxes (Wuensch et al. 2000).

2.1.5 Conclusion

After the presentation of main theoretical approaches on land rent, this part aims to piece together several important issues that will lead the argument to second section of the theoretical chapter about value capturing.

It has been seen in the theories that, each school attributes some roles to land rent phenomenon based on their specific assumptions and objective. While Marxists conceptualize rent as a social relation, emphasizing the active role of property ownership; the neoclassical economists tend to see the process as a simple redistribution problem giving landlord a passive role.

Increases in land rents also have been assigned two contradictory functions: On the one hand, they play a significant role in the distribution of the income from land which has been specified by theories as unearned (Marxist and Georgian theories), on the other, they are means of rationing allocating land use (Neoclassical theories). Even within same school of thought, there is not always a compromise in several points. For instance there are still debates among Marxist on *absolute rent*, which Marx hadn't, clarify enough in his *Capital*.

All these irreconcilable issues make land rent a complex issue to deal and work with. However, it should be reminded that in this study the aim is not to discuss the debates on land rent. This is quite a complex issue beyond the scope of this study. Instead, the aim is to put forth the *nature* and the *dynamics* of the rent phenomenon.

One (and maybe only) common issue for Marxists and neo-classical economists is that they both agree on the existence of *differential rent-1* in urban areas, although with different contexts. Both schools agree that differential rent may occur as a result of location advantages, increased accessibility, nearness to externalities, and so on. But Marxist thinkers require some more categories to support their argument differential rent-2, absolute rent and monopoly rent

Agglomeration rent is another type of urban rent that is introduced by geographical economists. It is formed in urban areas especially at central locations where variety of activities tend to locate closely, bringing location advantages and density advantages together. So it can be inferred that there is association between differential and agglomeration rent, but agglomeration rent in further sense denotes production increases. That's why in this study agglomeration rent is not going to be taken as problematic⁸. Instead the monopoly rent will be depicted as problematic acting as the opposite face of agglomeration rent which impedes production and allows speculative behavior especially in central locations.

In common, all the theories agree that the rent formation process is a characteristic of urban areas and it plays an important role in shaping cities (Ricardo 1817, Marx 1909, George vol3,

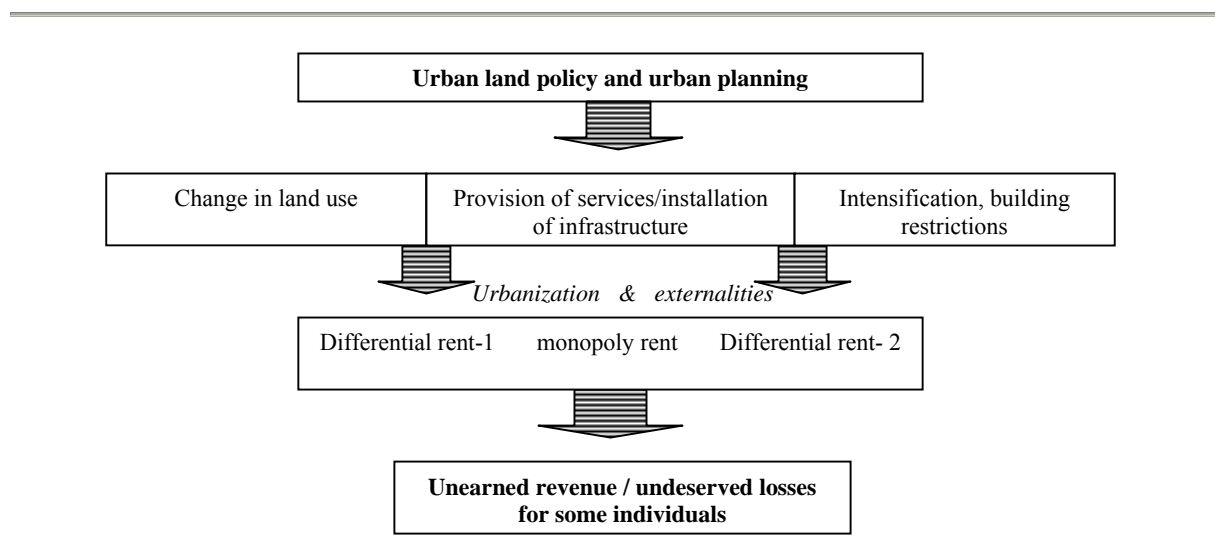
⁸ Moreover in the 4th chapter will be referred as a policy objective.

Jager 2003). The theories also indicate that, cities are developing with this inner dynamic; rent (*bid rent theories*). In addition, whether this development process is going to be equitable or not is a question around the distribution effect of this phenomenon (*George and Harvey*).

A final point inferred from the theories is the role of urban policies and planning decisions in rent formation process. In urban context, the value of land is determined, in large measure, by the value of public goods and services that are available to particular sites (Rybeck 2004). Ironically, a considerable amount of externalities and urban land rent are typically generated by policy and planning mostly because of the ignorance of dynamic nature of planning and urban areas.

In conclusion, after the nature and dynamics of land rent is put forward, and it's depicted as unearned income yielded by urban policies and planning activities; now, the problem definition in *figure 1.1* can be illuminated (fig. 2.1)

Figure 2.1: Urban Land Policy and rent formation



The figure depicts a process which starts with any policy decision or planning action bringing about land use changes, infrastructure provision, or density changes. This is an urbanization process which goes hand in hand with externality formation. All of these factors together, result in differential rent-1, differential rent-2 and monopoly rents in cities⁹, making some individuals better-off and some worse-off.

The question of *who is going to get the value generated* is a critical one for urban areas, and it is a domain of urban land policy; the basic motivation of value capture aspect. Accordingly, in the following section, value capturing concept will be introduced as a land policy objective.

⁹ Absolute rent is not involved based on the argument that monopoly rent can explain issues related to it absolute rent in urban area (Jager 2003). Also agglomeration rent was not involved as explained on page 15.

2.2 Value Capturing as an Urban Land Policy objective

In this section value capturing will be analyzed in urban land policy framework. Accordingly, subsections will be devoted to, first urban land policy and then value capturing issues.

2.2.1 Urban Land Policy and its objectives

In a functioning *land market*, rents will adjust so as to equate the demand and the available quantity of each quality of land, establishing a general equilibrium set of site rents (Adams et al 1968). In Clawson's (1962) words:

“If there is complete knowledge as to the time of future conversion, as to the value at that time, as to holding costs, and as to discount rate, then everyone would be in complete accord as to present worth. There would be no opportunity for speculative gain, because all future value would have been fully and accurately discounted into present value (ibid p. 250).”

But this is not the case in real life. Both classical and neoclassical economists recognize some market failures and mention the need for government action to correct them (Klosterman 1985).

Klosterman (1985) mentions some *market failures*:

- 1) *Public or collective consumption good provision*, which refer to unwillingness of private sector to produce some goods that are valuable to society as a whole, but not cost recovering. In addition, such goods have free-rider problem;
- 2) *Externalities or spill over effects* which are non-pecuniary and non-priced effects of an element on other elements, and which are fostered by the fixed location of land;
- 3) *Prisoners' dilemma conditions*, in which individual actions, costs or benefits contradicts with social ones in an urban context;
- 4) *Distribution issues*, where distribution of resources are far from Pareto efficiency¹⁰ - as in perfect competitive markets.

In addition, World Bank (1978) mentions that *land market failures* are triggered by weak ownership rights, monopoly of ownership, excessive fragmentation of land ownership, interdependencies among land uses, etc.

United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) lists *the rationales of government interventions* in urban land markets as such;

- 1) Eliminating market imperfections and failures to increase operating efficiencies;
- 2) Removing externalities so that the social costs for land market outcomes correspond more closely to private costs;
- 3) Redistributing society's scarce resources so that disadvantaged groups can share in society's output.
- 4) World Bank (1978) adds one more justification for government intervention: Public sector land demand for provision of public services such as roads, schools, which are some economic and social objectives of urban planning”.

¹⁰ equilibrium at which making one better of requires making one worse off

World Bank (1978) presents some possible *ways of government interventions* within four categories:

- 1) A country's land tenure institutions: It refers to the framework within which the land policy must operate in a country including ownership patterns and land tenure arrangements as private freehold, private leasehold, public freehold, public leasehold, communal ownership, etc.
- 2) Land use regulation: It refers to zoning, subdivision requirements, building codes, rent control, and other forms of administrative control including government permission or prohibition of private land uses.
- 3) Taxation of land or improvements to land: It refers to a wide variety of possible taxes such as general property taxation, site value taxation, betterment levies, land value increment taxes, public infrastructure charges, and the vacant land tax (ibid, p. 7).
- 4) Direct government participation in the land market: It refers government being a buyer, seller, landlord or a user of land via some instruments such as land readjustments, land banking, public private partnerships, etc.

All these issues mentioned above are essence of *urban land policy*. It tries to ensure that the land markets are efficient, equitable, environmentally sound and sustainable (Klosterman 1985). To reach these ends it deals with defining the principles and rules governing property rights over land as well as natural resources, and the distribution of these rights (European Union, 2004).

In the International Congress on Urban Land Policy of 1981 held in Belgium, *the objectives of urban land policy* had been set, and the main goal was stated as *to minimize all problems related to land in the context of development* (Aydoğanlı, 1996). In order to realize this main goal, three primary objectives are mentioned;

- 1) to assist in the planning and plan implementation for urban development,
- 2) to influence land price and profits on land in various ways and,
- 3) to assist in realizing social justice in urban development.

World Bank (1978) proposes three general objectives with an indication that they may be attributed different importance in different economic social and political contexts. These objectives are efficiency in use of land, equity and government revenue.

In static sense, *efficiency in use of land* refers allocation of land in which each parcel of land is assigned to its highest value use, with value understood to include not only the private value in that use but the social value of net external benefits or costs imposed by that use (ibid p.9). On the other hand, with a dynamic approach, "possible land use changes" should be taken in to consideration, and some flexibility should be adopted in regulatory mechanisms.

Equity in the distribution of benefits from urban land requires identifying and attempting to reduce any distributional inequities that are caused by the special characteristics of the urban land market itself. After that, land value increases resulting from public service benefits are either targeted on intended beneficiary groups, or they are captured by the government for government use (ibid p.10).

Government revenue objective requires mobilization of resources by public authorities for urban services, either in the form of general revenue for providing area-wide services, or in the form of specific revenue to finance individual projects.

In theory all of the objectives should work together: “Revenue should be raised without creating incentives for inefficient private land use, and the revenue instrument can be designed to raise revenue from landowners in proportion to public service benefits received by them, and the progressivity of the revenue instrument is a means of redistributing income from land (ibid p.11).”

Table 2.1: Public Intervention and goals of urban land policy

Public intervention in land markets		Goals of land policy
The reasons of intervention	The categories of intervention	
<ul style="list-style-type: none"> • Land demand by public sector for public services • Land market imperfections and failures • Need to remove externalities • Need for distribution of betterment • Redistribution of society's scarce resources for disadvantaged groups. 	<ul style="list-style-type: none"> • A country's land tenure institutions • Land use regulation • Taxation of land and or improvements • Direct government participation 	<ul style="list-style-type: none"> • Regulating and controlling land uses. • Managing efficient use of resources for urban development • Raising government revenue • Ensuring social justice and equity in the distribution of benefits from urban development.

Source: By author based on various resources

In the table 2.1 an attempt was made to bring together the remarks on land policy issue that are presented in this section. As can be seen there are strong remarks on the issues of distribution and redistribution of benefits as policy objective. In addition, in the middle column, some policy instruments are also presented to realize these objectives. The table 2.2 details “the categories of invention column” of table 2.1.

Table 2.2: Policy Instruments of public intervention

Categories of intervention and their instruments			
Ownership patterns & land tenure institutions	Land use regulation	Taxation of land or improvements to land	Direct government participation
<ul style="list-style-type: none"> • private freehold • private leasehold • public freehold, • public leasehold • communal ownership, etc. 	<ul style="list-style-type: none"> • Zoning • Subdivision requirements • Building codes, rent control • Some administrative controls i.e. government permission/prohibition of private land uses 	<ul style="list-style-type: none"> • General property taxation • Site value taxation • Betterment levies • Land value increment taxes • Public infrastructure charges • The vacant land tax 	<ul style="list-style-type: none"> • Land readjustments • Land banking • Public private partnerships, etc.

Source: By author based on World Bank, 1978

Embedded in the categories of intervention in land markets, some instruments are specifically aims at capturing the socially created value by urban development. It can be inferred that value capturing issue can be analyzed in land policy framework and can be seen as an objective of land policy contributing to overall objectives.

A different justification for more specialized value capture instruments relies in the nature of “planning” activity: Planning can be considered a way of regulating the externalities, but it is also directly involved in the process of forming externalities via provision of infrastructure and so on. In this sense more comprehensive, innovative and specialized planning instruments have to be created. Accordingly, in the following section, value capturing concept will be

introduced with as well as some specialized value capturing instruments which are designed to mitigate the inefficiencies of planning.

2.2.2 Value Capturing and its instruments

As defined by Smolka and Amborski (2000), value capture refers to the process by which (a portion of or all) land value increments attributed to the community effort are recouped by the public sector either through their conversion into public revenues through taxes, fees, exactions and other fiscal means, or more directly in on-site land improvements for the benefit of the community. According to Offermans (2003), the basic principle of value capture is to return (a share of) the land value increments that would otherwise be retained by (external) private actors, to the actors which are responsible for this value increase.

The origins of value capturing stems from the depiction of land rent as an unearned income and as a surplus value fit to be taxed (Physiocrats, Smith, Ricardo, James Mill, George, etc.). Ricardo, in his classical work (1817) clearly spells out the argument for taxation of economic rents accruing to owners of assets fixed in supply (Lewis, Jr. 1984). In Shoup's work (1950, p.80), Ricardo and Smith's views are presented with a quotation:

*“Both ground rents (urban land rent, apparently), and the ordinary rent of land (agricultural land rent apparently), are species of revenue, which the owner in many cases enjoys, without any care or attention of his own. Though part of this revenue should be taken from him, in order to defray the expenses of the State, no discouragement will thereby be given to any sort of industry. The annual produce of the land and labor of the society, the real wealth and revenue of the great body of people, might be the same as such a tax as before. **Ground rents, and the ordinary rent of land are, therefore, perhaps, the species of revenue, which can best bear to have a peculiar tax imposed on them.**”*

(Adam Smith cited in Ricardo, 1817)

Henry George developed these ideas further and introduced *single-tax theory*. He advocates that the rent of land should be taxed away from the private individual and given to state, allowing the abolition of all other taxes. Gaffney, who is a follower of George (1968) also defined land rents partly as the product of public spending in an urban context and stated that, if the public fails to charge landowners for public benefits by taxing rent, every public improvement bestows unearned wealth on a few.

In this formulation, private ownership could be sustained, but with a 100% tax on annual land rent (Wuensch et al. 2000). While private owners can own the improvements, society can capture the site value (or to government as a representative of society). In addition George argues that the improvements on land should be separated from the site value of original land. These ideas influenced the introduction of site value tax systems in several countries such as Canada, Australia, New Zealand, and in several African countries (Doebele 2002). These countries routinely value land, separately from building (Wuensch et al. 2000)¹¹.

At this point a distinction should be highlighted about the conception of land. In this section, in Ricardo's and George's view, value increments referred only the **land itself** and excluded

¹¹ For an elaborated study on land valuation techniques refer Wuensch et al (2000)

any kind of capital investment on it. Nevertheless, an alternative perspective conceives these two components difficult to separate.

One of the most important critics to single tax theory is the difficulty to value land separately, excluding the developments on it. In Marxist perspective (as it was explained in 1st section) it was believed that the productivity of land could be engendered by capital and so these powers are as much the product of history as they are of nature (Harvey 1982). Edwards (1985) states that there is no room for the neoclassical distinction between the market for land rights and the market in rights over buildings. He continues that, it is not possible to split down the combined revenue from the disposal of a building in to its elements (as return on the land, return on the building works).

In this approach, urban land can be defined in a different manner than agricultural land. Brown and Hepworth (2002), in their study on property tax system on Europe, adopted a definition of land referring not only to land itself but also to any fixture (buildings) attached to it and anything growing on it. The definition also includes anything under the surface of the land (minerals) as well as rights over the land, such as a right for an electricity cable, which crosses air space (ibid, p.2). In this perspective, serviced urban land can be taken as **“produced”**. Quantity of land per se may be finite, but supply of urban land is possible to be increased by providing urban infrastructure.

Within these two perspectives several tax bases have been developed with regard to urban land. In addition to that, difficulties faced in the management and implementation of urban plans, and the dynamic nature of the land uses and development profits led some other value capturing mechanisms to develop. Smolka and Amborski (2000) analyze value capturing techniques in two main headings: fiscal and regulatory. Fiscal category involves taxes and fees, and regulatory category involves basically in-kind contributions on site or off-site.

Table 2.3: Value Capture Instruments based on Smolka and Amborski

Fiscal		Regulatory
Tax	Fees	
<ul style="list-style-type: none"> • Temporary tax rate • Land value tax • Two-rate tax • Progressive rent on vacant land • Land speculation taxes • Capital gains tax • Tax increment financing 	<ul style="list-style-type: none"> • Special districts • Special districts for business • Special assessment • Impact fees 	<ul style="list-style-type: none"> • Participation in plusvalias (added values) • Bonus zoning or density zoning • Inclusionary zoning • Linkage • Selling of building rights • Certificates of building potential rights • Transfer of development rights • Eminent domain/ expropriation right • land banking • land readjustment • public private partnership • concessions • land leasing

Source: Author based on Smolka& Amborski, 2000

Doebele (x) categorizes value capturing mechanisms under ten classes in descending order of how they interfere with conventional markets.

Table 2.4: Value capturing mechanisms based on Doebele

Value capturing instruments arranged in descending order of intervention in land market	
1.	Public land ownership (the nationalization of land)
2.	Nationalization, or heavy taxation, of the development right in land
3.	Public ownership of land around major cities (sometimes called land banking)
4.	Land value increment taxation (special taxes of increases in land values distinct from other types of capital gains)
5.	the right of pre-emption (government intervention to prevent speculation)
6.	Land price freezing
7.	Land readjustment
8.	Development impact fees
9.	Special charges on land owners when public investment has increased value
10.	General property taxation

Source: Doebele (x)

Offermans (2003) makes a different categorization of similar elements. He groups instruments according to whom the capturing applies and whether it is mandatory or voluntary.

Table 2.5: Value capture instruments based on Offermans

		Voluntary contribution	<i>Mandatory contribution</i>
Capture from developer	Joint development	-Benefit sharing -Concession leases -Connection fees -Land leases& air right developments -Developer contribution	
	Governmental intervention		Administrative guidance
			Development charges
			Development rights
	Municipal land disposal		-Land readjustment -Land banking -Land assembly
Capture from community			-Special assessment districts -Impact fees -Tax incrementing financing -Temporary rate increase -Split rate property tax
Capture from within		-Super-developer	

Source: Author based on Offermans, 2003

In the tables above various instruments of value capturing are presented as categorized by several authors. In table 2.6 an attempt is made to bring all the instruments together. Smolka and Amborski's *fiscal and regulatory categories* are combined with Offermans' *government intervention and joint development categories*. Offermans' *voluntary and mandatory categories* are eliminated because of the fact that such a differentiation depends on the legal and socio-political environment in which the instrument is applied. For instance; participation to "transfer of development rights" programs is voluntary in some states of America, whereas it is mandatory in Italy. In addition to those categories the instruments are also divided in to two, according to their being in cash or in kind, which is believed to be a critical characteristic.

Table 2.6: Synthesis of value capturing instruments

Land policy mechanisms for value capturing			
FISCAL	Tax	cash	<ul style="list-style-type: none"> • Temporary tax rate • Land value tax (site value taxation) • Two-rate tax (general property taxation) • Progressive rent on vacant land • Land speculation taxes • Capital gains tax • Tax increment financing • Nationalization/ Heavy taxation of development rights • Heavy taxation of the development right
	fee	cash	<ul style="list-style-type: none"> • Special districts • Special districts for business • Special assessment districts • Development charges • Impact fee
REGULATORY	Government intervention	In kind/cash ¹²	<ul style="list-style-type: none"> • Certificates of building potential rights • Administrative guidance (cash) • Development rights auctioning (cash) • Participation in added values (in kind& cash) • Selling of building rights • Eminent domain/ expropriation right/ preemption right • Full public land ownership • land banking • land price freezing • land assembly • land readjustment • land leasing (in kind& cash) • Bonus zoning or density zoning • Inclusionary zoning • Transfer of development rights • Land swaps • Linkage
	Joint development	In kind/cash	<ul style="list-style-type: none"> • public private partnership/concessions • land leasing and air right development • benefit sharing • connection fees • developer contribution • super-developer

Source: By author based on World Bank (1978), Smolka (2000), Offermans (2003), Doebele (x)

One of the practical objectives of final categorization is to differentiate between *joint development schemes* and others. Joint developments are important ways of public financing as well as benefit and risk sharing. However, value capturing is not their primary objective. Moreover, these schemes require a different theoretical body which is not covered in this study. Accordingly the focus will be basically on the rest of the regulatory and fiscal instruments. Some of the instruments will be scrutinized within several country contexts in Chapter 3; the research part of the study. In annex part brief definitions of instruments are presented.

¹² in-kind unless indicated.

Fiscal Instruments

Each community needs to make a policy decision for the cost of new infrastructure between charging directly the new residents or sharing the cost among all current residents via adoption of higher taxes (Carrión & Libby 2002). In other words a choice should be made between taxes and fees.

Taxes

The general purpose of taxes is to raise revenue for public goods and services provided collectively through state. Subject to this general purpose, taxes may have a series of subsidiary objectives (Sandford, 1992). For instance; they may have a social policy such as discouraging consumption of a commodity (for i.e. tobacco), or a distributive policy such as reducing inequalities. Respectively; *land speculation and progressive taxation on vacant land*, and *land increment value taxation* are relevant examples to two subsidiary objectives.

There is room for debate that property taxes are not mechanisms of value capture, in the sense that they are impositions with no counter part. But considering the fact that land values are made up of land value increments, they are, indeed. Moreover, Smolka (2000) mentions that especially in North America, high property taxes are seen as a counter part for better public services.

There are some guiding principles of taxation such as: *equity, ability to pay, efficiency, simplicity, and cost of operation according*, etc. According to Sandford (1992) they have a conflicting character with each other and any tax system represents some sort of practical compromise.

Equity principle can be categorized in to two; *vertical equity* or *horizontal equity*. ***Vertical equity*** is the value judgment on the different amounts that taxpayers of different capacity should pay. ***The ability to pay*** principle deals with this issue. The latter principle requires a decision between *regressive taxation*; by which rich is taxed more than the poor, *proportional taxation*; by which rich and poor pay the same proportion of their income, and *progressive taxation*; by which rich pay at a proportionately higher rate than poor. On the other hand, ***horizontal equity*** refers to the equal treatment of taxpayers of similar taxable capacity

Efficiency is a measure of the distortion on the choices of individuals. Sandford (1992, p.114) explains this with the principle of ***least price distortion***: *tax A is more efficient than tax B, for equal revenue, if it involves less loss of satisfaction.*

On the other hand, ***simplicity*** and ***cost of operation principles*** denote the desirability of understandable and less costly taxes. ***Benefit approach*** is another important principle which suggests that taxation be levied to people who uses a public service.

Finally, ***certainty*** principle indicates that the individual's tax liability should not be arbitrary and should be calculable in advance. Finn Kydland and Edward Prescott's Nobel Prize (2004) winner approach; *the time consistency of economic policy* argument also emphasizes the certainty principle. In this approach the focus is on inherent imperfections and credibility problems in the ability of governments to implement desirable economic policies. They show in their research that, discretionary policies of governments lead to a lower welfare for the

whole society. They state that this can be overcome by taking the expectations¹³ of rational private sectors in to consideration at the policy making phase, and by introducing unalterable policy rules that guarantees that the applications are in line with the initial policy decision.

There are many variations of land tax systems with different names in different countries. In general sense, World Bank (1978) mentions several important **tax** bases: (1) land value alone; *site value taxation* (2) total value of land and buildings; *general property taxation* (3) Changes in land value or in total property values, either when land is transacted or periodically assessed on unrealized gains; *land value increment taxation, betterment levies, and special assessment*. (4) the total value of land or total property value when it is transacted; real estate transfer taxes and (5) land area, footage, or some other physical rather than value measure of land; *special assessments*.

Fees

Fees are the second category of fiscal instruments and are the most common way of value capturing.

The fundamental difference between tax and fees lies in its purpose and its authority. A fee can be defined as a charge fixed by law for public services. Different than taxes fees are usually imposed on the benefiting landowner. These are payments directly related to a specific public investment. Payments may be set as limited to cost of the investment; or beyond cost recovery all increments may be captured.

Also, power to tax and power to regulate fees have different constitutional and statutory bases. While taxes are revenue-generating measures, fees are regulatory measures. Thus, tax revenues can be deposited into a general fund and are available for general purposes. On the other hand, fees, in general, are used only for the purpose for which they were collected, and they are deposited to a separate fund (Adams, J.S. et al. 1999).

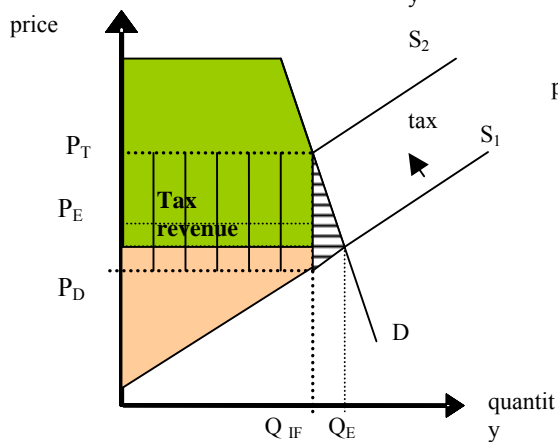
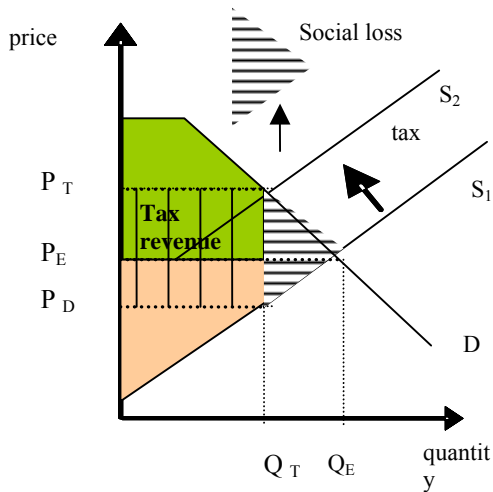
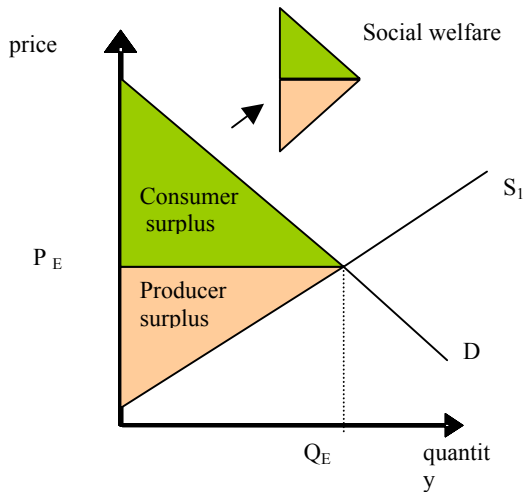
Incidence of a tax or fee

To estimate the distributional impact of any tax or fee, its incidence must be estimated. For most taxes it is probable that some part of the burden will be shifted to someone other than the individual who is legally obligated to pay the tax (World Bank 1978, p. 29).

In a theoretical context, the incidence of impact fees is crudely similar to the incidence of other kinds of taxes. Incidence of a tax and a fee is basically determined according to the characteristic of the land or housing market. *Supply and demand elasticity* affects the distribution of benefits and costs. For instance, in a housing market if consumers are not price responsive, in other words if demand is inelastic; the greater portion of the tax is paid by the consumer. On the contrary, if supply is inelastic then, the tax burden is born by producers (Box 2.6).

¹³ *Expectation of private actors* is an important ingredient of planning process, and is a factor in the formation of speculative rents on land. They can be overcome by introduction of more transparent planning process and several measurements in the timing of proclamation of new planning decisions.

Box 2.6: Tax theory and Incidence of a tax and fee



The graphic above represents a market equilibrium condition where consumers **are not price responsive**, in other words **demand is inelastic**, therefore, they pay a greater portion of the tax. In another perspective, as suppliers are more price sensitive, they shift the burden of tax on to the

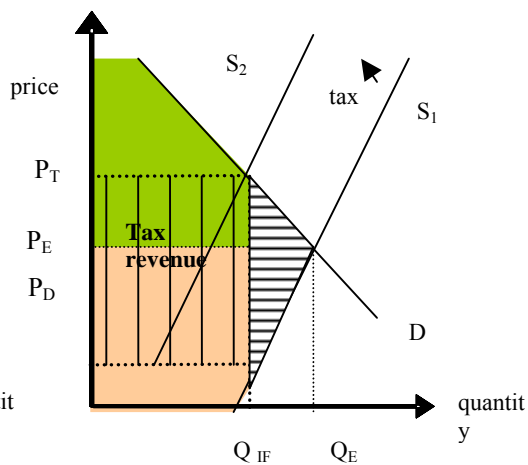
1st graph depicts equilibrium of an economic commodity when there is no government intervention and no externality. Theoretically, consumer surplus and producer surplus are maximized in equilibrium, and together they engender *social welfare*.

2nd graphics incorporates government intervention. Whenever a new commodity is produced, a tax is charged. The tax acts as a wedge between the price paid by consumers and price received by producers. The vertically shaded area represents the community's revenue collected by governments.

The imposition of a tax shifts quantity demanded from the original market equilibrium (Q_E) to the post tax quantity (Q_T). For example if the housing market is competitive before taxes, housing demand, denoted as D in figure 1, and housing Supply (S_1) are in equilibrium, where Q_E is the output of housing in equilibrium and P_E is the price of housing in equilibrium. When taxes are implemented, the supply curve shifts to the left, from S_1 to S_2 , indicating a higher cost of production. The result is a lower housing output (Q_T), a higher housing price (P_T) and a lower price received by the developer (P_D).

In this graph total social welfare is the total of consumer surplus, producer surplus and tax revenue. Compared to 1st graphics, it is reduced by the horizontally shaded triangle which is called *the social loss or excess tax burden*. The social loss is smaller with small tax rate on a broad tax base, than a large tax rate on a narrow tax base.

Incidence of a tax is determined by the demand and supply structure of the market. Supply and demand elasticity is critical in this aspect.



For goods that have **inelastic supply curves**, the tax burden is born by producer. This is valid for good which is fixed in supply for eg. Tickets of an event, **land in Georgian sense**.

Source: Author based on various resources

Box 2.7: Incidence of site value taxation

Henry George and his followers favored *site value taxation*, because they argued that a tax on site rent cannot be shifted to anyone else than landowner.

..The tax upon land values is, therefore, the most just and equal of all taxes. It falls only upon those who receive from society a peculiar and valuable benefit, and upon them in proportion to the benefit they receive. It is the taking by the community, for the use of the community, of that value which is the creation of the community.
George (Book IX, Chapter 1)

It was also admitted by Mills that the '*taxation of rent merely diminishes the profits of the landowner, cannot be shifted on the user of land, cannot add to prices, nor check production* (George 1879). George advocates this issue stating that it is impossible for landowners to shift such taxation on land users by raising rents because it is simply the taking by the State of a part of the premium which the landowner can get for the permission to use land; it neither increases the demand for land, nor decreases the supply of land, and therefore cannot increase the price that the landowner can get from the user (George 1879).

Regulatory instruments

Regulatory instruments have a broad range of applications. With these instruments mainly in-kind contributions of community are targeted. Regulatory instruments are usually practiced at planning phase as a facility for implementation. As long as they are based on legal framework, there is room for innovative techniques. It is with these instruments the government takes the most active role: It participates in the land market and becomes a buyer, seller, landowner or a user of land via some instruments such as land readjustments, land banking, public private partnerships, etc.

Compared to fiscal instruments, regulatory ones are more directly connected to practice and process. While taxes and fees are cash payments associated with revenue generation or cost recovery: regulatory instruments are mainly in-kind contributions associated with urban development process. Furthermore these instruments allow for dynamic policy making process incorporating expectations via negotiations and participatory approaches.

2.2.3 Conclusion

It has been argued in this section that, some market failures make government intervention inevitable in land markets. Accordingly, urban land policy framework has been introduced as dealing with this issue. By intervening in the market, urban land policy basically pursues three goals: *efficient allocation of resources, raising public revenue and ensuring equity*. These goals are not always inclusive (i.e., decisions based on raising revenue or equity criteria may not always reconcile); however inter-related many times. (i.e., an efficient allocation may raise revenue more easily). No matter compatible or not, each land policy instrument directly or indirectly is supposed to serve-at least consider- all of three objectives.

It has been stated that value capturing instruments is a group of land policy instruments. Theoretically, they serve all three land policy objectives but specifically they focus on *returning socially developed value to society*. In other words, the basic motivation is the distribution of benefits and costs of urban development to society, which recalls equity objective in the first moment. Yet; this comes along with other objectives.

After value capturing concept has been replaced in land policy framework, the instruments have been categorized according to their being fiscal or regulatory, as well as being joint development or government intervention. This classification helps to eliminate *joint*

development schemes from others, as their primary objective is not value capturing. Accordingly, they are not going to be covered in the rest of the study.

Fiscal instruments are those that basically focus at raising finance and cost recovery. Taxes and fees have been introduced in this category. Although not thoroughly; an attempt has been made to introduce some tax related issues. It is believed that taxes and fees are covered sufficiently to touch upon its association with value capturing. In general sense it can be inferred that fiscal instruments main objective is to raise finance and compensate costs of public investments.

Regulatory mechanisms are those that are more related to practices of urban planning and its implementation. The dynamic character of planning and implementation leaves room for innovative applications in urban planning practices. In general sense it can be inferred that that regulatory instruments basically aim to manage urban plans for equitable and efficient outcomes.

Finally, a classification of instruments is presented. It should be indicated that a classification for instruments doesn't mean more than simplification for analysis. In applications they are used together or interchangeably. Sometimes their success depends on how they are organized. Moreover, same instruments may result in very different outcomes in different countries. In these terms experiences become more valuable than such a rigid classification.

2.3 Evaluation

In this part a general evaluation of the first two sections is presented. The objective of such an evaluation is to link two theoretical bodies about *land rent* and *value capturing*, and to highlight several points that will guide the research part. Meanwhile, some possible solutions to our *problem statement* (fig.1.1& fig.2.1) can be incorporated.

In the first section of the chapter, *land rent theories* have been explained, and the problem is revised accordingly. The problematic process is depicted as one starting with policy decisions and planning actions, bringing about urbanization process that goes hand in hand with externality and rent formation. At the final stage, it is depicted that no, matter which rent category they belong, these value increments accrue in individuals' hands as unearned income.

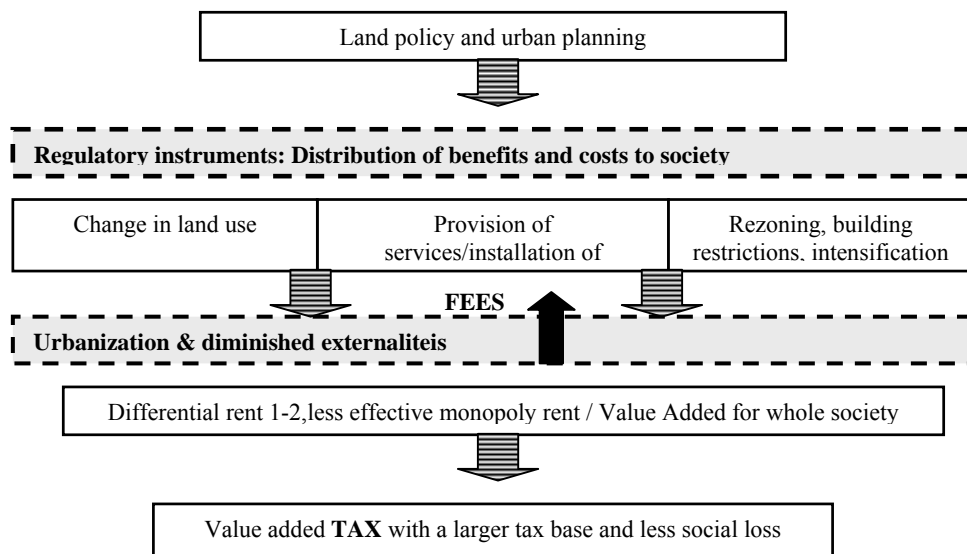
As Micelli (2002) states, urban land rent and externalities are interrelated phenomena that planning proposes to control through norms, standards and constraints. On the other hand any land policy decision or action results in value changes in urban areas. Accordingly 2nd section of theoretical chapter has been devoted to *land policy framework* and its special instruments for *value capturing*. By intervening in the market, urban land policy pursues mainly three goals: *efficient allocation of resources*, *raising public revenue* and *ensuring equity*. In the same manner value capture instruments pursue these objectives.

Moreover, the specific objective of value capturing is to "return socially developed value to society". It realizes this via several instruments that are specifically designed to capture to land value increments that public intervention engenders. These instruments can be divided basically in to two categories: *fiscal and regulatory*. In a simplest sense, fiscal instruments indicate cash payments and the latter indicates in-kind contributions. It can be inferred that, in

a society where there is fiscal constraints among citizens, their in-kind contributions may become invaluable. In this sense regulatory instruments leave room for innovative approaches.

Value capturing instruments aim to capture (future or actual) “rent” which is brought about social development. In this sense, these instruments can be adapted to our problematic process so as to take one step further for a solution at theoretical level.

Figure 2.2: Integration of two theoretical bodies as a solution to problem



The figure depicts a process which starts with land policy decision or planning action. At this level some regulatory instruments can be used;

- to develop projects that are desirable by the community, and compatible with the dynamic nature of cities, taking expectations of actors into consideration
- to estimate the cost and benefits, and focus basically on equitable distribution of them
- to prepare the grounds for raising revenue enough to cover infrastructure provision
- to prepare grounds for compensation
- to promote development with incentives
- to diminish monopolistic rent with decisive measurements against speculative actions.

After that fiscal instruments take place. In the design of tax and fee schemes, the consideration of incidence before they are imposed is critical policy issue that should be addressed by governments carefully

An urbanization based on such considerations would diminish externalities and speculative behavior on land relieving price pressures. Combined with equitable distribution policies, wealth would be spread to a larger base. Taxing added values from a larger a base would result in less societal loss for the whole community..

A practical solution depends on the effective applications of these instruments, considering the socio-political and economic environment they belong. In this sense, in the next chapter several instruments are going to be presented in specific country contexts.

Chapter 3 Value Capture Practices around the world

This chapter is devoted to value capturing practices around the world. The cases involve application of several value capturing instruments in several country contexts.

In this research, instruments are used as “entry points” to several practices around the world. Synthesis of instruments table (tab. 2.6, p.25) is used to choose these entry points. After elimination of “joint development” column, one instrument has been chosen from each of fiscal instruments, and four chosen from regulatory instruments. Nevertheless, it doesn’t mean that practices are limited to application of these instruments; they are just entry points that incorporate some other instruments. At the end with six entry points more instruments will have been covered, thanks to their complementary nature.

The instruments have been chosen according to the general interest they bear in real life experience, as well as land policy literature and according to their being comprehensive so as to hint some other instruments. On the other hand, the countries have been selected according to their reputation and peculiarities for (a) specific instrument(s):

Tax increment financing and **impact fee** schemes have been presented in **United States** context. These two fiscal schemes originally belong to the cities of United States of America and have been developed up to present day. Examples of tax increment financing outside North America are rare¹⁴. Although it differentiates from other taxes in some aspects, its integration to property tax system replaces it in the tax category. Being not representative to tax category it’s believed that its peculiar design in capturing value increments deserves further analysis.

On the other hand, impact fees and similar instruments are applied in several countries, but the effective cases can be encountered mainly in United States of America. Impact fee is a typical value capture instrument which is believed to be representative to other fee schemes.

After analysis of two fiscal instruments, first of four regulatory instruments; **Land readjustment** is explained in **Spain, France** and **Japan** contexts. These three models represent peculiar examples in the sense that they emphasize equitable distribution of benefits, cost recovery and community initiatives, respectively, in land readjustment process.

The second regulatory instrument is **transfer of development rights** in **Italy** and **United States** context. While United States represents a typical development rights market model, what makes it significant in Italy is the integration of traditionally used command-control tools in planning, with market-based tools (Micelli 2002).

The third regulatory instrument is **land leasing** as it is applied in **Hong Kong** and **the Netherlands**. These two cases represent different schemes. While leasing revenues are major source of income to finance public infrastructure and social services in Hong Kong, it is not the case in the Netherlands. Nevertheless, in both of the countries land leasing presents several opportunities.

¹⁴India (Mumbai), Spain (Barcelona) and some Japanese local governments are known to use this instrument in specific projects.

Final case study is Colombia with its peculiarity in the effective application of *participation in land value increments* instrument. Colombia is stated as one of the countries with a tradition of extensive use of value capture and, municipal authorities have had a continuous value capturing experience in funding public works (cited in Mendoza 2005).

Some final remarks should be made about the instruments, cases and the research: Firstly, their being significant in literature doesn't necessarily mean that they are completely successful and devoid of problems. Nevertheless, they are valuable experiences and (in some cases) innovative attempts motivated by a common issue: *value capturing*.

3.1 Value capture with fiscal instruments

In this section two fiscal instruments are going to be analyzed: Tax Increment Financing (TIF) and impact fees. Referring to table of 2.6 (p.25), it can be seen that these are cash payments under the fiscal category. As a method, similar aspects will be covered in the same structure for both instruments.

3.1.1 Tax Incremental Financing in USA

Tax increment financing (TIF) originated in California in 1952 as a reaction to limitation on local property tax increases. Nationally it became popular with the decreased availability of national funds after 1980s and 1990s. Since 1952, forty-eight states have authorized tax increment financing (Man 2001).

Box 3.1: Brief introduction to local governments in USA

In United States each state is structured in accordance with its own law but typically each state has at least two separate tiers: Counties and municipalities. Both types of governments often operate in the same area with different responsibilities. .

Counties basically exist for implementation of the state policies. In general; the budget, tax rates, land use plans are approved in county level within the authority limits of the state it belongs.

Municipalities have a degree of autonomy that depends on their size. Most municipalities have a planning department or planning commission and have powers to tax both local residents and businesses.

Besides general purpose districts (counties and municipalities); there are also **special purpose districts**. They only serve one or a few special purposes and only for those people who live within them. They are empowered to tax residents of the district. The school district, community college district, county, township, park district, library district are some of them.

These districts are usually much more flexible than more geographically determined municipalities. They often overlap with each other and take place in more than one municipality. For instance the properties included in several districts pay additional levies which are added to their property tax bases.

Who pays for what use?

Tax increment financing has been implemented primarily as a means of financing public investments and infrastructure improvements needed for economic development in specific geographical areas, which are usually blighted. The essence of tax increment financing is that the property tax revenue generated by new construction in a designated area is deposited in a special fund and used to pay for public improvements within the same designated area (Klacic & Nun 2001).

The revenue has to be used only for the funding of the project. There are typically two ways of using tax increment financing revenues. They can be used for infrastructure construction as they are received (**pay-as-you go** method), or they can be used for **debt service** for a bond issued on anticipated future revenue streams. Being more risky, there is immediate access to larger amounts of revenue in the latter method than the former (Klacik & Nunn 2001).

Landowners are not charged unless there is real value increases. In this sense it can be considered as fair and less eager to oppositions (Offermans 2003). However, the real challenge is to ensure right from the beginning that there will be continuous value increases and an income stream.

Technical aspects for implementation

A typical tax increment financing process (Box 3.2), is explained by Paetsch and Dahlstrom(1990) in seven broad steps (Man 2001). Firstly, (given that there is need for a project) the municipality should ensure that the project is a feasible and an attractive one. Then the area is designated as a legal entity of distribution and allocation of incremental tax revenues. In the third step, agreement between developer and TIF authority is established; the overall development plan of district is prepared. After public hearings and necessary changes in the last steps debt is issued and TIF tax rates are established.

Box 3.2: A generic Tax Increment Financing (TIF) process and basic terminology

A generic tax increment financing	BASIC TERMINOLOGY
1. Determine need/decide if project is feasible Ensure there are interested private actors	<ul style="list-style-type: none"> • Base year: the year that the TIF district is established. • Base (Equalized) Assessed Value: the assessed value of property within the TIF district in the base year. • Incremental (Equalized) Assessed Value: the assessed value in TIF district in any post-base year, minus the base assessed value. • Incremental Revenue: incremental assessed value, multiplied by the overall tax rate of the TIF district. • Sponsoring Jurisdiction: The organization that creates and activates the TIF district usually a redevelopment commission • Contribution Jurisdiction: the taxing units whose assessed value is at least partially contained with a TIF district.
2. Designation of economic development area- identification of boundaries	
3. Establishment of agreement between the TIF authority and the developer-an overall development plan	
4. Public hearing and changes according to public hearing results	
5. Draft and adopt new ordinances.	
6. Prepare and issue debt instruments, establish tax rates	
7. Built tax increment and retire debt.	

Source: Klacik and Nunn 2001

Before a TIF is established there may be several overlapping jurisdictions such as school districts, hospital districts, so on. In the initial case all *contributor jurisdictions* share the tax revenues according to their specific tax rates. After the TIF is designated, the contributor jurisdictions get only the property tax revenue that is generated by *base assessed value* and the incremental revenue goes to *sponsor jurisdiction* during a determined period.

The table 3.1 illustrates a hypothetical three-year¹⁵ tax increment financing plan covering five jurisdictions in the special TIF fund. Simply the steps are:

- Firstly, *the base year assessed value* is calculated (\$500 000), and each year recalculated (i.e., \$550 000 for 2nd year)
- Any increase on the base year assessed value (\$50 000) is multiplied by overall property tax rate (4.75%) and this amount (**\$ 2375**) is collected in the TIF fund.
- After the TIF period is finished the revenues are shared again according to tax rates.

Table 3.1: A hypothetical Incremental Revenue allocation

	tax rate %	TIF period				Post-TIF
		500000 <u>base year</u>	500000 <u>base year+1</u>	550000 <u>base year+2</u>	600000 <u>base year+3</u>	700000
Jurisdiction						
Sponsor jurisdiction	1.25	\$ 6250	\$ 6250	\$ 6250	\$ 6250	\$ 8750
Contributor jurisdiction 1	0.75	\$ 3750	\$ 3750	\$ 3750	\$ 3750	\$ 5250
Contributor jurisdiction 2	0.85	\$ 4250	\$ 4250	\$ 4250	\$ 4250	\$ 5950
Contributor jurisdiction 3	1.00	\$ 5000	\$ 5000	\$ 5000	\$ 5000	\$ 7000
Contributor jurisdiction 4	<u>0.90</u>	\$ 4500	\$4500	\$4500	\$4500	\$6300
Total TIF District rate	4.75					
Tax Revenues						
Base year (to contributor jurisdictions)		\$ 23750	\$ 23750	\$ 23750	\$ 23750	\$ 33250
Incremental Revenue (TIF district)		\$ 0	\$ 0	\$ 2375	\$ 4750	\$ 0
Total		\$ 23750	\$ 23750	\$ 26125	\$ 28500	\$ 33250
Revenue Allocation						
Share to TIF district		0,0%	0,0%	9.1%	16.7%	0.0%
Share to sponsor & contributor jurisdictions)		100%	100%	90.9%	83.3%	100%

Source: Klacik and Nunn, 2001

Some academic works related to performance of Tax Increment Financing

There have been several attempts to find out whether tax increment financing stimulates economic development; yet the findings don't reconcile. Man (2000) represents several studies on TIF and points to the need for more researches before reaching a consensus on its effectiveness.

Man and Rosentraub (1998) had investigated whether establishing a TIF would make difference in a specific area in India (Man 2000). They found out that municipal adoption of TIF has statistically significant positive effect on property value growth¹⁶ in the entire city. They have shown that having no effect in the first two years, in the long run the existence of TIF brought an **11.4% increase in the TIF-adopting cities**. This indicates that tax increment financing has a substantial spillover effect.

Wassmer (1994) used a data set from cities in Detroit metropolitan area and examined the economic impact of four local programs, industrial development bonds, commercial property tax abatements, the establishment of a downtown development authority, and a tax increment financial district. He has found that it was only **TIF that exerted a positive effect on real retail sales** (Man 2000).

¹⁵ This is not a realistic time period for tax increment financing. In general it as long as the length of the bond issued (i.e. 20 years)

¹⁶ This is a desirable finding for the instrument itself. However, it should be discussed whether it is desirable for overall land policy objectives.

Box 3.3: Opposing views on tax increment financing

As put forth by Man (2001) and Davis (1989), there are several opposing views on TIF. These are listed in the table below. These are popular arguments for which there is not enough empirical proof for consensus.

For TIF

- It has contributed to development of public-private partnership bringing developers, neighborhood groups, and local government officials together around urban problems.
- The local incentives provided through TIF may generate significant capital investment to certain types of development projects that are economically feasible but would not have been funded without tax increment financing:
- It is self financing mechanism. Under TIF development, projects are financed from the increased tax revenues of the project area rather than being subsidized by taxes from other overlapping governments.
- Property owners pay no more than the normal taxes and there is no increase in the tax burdens. Because there would not be any increase if there were no project.
- Provision of incentives attracts firms to locate or expand their business in the targeted area. Because; new and improved infrastructure facilities provided through TIF reduce private firms' production costs
- Industrial and commercial TIF district are believed to create economic growth both inside and outside the district.
- A flexible instrument for any kind of project.
- It can be linked to traditional property taxes, so the cost of implementation is low.
- It is fair because only true value increases are taxed.

Against TIF

- For several public facilities whose usage cannot be restricted to only TIF district, many people benefiting the service doesn't pay for the costs while some who live in the district but who doesn't really benefit the service bears the cost.
 - TIF project decrease the revenues of other jurisdictions instead of increasing them.
 - It is a budget manipulating instrument adopted by growing cities to capture property tax revenues that otherwise would go to some other overlapping jurisdictions.
 - TIF programs are too complicated and costly for government, especially when there are too many TIF districts in one city.
 - Lack of voter participation (in some of the states)
 - It benefits developers at the expense of others
 - Nationally thinking, a zero sum game.
-

A controversial study came from the researches of Dye and Merriman in 2000 and 2003. In their first study in 2000 they used data from 235 municipalities of Chicago area and showed that property values in **TIF-adopting municipalities grew at the same rate or even less rapidly than in non-adopting municipalities** (Dye & Merriman 2000 p.5). In their second study more data was used and also different types of land uses were differentiated. The evidence showed that commercial TIF districts reduce commercial property value growth in the non-TIF part of the same municipality whereas for industrial property no significant difference was observed.

An example: Geneva case

Geneva represents a successful case: Geneva, located in the fringe of Chicago Metropolitan region, had a healthy business district; however, the river front area near by the business district couldn't develop for a long time, but faced deterioration. Several attempts were done to eliminate the problem. Industrial bonds were used and applications were done for grants. But bonds failed to become an adequate incentive for business, and grant applications were rejected as Geneva was relatively rich. Finally 37.5 acre area was designated as TIF district.

A developer took on the transformation of an old factory to mall, and the city in return spent \$300 000 in the construction of public parks and infrastructure improvements around the mall. This expenditure was financed through a TIF revenue bond. Later on additional developments

took place without further TIF expenditures. As Davis (1989) informs the mall is completed by now and bond is being repaid in a sufficient manner. For the next phases of the project TIF fund has been increased with an amendment to original TIF legislation. The new version the legislation allows TIF districts to capture sales tax increments in addition to property taxes.

Some other examples from US (Offermans 2003):

- San Jose (California) has raised \$ 1.4 billion from TIF for its down town and satellite business centers.
- New York City is projecting an income up to \$1.0 billion out of a TIF application in an old rail yard.
- It is informed that US have come up with more than € 10 billion in the after 1997-2002 time period in all TIF applications.

As can be observed tax incremental financing can be an effective financing instrument in several cases. However, more problems rise, the more it is practiced. The way an area is designated, the way the value increases are attributed to the project area, and the way the cost of a project is born by property owners of the designated area raise legitimacy problems.

3.1.2 Impact fees in USA

Historically, infrastructure financing in United State's cities relied on two cost-sharing approaches, (1) current-sharing schemes; *up-front payments by all the landowners of the city*; (2) perpetual-sharing; *issuance of a bond and sharing the interest payments among all land owners* (Brueckner 1997). In both of the two schemes the burden fell on *all* of the landowners in a locality.

Property tax limitations and environmental concerns forced local governments to find new local government resources. In the last several decades an alternative scheme was developed: **impact fee scheme**. Cities of California, Colorado, Florida were first to adopt impact fee. Fees were adopted also in some other cities where growth was rapid, and the property tax rates were already high. The use of impact fees has expanded in the last 15 years (Carrión & Libby 2002) and it is now allowed in 28 states.

A development impact fee is a form of financial exaction but there are differences in specific terminology from one place to another. In some communities these development charges are called impact fees while in others; benefit assessments, user fees or connection charges (Carrión & Libby 2002)

Who pays for what use?

Impact fees are designed to transfer a portion of the capital cost of new infrastructure from public to private sector. The specific purpose is to ensure that new development pays its own, alleviating the burden that would otherwise fall on the existing property owners. The motivation is to shift the burden of new development from current residents of a city onto new residents. The main purpose is to reduce the gap between the resources needed and money available in building new public facilities (Carrión & Libby 2002).

Impact fees are one time charges applied to new developments. They are assessed and dedicated principally for the provision of additional water and sewer systems, roads, schools, libraries and parks and recreation facilities which are made necessary by the presence of new

residents in the area. The funds collected cannot be used for operation, maintenance, repair, alteration or replacement of capital facilities (Carrión & Libby 2002).

The incidence

Theoretically, the incidence of impact fees would be similar to the incidence of other kinds of taxes (Box 2.6 p.28). Who bears the burden of *fee* depends on the elasticities of demand and supply curves. If buyers of new homes are not price responsive, that's to say if demand is inelastic, they will pay a greater portion of the impact fee. In the short term, both buyers and developers bear part of the burden unless developers offset their share of the fee by reducing lot or dwelling size, quality and amenities. On the other hand, if the fee is imposed before developers have had a chance to account for them; developers will have to pay the fee out of their profits (Carrión & Libby 2002).

Technical aspects for implementation

Local governments decide on the percentage of the fee according to how much ratio of infrastructure cost they want to recover. Impact fees are either in the form of on-site exactions or off-site exactions¹⁷. For on-site exactions often a fixed fee schedule is used. But, off-site exactions are negotiated on a case-by-case basis.

The fees are determined according to *three nexus tests* that have been brought after several Supreme Court cases (Adams, J.S. et al 1999):

1. *The reasonable relationship test*: There should be a reasonable connection between the fee charged to the developer and the needs generated by that development
2. *Specifically and uniquely attributable test*: The fee charged to the developer should be directly and uniquely attributable to that development.
3. *The rational nexus test*, a) There should be proportionality between the need for new facilities generated by the development and the amount of fee; b) There should be a reasonable connection between the use of the fees and the benefits accumulated to new development (Carrión & Libby 2002).

The fees are typically collected at the time a residence permit is given. For instance in Texas, average fee charged was just over \$1000 for a single-family residence

Some academic work related to performance of impact fees

There are several studies about the effects of impact fees on housing prices, land values or urban development. These studies try to find out to how the fee is absorbed by several actors. Ott & Read (2006)¹⁸ presents these studies:

Delaney and Smith (1989) examined the effect of a development impact fee on both new and existing housing prices. In his study he focused on a \$1,150 impact fee imposed in 1974 for all new, single-family housing in Dunedin, Florida. Later on the estimated price of a constant-quality home in Dunedin was compared with the estimated price in other three cities (which did not impose an impact fee). It is found that **the impact fee resulted in a statistically significant increase in housing prices in Dunedin compared to other cities in the period between 1973 and 1978**. The estimated new housing price increase in Dunedin was more

¹⁷ Off-site exactions are required when the new development entails the whole system of the city to be renewed.

¹⁸ The references to empirical studies presented in this part are all extracted from Ott & Read (2006) except for Clarke and Evans (1999).

than three times greater than the amount of the impact fee. Also it is observed that Dunedin's housing prices increased in the year before the impact fees. This denotes the dynamic nature of land markets assumed that the price increase have resulted from homebuyers anticipating the imposition of the impact fee and increasing their demand for housing before the fee went into effect (Ott & Read 2006).

Delaney and Smith's (1989) second study examined the effect of Dunedin's impact fee on existing housing prices in both Dunedin and Clearwater, one of the three cities in the former study. In the period between 1973 and 1978, the study found Dunedin's estimated new housing price exceeded the city's existing housing price by \$2,633, which was more than twice the amount of the impact fee. Dunedin's existing housing price exceeded Clearwater's existing housing price by \$1,643. These results suggest **the impact fee increased the cost of new housing in Dunedin relative to existing housing and increased the cost of existing housing in Dunedin relative to a comparable community without an impact fee** (Ott & Read 2006).

Singell and Lillydahl (1990) examined the effect of an impact fee on new and existing housing prices in Loveland, Colorado. Their results show that a \$1,182 of impact fee resulted in a \$3,800 increase in the estimated price of new homes. The study found that the impact fee increased existing home prices by \$7,000. This indicates that the **improved infrastructure and reduced property tax rates were capitalized into the price of existing houses in the form of "spill-over" benefits** (Ott & Read 2006).

Ihlanfeldt and Shaughnessy (2004) estimated the effect of impact fees on single-family homes and undeveloped land prices in Dade County, FL. The results showed that **each additional dollar of impact fees increases the estimated new home price by \$1.64 and the estimated existing home price by \$1.68**. The study also found that the impact fee resulted in a **reduction in undeveloped land values** by approximately 8%. This can be explained by discouragement of people to develop new lands.

In the same manner, Evans-Cowley, Forgey and Rutherford (2005) analyzed developed lots and undeveloped land values in 43 communities throughout Texas. They found that **impact fees resulted in a 4.7% decrease in undeveloped land prices**.

Skidmore and Peddle (1998) tried find the effect impact fees have on the delivery of new housing units. Their results found that property tax reductions associated with impact fees increased the rate of residential development by 4%. However, increased costs reduced the supply of residential development by 29%. The authors conclude **the net effect of impact fees can reduce the rate of new residential development by approximately 25%**.

Box 3.4: Some arguments on impact fees

For Impact Fees

- Impact fees can be used as an instrument to guide development efficiently when based on a comprehensive plan (See Leitner and Schoettle, 1993; Brueckner, 1997)
- When well implemented, they allow local governments to finance construction improvements along with a schedule for their funding and construction, ensuring that the improvements are in place to serve new development (*Carrión & Libby 2002*).
- An impact fee is an effective tool in guaranteeing adequate infrastructure to accommodate and facilitate growth in areas where there is a lack of public facilities, also eliminating substantial infrastructure costs in areas where there is little current development by avoiding a leapfrog urban sprawl pattern (*Carrión & Libby 2002*)

- Most facilities have efficient service areas, in that they are constructed and operated at the least cost for users within that area.
- In theory, impact fees overcome free-rider problem because new development is charged only *for its expected level of use* of the new facility and not for the total cost (Carrión & Libby 2002).
- As a growth control mechanism, it may reduce undeveloped land values encourage development in more remote locations, provide existing residents and local governments with windfall economic gains. (Ott & Read)

Against Impact Fees

- Businesses may choose to locate in a community without impact fees instead of one that has impact fees, thus retarding urban growth.
- It is complicated and expensive to implement. Impact fees require local governments to engage in more professional and sophisticated capital facilities planning, requiring additional administrative staff with the necessary skills.
- A fee system may also increase the price of undeveloped land because impact fees act as a deterrent to develop open land (however; the data shows the opposite, p.38).
- Impact fees are non-equitable vertically. Horizontal equity between same kind and size doesn't differentiate between communities.
- An impact fee scheme may discriminate against low-income households because it raises housing prices and, in a competitive market and in the short term, the developer will attempt to pass these costs onto the buyers (Carrión & Libby 2002)

Ott & Read (2006) evaluates the economic consequences of impact fees based on these empirical findings:

Impact fees often increase the cost of new housing in an amount greater than the fee. Therefore, new homebuyers may absorb a large portion of the cost increase associated with an impact fee. Existing residents are likely to experience capital gains as property tax savings and benefits of improved infrastructure are capitalized into existing home values. A reduction in new housing supply may also put upward pressure on existing home prices. Local governments experience windfall economic gains as increasing home prices expand the property tax base. While economic theory suggests the effect of impact fees on undeveloped land values is ambiguous, empirical work shows land values are likely to fall as a result of developer uncertainty regarding the cost of impact fees in the future (p.24).

Clarke and Evans's (1999) research presents a different perspective. With a sample of 85 US cities they looked at the relationship between the "capital spending of a city and use of impact fees". They asked the question "how a capital spending of a city is affected with/without the use of impact fee". They have found that **the use of impact fee is associated with lower levels of capital investment**. They explain this result basically with two facts: (1) fees increase the cost of development and reduce the amount of capital investment demanded by developers (2) municipalities that wish to limit growth apply this instrument.

All these empirical findings have different implications depending on the objectives of the responsible authority. If the policy is to hinder spatial growth, impact fees proves to be effective, on the other hand, if the policy is to keep housing prices at reasonable levels, impact fees seems not as the relevant instrument to realize this objective.

An example: the city of Hudson Wisconsin State

Hudson city has enacted impact fee ordinance in 1996. In this city the impact fees are to be used for sanitary sewer systems, water plants and parks.

The fees are generally paid as a pre-condition to get a plat approval or a building permit. If fees are not used for a pre-determined time they have to be returned to the property owner. This duration is ten years for sewer infrastructure and twenty years for water facilities (Adams, J.S. et al 1999).

There are several peculiarities of Hudson impact fee scheme. Firstly, the fees vary according to the type of infrastructure and density. As the fees are fixed for each density category, this triggers more dense developments, based on the fact that people want to compensate for the payment. Secondly, public and non-profit organizations are also obliged to pay impact fees. Thirdly, a developer can turn his one-time fee in to *special assessment* payable over a three year period (for non-profit organizations, ten years). This provision shifts the cost of impact fee directly from the developer to the buyer, rather than having it capitalized in to the value of the property. The fee rates are updated every few year according to inflation (Adams, J.S. et al 1999).

Table 3.2: Impact fees for Hudson, Wisconsin, 1996

Facility type	Single family (\$)	Medium Density residential (\$)	High Density residential (\$)	Commercial & industrial (\$)	Park (\$)	Institutional (\$)
Storm sewer	3730	4476	5222	5222	2238	3730
Sanitary sewer	1645	2467	4935	3290	411.25	1645
Water (main & treatment)	1795	2692	4308	3590	224.38	1795

Source: city of Hudson, Ordinance no. 20-96 (1996) in Adams, J.S. et al.

3.2 Value capture with regulatory instruments

In this section some regulatory instruments are going to be presented in several country contexts with some examples. For each instrument, firstly a general definition and technical issues for implementation will be presented. Secondly, some issues will be highlighted according to the country they are distinguished, supported by some examples.

3.2.1 Land Readjustment in Spain, Japan and France

It was in Germany in 1902 where modern methods of Land Readjustment began (figure 3.1, p.41). The motivation was the belief that a joint development would serve the public interest more, and make implementation more effective instead of voluntary association of the individual landowners, or compulsory acquisition by the government.

The main perspective has widely been recognized and used in various countries such as Germany, Japan, Taiwan, South Korea, Canada, Indonesia, Nepal, Australia, and Turkey as an urban land development tool. Concerning rapid urbanization and limited resources, land readjustment was put forward as a possible technique for land development in developing countries (Sorensen 1999).

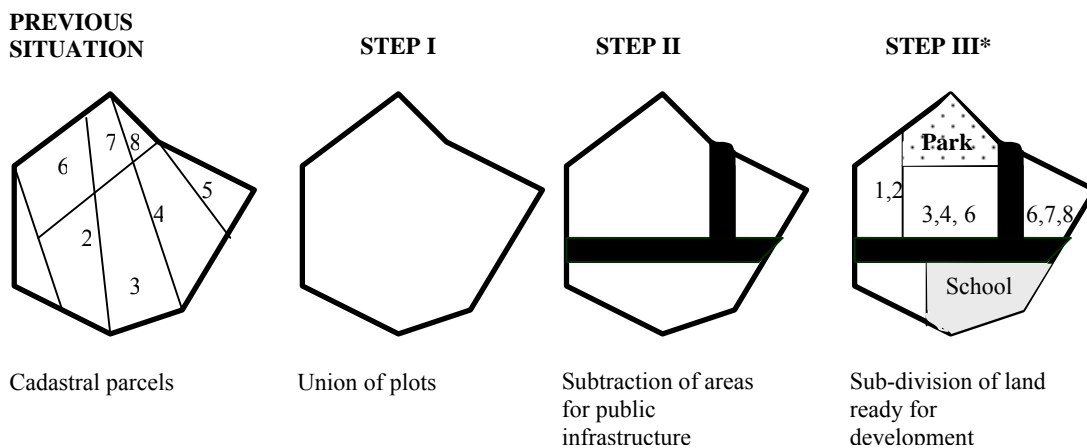
Land readjustment is a method whereby the ownership of scattered and irregular plots of agricultural land is pooled, roads and main infrastructure are built, and the land is then subdivided in to urban plots (Sorensen 1999). Although the main framework is more or less similar, there is not one single land readjustment model that has been standardized and used

world- wide (Yomralioglu 1993). Different implementation and procedures are observed under different names such as land pooling, land regroupment, land reform, land reordering.

United Nations Centre for Human Development (1990) defines land readjustment process:

"Under land readjustment programs, undeveloped areas, usually an urban fringe can be designated for improvement, including the rearrangement of plots, the grading of land, the construction of roads and the provision of infrastructure. Instead of paying a betterment levy, landholders must surrender part of their land to the local authority as payment for the improvements. The local authority can then resell this portion of land to recoup the improvement costs." (cited in Yomralioglu 1993)

Box 3.5: Steps of a typical land readjustment process, Germany model



* the number or sizes of output parcels doesn't necessarily correlate with the number, or size of initial cadastral parcels, nor the number of land owners. What is important at the end is to produce urban parcels at optimum size for the density they are assigned. Such a process helps to operationalize fragmented parcels (5, 7, 8) and rationalize large rural parcels (2, 3, 4) in urban context.

STEPS:

- The plan boundaries are defined and all landowners within the area is included generally with no option to leave the programme* (STEP I)
- From the cadastral parcel areas a total area is calculated (STEP II) and then reduced by a common share (30% in Germany) for public services (STEP III).
- In the reduced area every owner gets a share in proportion to either the area or the value of his included land.
- New parcellation is prepared. Every landowner is given a place in the possible nearest location to his old location
- The parcel plan is announced to public, objections are received and accordingly last adjustment is done.
- The building of infrastructure is not included in the proceedings; they are the responsibility of the municipality and are paid from conventional charges.

*in France reluctant owners have right to announce that they wish to give up their property and the price is determined in general according to rules of expropriation.

Source: Larsson 1997 based on German system

Doebele differentiates two types of land readjustment applications. In the first type, the primary objective is the assembly of small parcels for better urban development, and the distribution of the benefits of new urbanization among landowners (Germany model). In the

second type, although the main approach is similar, the emphasis is made on self-financing urban development and redevelopment (Japan model). Put in another way in these two schemes different roles of the instrument are emphasized; (1) more efficient and more equitable assembly of large parcels or fragmented parcels of land or, (2) recovery of the socially created value from landowners in order to recover the cost of infrastructure associated with a project (Doebele 2002).

Allocation of costs and benefits

Land readjustment especially the one with cost recovery tries to capture the cost of installing complete infrastructure as well as additional socially created value. Each landowner involved in the project area must contribute a portion of their previous land holding to provide space for roads, parks and other public space and *reserve land*. The reserve land is *generally* sold at the end of the project to pay the costs of planning and administration costs. Contribution ratio varies in countries, from 10% in Spain to 70% in Seoul, depending on the government's approach to the issue.

Doebele (2002) mentions that, ideally every actor benefits at the end of the process. In the same manner; Sorensen (1999) points to the attractiveness of the method for land owners for there is possibility to achieve substantial increases in the value of land by the process. However, such evaluations require careful assessment of the value of each parcel going into project and a further careful assessment distributing the equivalent values at the end of the process (Doebele 2002).

Japan case

Two big catastrophes; earthquake in 1923, and Second World War 1945 pushed Japan to use innovative techniques for reconstruction projects in corporation with landowners and tenants. Land readjustment was started to be used in Japan with 1980s based on the German model. After adoption of the model in 1980, the method developed further and now it is responsible for nearly 50% of all new development areas (Larsson 1997). Besides transformation projects from rural to urban; it has been used for various projects such as downtown redevelopment, new town building, mass transit development, so on (Sorensen 1999).

Japan land readjustment system is distinctive in terms of the variety of project initiators. Contrary to German and French procedures, the model is not solely designed for either the public or private sector. In addition to public authorities; individuals and associations (organized community) are also allowed to start up projects.

Another peculiarity is the emphasis made on consensus and bottom up style of planning: the Japan authorities state that "a project is carried out in such a manner to obtain consensus from land owners and lease-holders, based on the fact that the project is directly related to their property (Sorensen 1999). To start up projects at least 80% consensus has to be achieved by associations, whereas it is full consensus for individuals. However in any case, project requires recognition at the beginning, and approval at the end of the public authority.

The percentage of land that is to be surrendered by landowners is determined according to two aspects: (1) public areas requirement (2) costs of building public services. The former is met by the surrendered land, and the latter is met by the sale of reserve land. In this way the project becomes self-financing. What is left after deduction is given to landowners in similar

locations. The cost sharing between the public and private is determined by mutual agreement. The shares can be determined according to areas or values of land (Larsson 1997).

Box 3.6: Steps of land readjustment with cost recovery, Japan model

Doebele (2002) outlines the steps of land readjustment with cost recovery:

1. The area is designated for a Land Readjustment project. The responsibility to start this process is either on a private association of landowners, on individuals or on public agency
2. A master plan is prepared showing the layout of streets, public areas and plots for private development.
3. The areas that are shown as streets and other public areas in the master plan are measured. (*Let's assume 25%*)
4. Total market price of all saleable plots by the end of project are estimated (*let's assume it is 200 unit price*)
5. Cost of construction of all infrastructure including administrative costs are estimated. (*Let's assume it is 30 unit price*)
6. $(30/200 \times 100)$ 15% of saleable plots are allocated to the ownership of the agency that carries out the project (municipality or association of landowners). These plots are called **reserve land** or **cost equivalent land**.
7. The remaining area (60%) is distributed in such a way that all of them are serviced and ready for sale as urban plots.

Sorensen's study (1999) on land readjustment system in Japan claims that many of these aspects are totally ignored in practice. It is indicated that in 66 cases, 65 of them was started by government, although only 18 were public projects. This refers that almost non of the association projects are self started or self managed. Secondly; although there is high level of public oppositions to projects in some cases, and no consensus at all; the projects are sustained by local governments with application of several persuasive techniques. Final remark of the study is the long periods of time from (5 to 20 years) in realization of a project. Lack of sanctions or incentives allows development spread out over a long period of time for speculative or some other reasons (Larsson 1997).

France case

France represents a bottom-up planning approach with land readjustment practices. Although land readjustment initiative can be taken both by municipality or private interest holders; the practices show that it is mainly the responsibility of the voluntary landowners (Larsson 1997).

First a pre-plan is prepared indicating the physical requirements as well as fiscal ones. Secondly, the plan is exhibited and objections are gathered (not adjusted). In a general meeting, if 2/3 of the landowners, who also has the 2/3 of land, agree on the project, the real land use plans are prepared. After approval by municipality, an authorized **association** of land owners is established (*Association foncière urbain autorisée*). The authority of implementation and cost recovery (from the members) is assigned to this association. The properties of reluctant landowners can be expropriated if they apply for it within the first one month. When the construction work is finished in all senses, the association is dissolved.

Land readjustment by association is more time consuming, entails more commitment and risk-taking on the part of the landowner (Larsson 1997). However, it is applied in France, despite many countries that embody such design but fail to apply. After all, it is a bottom-up planning approach with its specific virtues

Spain case

Land Readjustment process in Spain is an approach which aims both value capture and cost recovery. Besides, more emphasis is given to equity issue. The complex applications on equity issue give some peculiarities to the Spain model.

Planning system of Spain is heavily based on zoning; and plans are important binding elements of the system (Riera 2000). At municipal level *General Plans*¹⁹ are prepared usually covering one municipality. In these plans, the land of the municipality is categorized under three areas; *urban, urbanizable and non-urbanizable*. Urban land refers already built up areas. Urbanizable land is one that development is likely to occur, and non-urbanizable land is one that is protected from development (ibid).

According to each classification of land, the level of detail and the planning instruments are provided in the General Plan. General Plans are binding documents and shows in detail what can be developed, where, how much, with what shape, and even when (p.8). However, these plans are also easy to modify²⁰. **Partial Plans** plays a complementary role to General Plans, especially in case of modifications, and required at the point of development of urbanizable land.

The General Plans provide the areas to be urbanized, which is known as **polygons** as in box 3.5 (p.42). When a development is in question, a Partial Plan is prepared in order to provide the details related to settlement conditions, such as the proportion of area needed for infrastructure and the building-up areas. The local authority engages in negotiations with developers on these terms as well as on the decisions such as density of dwellings, height of buildings and so on. In these terms, the most evident example of value capture at design process is with partial plans.

The municipality is entitled by law to get the part of the profits in kind (Riera 2000, p.17). In other words; the municipality becomes a landowner when a partial plan is drawn. The amount of land that municipality has authority to get, is an amount equivalent to a yield of about **10%** of the profit from the development of the whole polygon. Different than Japan (where the ratio is determined according to costs), in Spain the ratio is fixed by law that is 10%. The municipality doesn't have to compensate the landowners for this surrendered land. In addition to sale option of this land as in Japan case, there are some other possible ways to use it. For example it can be developed as social housing or it can be traded for land in other locations of the municipality (Riera 2000).

An example to a usage of this 10% land is in a social housing project in Barcelona. The land was provided at lower costs from the surrendered 10% land and municipality was able to sell social houses at a half cost of market price thanks to subsidizing construction mainly with land provision (Riera 2000, p.17).

¹⁹ Because of limited resources and low level of population growth in smaller municipalities, General Plans are only prepared by large municipalities. In these smaller municipalities instead of General Plans, Subsidiary Guidelines or delimitations of national legislation is applied.

²⁰ Riera (2000) indicates that there is an average two modifications a year.

Another peculiar aspect is the emphasis of **horizontal equity principle, which** is also hinted in the Constitution, article 47:

“The community shall participate in the benefits accruing from the town planning policies of the public bodies (Riera, 2000).

Community in this article refers to landowners in a polygon. In this sense all landowners of a project area (*polygon*) should achieve the same profit out of development, and this is realized through reparcellisation process with coefficient calculations.

In order to realize horizontal equity the polygon's *mean profit* is calculated: Firstly each land use is given a coefficient. These coefficients are supposed to reflect profit rate differences. There are in general ten or more types of land uses with different coefficients. Land office development in general gets the highest coefficient (i.e. 0.9) while public facilities get lowest which is zero.

In addition, another coefficient is attributed to the whole polygon based on the attractiveness of the site (For e.g. hilly land and flat land have different coefficients). Using both of these coefficients, the *polygon's mean coefficient* is derived. Mean coefficient is used to ensure **equalization**. The aim, as stated by Riera is to reassign the land in a way that every landowner gets the same proportion of profit (not the same proportion of initial surface). For instance, a landowner who had a large amount of land in the beginning can end up with a small land in a high co-efficient area.

3.2.2 Transfer of Development rights in Italy and United States

To own a parcel of land is to own a package of property rights pertaining to its use and disposition (**Mills 1980**). This package includes rights to build, to exploit natural resources, to restrict access, to sell the land, to subdivide it, rent it, etc. However, not all landowners have same opportunities on land; some parcels are prohibited or restricted for urban development for several reasons by land policies. To prevent the economic impact of policy restrictions on such restricted parcels, and to maintain specific areas undeveloped, the idea of **transferring of development rights** between properties was first introduced in New York City in 1916.

Transfer of development rights (TDR) programs allow landowners to separate the building rights from a particular piece of property and sell them. This instrument allows the sale of one parcel's development rights to the owner of another parcel, yielding more development on the second parcel and preventing development on the originating parcel. Development rights can be bought either by developers who want to increase the density of their developments, or by government who aims to control price, design details or restrict growth (Hanly-Forde et al. 2004). Hanly-Forde et al. argue that transferring of development rights programs make such preservation more equitable and politically reasonable by compensating landowners who lose the right to develop their property

Technical issues for implementation:

Transferring of development rights programs are used for two integrated goals: (1) to preserve open space, agriculture, historic buildings or housing, (2) to compensate landowners who are deprived of developing their property.

Basically, the transfers can be between:

- A landowner who wants to sell the development rights, and a developer, who then uses those development rights to increase the density of houses on another piece of property at another location,
- Two different properties of same developer,
- A developer and a TDR bank of local government

In these transfers currency becomes the “development rights”. The development value (not the price) of a transferring of development rights credit is set so that one equals another.

A basic question in United States is whether these programs should be mandatory or voluntary. Mandatory programs usually have pre-zoned sending and receiving areas. The sending area is downzoned, and the receiving area is rezoned for a low base density so that developers must purchase development rights to build at any higher density. On the other hand, voluntary programs don't include such regulations. In voluntary schemes, credits can be bought and sold at any time, not just when a particular development in the receiving site is pending. The latter represents a scheme that is out of urban planning scope.

In mandatory programs, sometimes there is only one district. In this type, the objective in general is to prevent a parcel which may have historical importance or alike. On the other hand some programs involve one sending area and one receiving areas. These are preplanned and designated areas.

Sending areas are those that are to be preserved or restricted for development. As a first step, they should be defined, and the goals must be articulated. The amount of transferable development credits and the allowable density should be specified. Secondly, the property owners must be motivated to sell their development rights rather than developing within the allowed limits of their own land (in case it is not restricted by plan). Besides restrictive ordinances, some other incentives may be applied

The ***receiving areas*** should also be identified, and the maximum density could be assessed. As Canavan (1990) states designating the receiving areas can be the trickiest part of setting up a TDR program (Hanly-Forde et al. 2004), because, communities may disfavor higher densities. Yet, several incentives such as maximum density bonuses, exemptions from some impact fees are used to make it attractive for developers to buy development rights. It is important that both of the areas are consistent with a community's comprehensive plan, future land-use map, zoning, and capital improvement program (Lawrence 1998).

Allocation of costs and benefits

Transfer of development rights programs appear to offer many advantages to local governments that want to *control* land uses but also *compensate* landowners for restrictions on the development potential of their properties (Hanly-Forde et al. 2004).

These programs are equitable in terms of their attempt to spread the wealth of development by compensating landowners in restricted areas according to their losses. Moreover, the cost of density development and implementation are covered by actors in market as well as the funding of preservation of open spaces, historic buildings, etc.

One drawback of transfer of development rights programs is their being complicated and expensive to implement compared to traditional zoning. It requires, accordingly, the need for

education of citizens, real estate professionals, lawyers, assessors, and planners, in this process (Hanly-Forde et al. 2004). Finally it is prone to oppositions in *receiving* areas, where the community might not want more density.

Following cases compose of three mandatory programs, one being from USA and other two from Italy. They all incorporate some government regulations. However, they differentiate from each other, in terms of Italy's integration of the instrument with urban planning

USA, *Montgomery County, Maryland case*

Montgomery County's general plan in 1969 allowed higher development density in corridors and left the aside of corridors as open space. However, by 1980s it is seen that the plan couldn't prevent 18% of agricultural land to develop. In 1973 eliminating two other options of downzoning, outright purchase of agricultural land; the transfer of development rights was chosen to deal with this issue (Johnston et al 1997).

Firstly, a sending area has been designated comprising 90 000 acres (app. 36400 ha), and it is downzoned from one dwelling per 5 acres to 25 acres (from one dwelling per app. 2ha. to 10 ha.). Secondly the areas that already had infrastructure in place were chosen as receiving areas, and then the general plans were amended allowing a higher density in these areas. Thirdly, the credit values were calculated, and 1 credit per 5 acres was allocated, which are to use for residential buildings only. This process was made simple, without any differentiation between soil or terrain type (Johnston et al 1997).

Also a development fund has been established for basically two purposes (1) to guarantee loans by private institutions to landowners, who use credits as collateral (2) to buy credits. As indicated by author, the 2nd purpose has been never applied, as it was easy to sell credits.

The available credits in sending areas have been estimated as 4700, and it is indicated that 4300 of them have been sold. The prices of credits have been increased from \$ 3000 in 1993 to \$10000-\$12000 in 1995 (Johnston et al 1997). Moreover, conversion rate of rural land to urban land has been decreased dramatically: while it was 3500 acres per year before the program, it was only 3000 acres of farmland in total between 1980 and 1991. After all, approximately 34000 acres have been preserved (Johnston et Madison 1997).

It is stated that considerable effort went into publications to educate participants, for instance 24 public meetings were held. Thanks to simple calculation method of credits which makes no differentiation between the types of land, it was still a relatively easier process (when compared to some other practices in United States).

Italy; *Cesena and Ravenna*

The basic concepts and objectives in transfer of development rights programs in Italy are similar to that of United States: to reduce the inequity of zoning via compensation of those who are prohibited from developing and to allow administration to acquire preservation land at least cost.

In addition to the preservation objective, in Italy these programs can also be applied in ordinary urban areas in order to save land for public services and infrastructure. The

instrument is used as a complementary tool to traditional planning techniques (Micelli 2000). Moreover, the equalization approach goes hand in hand with determination of transferable development rights. Equalization process aims the equal distribution of developing rights to all owners²¹.

Box 3.7: Establishing a development rights market in Italy

The basic scheme of instituting a market of development rights as presented by Micelli (2000) is as follows:

- The local administration identifies the areas for transformation which are also designated by the plan.
 - These areas are classified and accordingly attributed a building index. Building indexes specify how much usable surface area (or volume) can be built upon.
 - After classification, these classes are sub-divided into sections, inside which the property-owners can negotiate the transfer of the development rights they own.
 - The owners of properties designated for municipal facilities and public infrastructure, own rights that can only be used in those areas of the plan designated for private development. The owners of these latter areas use their own volumetric rights and *host* the rights of the other landowners.
 - Once the development rights have been used, the property-owners of the areas designated to public facilities leave their old land for public facilities at farm prices or nothing at all.
-

In the past decade, in Italy, the development rights market have been used for a wide range of urban plans and projects, dealing with different issues such as urban renewal or protection of environment (Micelli 2001). Based on the scheme in Box 3.7, two strategies have been applied: (1) establishing a development rights market for all the urban areas designated for urban transformation as in *Cesena*; (2) application of transfer of developing rights only in a portion of land that is going under change as in *Ravenna*.

Cesena presents a typical case for the first strategy. In 1998, to implement its Structural Plan, the municipality decided to establish a development rights market. All the areas were included in transformation. The areas involved were very different than each other, so the administration differentiated them under five categories, and attributed them several indexes:

1. high environmental value areas, *with an index of 0.03*,
2. development areas, *with an index of 0.08*,
3. development areas already designated in the previous plan, *with an index of 0.12*
4. urban renewal areas, *with an index of 0.40*
5. high density urban renewal areas, *with an index of 0.60*

Indexes indicated the building capacity. For instance, the index of 0.03 for environmental areas referred to 3% of construction permit, which is quite little, compared to 60% of construction permit in high density urban renewal areas. The indexes were arranged so as to orient desirable development according to structural plan. In the allocation of development rights to individuals, government used the criterion of “*the rights acquired in the past*” by the economic agents (Micelli 2000).

The next step was the subdivision of categories in to sections. The administration tried to minimize transaction costs by homogenizing the sections and putting as limited number of property owners as possible (Micelli 2000). Within a section, the development rights could be relinquished by property-owners of the *sending areas* and acquired by property-owners of the *receiving areas*. In this process, the administration functioned as a link and information

²¹ The essence of equalization is the same as “land readjustment” instrument.

provider between property owners, with the aim of making the mechanism of distributing and trading development rights clear (Micelli 2000).

Ravenna is an example for the 2nd approach, in which only specific areas are designated for transfer of development rights. In Ravenna in 1993, there were basically two objectives: firstly, the acquisition of a green belt to create the largest park in the city at farm price, without using compulsory acquisition procedure; and secondly, promotion of an important renewal operation in the wharf area (Darsena) through a high density urban renewal program. So, in this approach these two objectives were linked (Micelli 2000).

A specific category was specified for the green belt with an index of $0.1 m^2$ of construction permit per square meter. However, it was prohibited to use this development right in the green belt area but only in the Darsena renewal project. The property owners of green belt areas were obliged to participate in the program. Once the development rights were transferred, the municipality bought the old lands at farm price. To make the process desirable for the property-owners of receiving area in Darsena, 15% bonus of building rights were awarded attached to the transferable development rights. The project has not yet completed, but in seven years time 10 hectares have already been acquired, and in the in the long run, a total area of 33 hectares is targeted for the whole green belt park (Micelli 2000).

Government's role has been significant in both *Cesena and Ravenna* cases. The public administration conditioned the form of the development rights market, established the areas to which the building rights are to be assigned, and organized the land classification and subsequent attribution of building indexes. In addition to these, administration has dealt with further issues such as minimizing the transaction costs between landowners, preventing monopoly by intervening in the market and buying land development rights itself.

3.2.3 Public Land Leasing in Singapore and the Netherlands

Public leasehold systems in principle, allow the government to manage urban growth by incorporating land use regulations into land leases (Hong 1999). Many scholars²² argue that if government can take advantage of this statute, it can capture all the surplus value. Indeed practices show that, in public leasehold systems, the government, as the landowner, takes a portion of the land value increments or any betterment (Hong & Yu-hung 1999). In these systems, besides property taxes, there are some other ways to capture land value increments such land premium, annual land rent, etc.

A lease agreement is a contract that enables the lessee (the person leasing the land) to rent land from the lessor (the owner of the land) for a fixed term and use. By this agreement several rights are transferred to the lessee. While ownership stays with the government, the private party gets the right to use, to develop, to transfer, to inherit and to benefit from land for a specified time in the land contract (Hong & Yu-hung 1999).

Hong Kong is one of the two world's most well developed leasehold system (Hong 2003). There are some other countries that apply land leasehold partly. For example in Singapore three-fourth of land is publicly owned, whereas this ratio is one-third in Netherlands.

²²Hong (1996) mentions some scholars: Farvacque and McAuslan (1992, p. 43), Archer (1973, p. 8; 1994, p. 24), and Yeh (1994, p. 8)

Hong Kong case

In China, all land and other natural resources are State property, and the Hong Kong government is responsible for the use and management of land on the behalf of the State (Ho et al. 2004)

In Hong Kong, the total land revenues are composed of property taxes, rates, rents, and land premia. In exchange for these payments, the lessees have right to enjoy the granted rights as well as transferring development rights to other parties and benefiting from all land development and transactions.

A rate and rent are two annual taxes on real property. They are both charged on the *ratable value* of a property that is the estimated annual rental income for that property. A *rate* is levied at a fixed percentage of the ratable value (5% in 2004). However this percentage is flexible for modifications according to financial needs (i.e., 11.5% in 1970s). On the other hand, *rent* is equivalent of 3% of ratable value. Thus; in total property owners pay 8% of their property to the government as land-related levies every year (Bourassa and Hong 2003). There is also *property tax* which is payable by owners at 15% of the actual rental income reduced by the rate payments (Ho et al 2004).

In some cases lessee pays some portion of all the rent in advance. This type of lump-sum payments are called *premium*. Premiums are paid in three different phases: at the beginning of the lease (auctions), at the time of lease modifications, and during lease renewals.

A typical leasing process with *auction* in Hong Kong starts with the preparation of a draft lease called the *Conditions of sale* in which the physical attributes of a plot is defined and restrictions on the use are specified. Moreover, several provisions such as streets can be transferred to private party's responsibility. Uses of land are determined by the comprehensive plan of the city. Secondly, the *document* is sent to all interested land developers, and the highest bidder determines the premium paid to government for leasing land. The 10% of the premium is asked right after the auctions, and the rest is required to be paid in 30 days. It can be considered as a more transparent process than private negotiations (Bourassa and Hong 2003).

When lessees want to develop their properties, they have to apply to related authority for *modification* of their lease conditions. If the application is approved, an additional premium is required. The premium is determined according to potential increases in land value after modifications are applied. However Hong (2003) states that in practice, modifications are too costly to realize. Because when there are multiple leaseholders (and in general there *is* due to high density) negotiations become too costly, therefore, there have been few applications for modifications.

At the end of the lease period, unless the government has a public purpose in land; the *renewal* is realized with an additional premium which is equal to the rent. However, the renewal premia don't contribute to total lease revenues substantially, because public protests throughout history made value capturing at renewal periods politically undesirable (Bourassa and Hong 2003).

Allocation of revenues

Lease revenues contribute to general revenue, but the main objective is to raise public funds for public infrastructures. Apart from that, the government provides grants to non profit organizations and special industries. In such occasions instead of auctioning land leases, three different schemes are applied: (1) nominal premium grant (2) reduced premium grant (1) full market value grant.

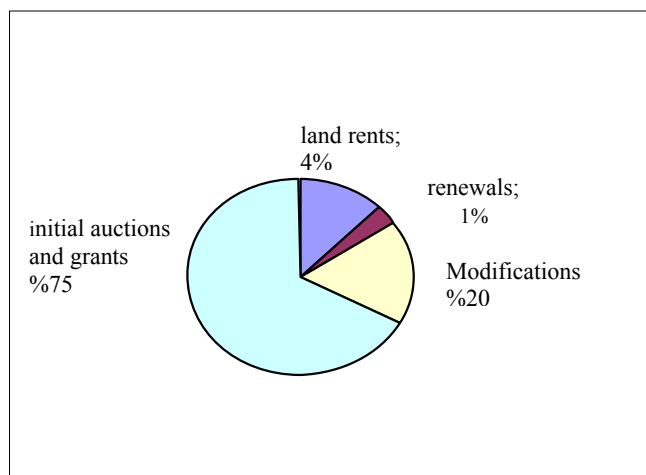
Nominal premium grants have lease term ranging from 15-20 years and the lessees have to pay only a small amount of money to the government as premium. Non-profit organizations such as schools, hospitals, religious associations, can apply for this grant. In addition, within this scheme, public housing is subsidized via granting land to Housing Authority of Hong Kong which is responsible from the provision of public rental housing to low-income group.

On the other hand some housing cooperations which target middle income public housing as well as low-income, can apply for ***reduced premium grant***. In this scheme typically half or one third of the market value is paid.

Full market value grants are for promoting the industries, which are land intensive such as oil refineries, shipping, etc. The government leases land through full market price but payments are allowed to be fulfilled in several installations. Moreover, premia are subject to negotiations which lowers the amount compared to auction process.

Stylized facts

Figure 3.1: Components of lease revenues



In figure 3.1, total lease revenues are presented between 1970 and 1995 according to the shares of land rent, premia, lease modifications, and renewals in total. As can be seen from the figure, initial auctions accounts for the highest share which is 75%. Modifications are also significant, whereby renewals are only 1%, which is a result of public oppositions

Source: Hong, 2003

Hong Kong's land revenues are not only composed of lease revenues. There are also rates and property taxes. Hong (1996) presents shares of different land revenues in the period between 1970 and 1991, and their contributions to local government revenue, total government expenditure and total infrastructure expenditure (table 3.3).

Table 3.3: Land and Lease Revenues in Hong Kong, 1970-1991

Type of land revenue	Average Annual Amount (Million U.S. \$)	Percentage of average annual			
		Total Land Revenues	Total Local Government Revenues	Total Local Government Expenditures	Total Infrastructure Expenditures
Property tax	130	9.1	1.8	2.0	7.2
Rate	307	21.5	4.3	4.7	17.1
Lease revenue (premia & rent)	990	69.4	14.0	15.1	55.2
total	1 427	100	20.1	21.7	79.6

Source: Hong 1996

A similar study (Bourassa & Hong 2003) for 1996-2000, shows better figures in terms of contribution of lease revenues. From table 3.4, it can be inferred that lease revenues are sufficient enough to finance public services except for 1998-the year of Asian financial crisis.

Table 3.4: Lease Revenues government schemes in Hong Kong

		1996	1997	1998	1999	2000	average
Lease revenues	Amount (millions of HK\$)	29 508	65 931	25 687	39 111	32 183	
	% of total revenues	14	23	12	17	14	16
	% of total expenditures	16	34	11	18	14	18
	% of expenditure on public works	101	229	82	133	105	130

Source: Constructed from Hong 2003 based on "China Council for the promotion of international trade (2000)"

As a result of several leasing schemes, it is observed that vital social services are guaranteed and essential industries are attracted in a competitive business environment. Nevertheless, Hong Kong faces high housing costs. Hong (2003) argues that land leasing is one of the major causes for high housing costs. According to Hong, land scarcity aside, initial auctions and bidding process brings additional prices to land and housing.

Netherlands case

Different than Hong Kong case, land is not initially owned by the State in the Netherlands but owned by municipalities as a result of a wide spread practice of buying land, servicing it and selling serviced land. For instance while Amsterdam Municipality owns 80% of land and practice ground lease (*erfpacht*), there are many small municipalities that neither have enough land nor practice ground lease.

In terms of finance, land lease in Netherlands is a weaker tool than it is in Hong Kong. Different than Hong Kong, there are no auctions for land in Netherlands. The price is set by the municipality, and there is not enough room for negotiations. Yet, it is still an important source of income: in 1999 City of Amsterdam had a net income of approximately **US\$ 40²³ million** from this source which accounted for **1.3%** of the municipality's current expenditures. This rate is **3%** for property taxes in a typical Dutch municipality (Hong 2003).

In terms of planning, land leasing gives several powers to municipalities. The maintenance of conditions specified by lease agreement is one of them. Moreover, the maintenance of buildings is guaranteed by the lessees. Finally, land assembling for development becomes easier to manage for municipality, though not costly.

²³ 113.5 million HFl in 1999

Hong mentions that land lease has wide unpopularity among voters in the Netherlands. In the same manner, it was announced by Rotterdam Municipality that it would sell the ground leases which was estimated to raise 900 million Euro in the short term (Hong 2003).

One advantage in Netherlands is that anyone who owns the freehold of undeveloped land may create and sell a ground lease on it. For instance, NS Real Estate, (a company of NS group-The Netherlands Railways), the developer and investor of public transport nodes, has the ownership of land around stations. This gives a very big advantage to NS Real Estate to develop land around stations via leasing (Offermans 2003).

3.2.4 “Participacion en Plusvalias” in Columbia

Participacion en Plusvalias²⁴ (Participation in increased values), is a value capturing mechanism that aims to balance costs and benefits arising from the development process. It has been mandated in Colombian National Law (388) in 1997. With this law a principle is enacted: “*Public entities will participate in the increased values generated by their action related to urbanism.*”

The basic idea of *participation in increased values* can be traced in some other countries such as Venezuela and Brasilia. Nevertheless, as Furtado (2000) mentions, in these countries the associated instruments were usually not implemented, or at best they were used in pragmatic ways in which the link with the ethics of value capture was loosened.

The significance of this instrument in Colombia derives from its familiarity with the principle of *collecting the community-created value of land for community benefit*, stemming from its long tradition of effective use of another value capture instrument: ***Contribucion de Valorizacion***²⁵ (Valorization Contribution). Since 1920s, municipal authorities have had a continuous experience in funding public works using contributions of the owners of the properties who are supposed to receive the benefit of the public investment. *Valorization Contribution* had a fundamental role in financing the modernization and servicing of Colombian cities throughout the country (Mendoza 2005). However, some concerns that arose in the use of valorization brought the necessity to design a new instrument which incorporates urban land policies in addition to fiscal one: *participation in increased values*.

As Furtado (2000) states, in the design of this new instrument social welfare and redistributive concerns have been taken in to consideration. Therefore, revenues collected through it are not, as in the case of Valorization, directly allocated to the cost recovery of local public works, but allocated to financing public services of general interest such as provision of urban infrastructure in areas in need, or purchase of land for social programs.

Land value increments to be captured are fixed between 30 and 50 percent²⁶ of the valuation. Valuation is done for two different phases: prior to public action, and after public

²⁴ Plusvalia, a Spanish word, indicates an increase in land value resulting from governmental, and particularly municipal, activity

²⁵In general terms, “*valorización*” is a kind of Assessment District designated by a public authority (Mendoza 2005). Consequently, the revenues from “*valorización*” are earmarked to the construction of specific public works; and only the owners of the properties that receive the benefits are charged.

²⁶The underlining idea is that the instrument constitutes a provision for the sharing of plusvalias between private owners and the public (Furtado 2000).

decision/action (estimation). The difference between two phases determines the amount that government can participate. Government gets its share when the landowners effectively perceives the benefit and makes a positive initiative such as selling the property, changing its use, or requesting a building license (Furtado 2000)

Box 3.8: Framework of Participacion en Plusvalias

The municipality has right to participate in the value generated as a result of:

1. designation of rural and suburban land for urban uses,
 2. changes in zoning to more profitable uses, and
 3. allowance for additional development rights
- (Furtado 2000)

As specified by law, the revenues obtained must be allocated to specific purposes such as:

1. Buying land for social housing.
 2. Providing infrastructure in areas where it is currently inadequate.
 3. Expanding the network of open spaces.
 4. Funding or financing roads infrastructure and mass transit.
 5. Developing large urban projects or urban renewal.
 6. Covering compensations or land expropriation costs for urban renewal.
 7. Maintaining of historical constructions
- (Doebele 1998)

Payments by the landowner can be done in six different ways:

1. by paying cash;
 2. by transferring to a public body a portion of the property that is of equivalent value;
 3. by exchanging urban land of equivalent value at other locations;
 4. by making the public body a partner in the execution of the project with an interest of equivalent value;
 5. by providing needed infrastructure or open space of equivalent value; or
 6. by giving back a portion of the development rights created by the public action that is equivalent in value.
- (Doebele 1998)

The legislation provides an incentive to use the methods number 6 with 10% discount; number 2 and 4 with 5% discount, to promote participation of actors.

Furtado (2000) states that there are still some fundamental open issues to be discussed and resolved in connection with the implementation of instrument. For instance, in the calculation of base value, a decision should be taken about which base to adopt: *the value of highest and best use* or *the actual use*. However, for Colombia, it is stated that, the experience with Valorization instrument can be of great help in dealing with such issues.

Participation in increased value is a mechanism allows several value capture instruments to work in a coordinated manner. Usme project in Bogotá represents such an example

Usme project

Usme is 1000 hectares urban area, half of which is already occupied with illegal residences in Bogotá. The area has already been served with water and sewerage system and several projects are in the process of execution. Recently a new project has been launched for Usme that aims to develop 600 hectares according to master plan.

An alternative approach is pursued for new development: to make use of *participation in increased value*. In addition; this scheme involves some more mechanisms such as; land freezing, land readjustment, participation in increased value and separation of building rights from ownership.

As a first step, the land values have been frozen to current prices before announcement of the project. The next step was the application of land readjustment approach as in Spain model, by which the infrastructure costs and development rights are distributed among actors including municipality *Participation in increased value* mechanism is also applied at this stage. Both costs of infrastructure and participations are tried to be captured. This approach allows Municipality of Bogotá to obtain free or low cost land for infrastructure or public facilities, or for social housing (Furtado 2000)

Mendoza mentions a total amount of **€98.5²⁷ million** required for both the construction of principal infrastructure and land development that includes local streets, parks, social housing, etc. The latter, land development part is charged to landowners and it accounts for **€44 million**. Considering the value increase in the area which is **€117 million²⁸**, the project seems to be feasible, albeit the 50% share among administration and landowners. Finally the project also introduces the opportunity to assign land development rights to low income families which will shift them some power in housing markets and prevent them from price increases (Copello et al. 2003).

3.3 Analysis of Value Capture practices

After presentation of several instruments in several countries, in this part an analysis will be exhibited based on seven criteria;

1. The principle/ motivation/ assumption of the instrument stems
2. The description/the essence of instrument
3. The definition/ depiction of the “captured” value
4. Revenue allocation
5. Distribution of costs and benefits (among landowners, public authority)
6. Coverage of equity and redistribution aspects
7. Critical issues

The aim of such an analysis is to structure these practices with reference to these seven criteria and try to grasp them all together. While first six points are extracted from the content, the seventh is author’s own remarks based on the content. With such a compilation relevance of instruments as being value capture instruments can be better evaluated, furthermore; their consistency with the objectives and the connections with theory can be tested.

Among the first six criteria all three policy objectives are involved; *equity* (6) being the most explicit. For instance, captured value criterion (3) implicitly incorporates *raising finance* objective. Because these captured values in each case are allocated to several expenditures which can be traced in table 3.4.b (p.59) under the criterion (4); *revenue allocation*. It is at this point the *efficiency* objective can be dealt. As mentioned earlier “efficiency in use of land” refers the allocation of land in which each parcel of land is assigned to its highest value use, with value understood to include not only the private value in that use but the social value of net external benefits or costs imposed by that use (World Bank 1998). In this sense, it is

²⁷ 275.890 Pesos in 2005

²⁸ The report of Centro Interdisciplinario de Estudios Regionales, CIDER (2005) declares the estimation of total initial cost of the land as €11 million, whereas the total value after investment is estimated as €128 million.

quite a complex issue to measure efficiency. However, it can be assumed that allocation of revenues according to a *master plan* is efficient based on the argument that public intervention is necessary to mitigate inefficiencies of urban land markets (section 2.1). As to equity objective, a specific criterion (6) is incorporated in the analysis table to show how each instrument covers equity and redistribution aspects.

For fiscal instruments a distinction should be made in the definitions of objectives. For instance equity objective for these instruments can be analyzed in the light of “ability to pay principle”, or “horizontal equity principal” which refers equal treatment of taxpayers of similar taxable capacity (p.26). *Efficiency*, on the other hand, is a measure of the distortion on the choices of individuals. In this sense, the extent a tax or fee affects individuals’ decisions can be a measure of efficiency. Finally, *certainty* principle indicates that the individual’s tax liability should not be arbitrary and should be calculable in advance. So, these issues should be taken into consideration in the analysis of impact fee and tax incremental taxation.

The 7th criterion, *critical points* is required to specify some weak or key points related to an instrument. Ambiguities in objectives, problems in design, problems related to static nature of instruments, the certainty they provide, and public attitude toward instrument are tried to be covered in this domain. It is believed that these critical points are needed to be addressed in the design of instruments for effective results.

Findings

As can be inferred from the table 3.5.a (p.58) each instrument represents commitment to value capturing aspect based on their principles, and short descriptions. In theory, all instruments have more or less similar principles or motivations:

1. The cost of development is born by beneficiaries (Tax incremental financing, impact fee, land readjustment).
2. Community should participate in the benefits of development (land readjustment, participation en plusvalias, transfer of development rights).
3. Public entities will participate in the increased values generated by their action related to urbanism (land readjustment, participation en plusvalias, land leasing).

However, in the following table 3.5.b (p.59), some problematic aspects are distinguished, especially for fiscal instruments, related to distribution of costs and benefits issues. In each scheme, it can be observed that costs and benefits are tried to be balanced. However, starting with cost side and struggling to meet them with benefits, is a critical issue that may violate basic value capturing principles.

For instance *tax incremental financing* schemes can be interpreted as an effective instrument in its capability to capture value increments. But, from another perspective, we may find public authorities look forward value increases in the designated area. In this sense tax incremental financing approach becomes a legitimate form of project financing, which starves for the continuation of value increases to meet initial investment. This issue- promoting rent- is a sensitive one from a value capturing perspective. Moreover; attribution of value increases to project *per se* and allocation of whole revenue to the designated area are critical debate issues that requires strong justifications.

Impact fee schemes, being strong revenue for local government finance, are not without problems as well. Firstly, the ability to pay criterion is violated in the sense that same indexes are applied to similar size of dwellers, without any distinction of income levels of people. Another problematic point raised in researches is related to incidence and spillover effects. New house buyers absorb impact fees, while existing homeowners absorb the benefits in their property because of improved infrastructure. This indicates a situation in which the outcomes are a bit far from value capturing objectives.

One final important remark about impact fees is the role they play in formation of *monopoly rent*. By imposing high impact fees or alike, exclusion of some social groups can be easily achieved. After all, it can be said that the objectives and outcomes of “impact fee” are quite ambiguous.

Table 3.5.a: Analysis of value capture practices

Instruments & countries	Type of instrument	The principle/ the motivation/ the assumption	Description/the essence
Tax Incremental Financing United States of America	Fiscal/ cash	<ul style="list-style-type: none"> - The value increase is a result of the project alone. - There wouldn't be any value increase if there were no project. - Internal financing, self-generating redevelopment. 	The property tax revenue generated by new construction in a designated area is used to pay public improvements within the same area.
Impact Fee United States of America	Fiscal/cash	The burden of new development should be born by <i>new residents</i> not by current residents.	Charges levied on new development to pay for the construction of additional capital improvements that are brought about by new development and which in turn benefit the new development.
Land Readjustment Spain, France, Japan	Regulatory/ in-kind & cash	<ul style="list-style-type: none"> -The community shall participate in the benefits accruing from the town planning policies. - The recipients of the benefits after development bear its costs. 	The assembly of small parcels for better urban development, and distribution of the benefits of new urbanization projects among landowners
Transfer of Development Rights United States of America, Italy	Regulatory/ in-kind	<ul style="list-style-type: none"> - Prevention of the economic impact of policy restrictions on some parcels, - Maintenance of specific areas undeveloped - Integration of government instruments with market-based ones. 	The sale of one parcel's development rights to the owner of another parcel, which allows more development on the second parcel while reducing or preventing development on the originating parcel.
Land Leasing Hong Kong, The Netherlands	Regulatory/ in-kind & cash	<ul style="list-style-type: none"> - The government, as being the landowner, has right to get a portion of the land value increments and betterments - Government can manage urban growth and planning decisions better 	Acquisition of a package of rights on land by private party for a specified time, while ownership stays with the government,
Participacion in Plusvalias Colombia	Regulatory/ in-kind & cash	<ul style="list-style-type: none"> - Public entities will participate in the increased values generated by their action related to urbanism. - Collecting the community-created value of land for community benefit 	Returning the economic benefit-perceived by private parties as a consequence of public actions or decisions- to the society.

Table 3.5.b: Analysis of value capture practices (continued)

Instruments & countries	The captured value	Revenue allocation	Distribution of costs and benefits (landowners, public authority)
Tax Incremental Financing United States of America	<i>(annual payments)</i> Value increases attributable to new development within the designated district, multiplied by total tax rate.	Allocated in the TIF area: (1) to retire bonds that finance the initial improvements which stimulate development. (2) to finance the project with pay as you go method	<ul style="list-style-type: none"> - Landowner who is found in the TIF area and whose property gets more valuable pays it (not necessarily users). - Depending on the project whole society/ all users may benefit by the project.
Impact Fee United States of America	<i>(One time payment)</i> The “expected level of use of several public facilities” determines the fee, <i>not</i> their total cost.	<ul style="list-style-type: none"> - The provision of additional water and sewer systems, roads, schools, libraries and parks and recreation facilities made necessary by the presence of new residents in the area. - It cannot be used for operation, maintenance, repair, alteration or replacement of capital facilities 	<ul style="list-style-type: none"> - <i>New home buyers</i> may absorb a large portion of the cost increase associated with an impact fee. - <i>Existing residents</i> experience capital gains as property tax savings, and benefits of improved infrastructure are capitalized into existing home values. - <i>Local governments</i> experience windfall economic gains as increasing home prices expand the property tax base.
Land Readjustment Spain, France, Japan	<i>(a portion of land)</i> It is determined according to: <ul style="list-style-type: none"> - <i>space</i> required for public facilities (roads, parks, schools) - cost of establishing them (i.e. Japan) 	<ul style="list-style-type: none"> - For acquisition of land for public services and reserve land. - Reserve land can be <ol style="list-style-type: none"> (1) sold (2) traded for land in other locations (3) used as social housing or alike 	<ul style="list-style-type: none"> - Each landowner in the project area must contribute a portion of their previous land - Cost of infrastructure associated with a project is born by related landowners. - The benefits of urbanization is shared among landowners and public authority - Ideally every actor benefits at the end of the process (<i>landowners & public authority in behalf of society</i>)
Transfer of Development Rights United States of America, Italy	<i>(Specific areas in exchange for transferable development rights)</i> <ul style="list-style-type: none"> - The revenue gained from acquisition of land required for a public use at farm prices or nothing at all. - Unborn cost of preservation of specific areas. 	<ol style="list-style-type: none"> (1) Preservation (2) Density control (3) Provision of public facilities (4) Compensation of restricted parcels’ landowners 	Actors in the market pay: <ul style="list-style-type: none"> - The cost of density development and implementation - The funding of protection of open spaces, historic buildings, etc.
Land Leasing Hong Kong, The Netherlands	<i>(premium, rate, rent,)</i> The government, as being the landowner, takes a portion of (or all of) the land value increments or betterments.	<ul style="list-style-type: none"> -Contribution to general revenue, - Raising public funds for public infrastructures. - Provision of grants to non profit organizations (i.e social housing) and land intensive industries (i.e shipping) 	<ul style="list-style-type: none"> -In exchange for payments the lessee have right to enjoy the granted rights as well as transferring development rights to other parties and benefiting from all land development and transactions. - Some social services are subsidized
Participacion in Plusvalias Colombia	<i>(in variety of forms)</i> 30-50% of the land value increments (<i>the value difference between two periods; before the announcement of a project and after the project</i>).	<ul style="list-style-type: none"> - Not necessarily used in a specific designated area. - To finance public services of general interest (i.e. provision of urban infrastructure in areas in need, or purchase of land for social programs, etc.) 	<ul style="list-style-type: none"> - Costs of making land “developable” are born by landowners in the project area; (i.e. local streets, parks, social housing etc.) - The benefits accrue to whole society.

Table 3.5.c: Analysis of value capture practices (continued)

Instruments & countries	Equity and Re- distributive concerns	Critical and ambiguous issues
Tax Incremental Financing United States of America	<ul style="list-style-type: none"> - Landowners are not charged unless there is real value increases. In this sense it can be considered as fair and less eager to oppositions - Usage of some facilities cannot always be restricted to the designated area, so not all beneficiaries pay. In this sense it can be considered as unfair for payers. 	<ul style="list-style-type: none"> - The existence of a streamline value increase is crucial. (no certainty of value increase as well tax burden) - The designation of TIF area is controversial. - Attribution of value increase to a project for a determined time is questionable. - Benefit principle is violated in some cases - little or no room for negotiations
Impact Fee United States of America	<ul style="list-style-type: none"> - Impact fees overcome free-rider problem because new development is charged only <i>for its expected level of use</i> of the new facility and <u>not</u> for the total cost. - Although there is horizontal equity between same kind and size of communities, no distinction is made between the income levels of communities (Ability to pay principle violated) - It may discriminate against low-income households because it raises housing prices and, there is possibility that developer pass these costs onto the buyers. 	<ul style="list-style-type: none"> - For local government finance; a strong revenue. - - Increasing housing prices increase property tax provides additional revenues for local governments. - It becomes more difficult for low income families to access housing. - Impact fees may act as <i>monopoly rent</i> to exclude low income families. - ability to pay is critical principle - no room for negotiation and public participation
Land Readjustment Spain, France, Japan	<ul style="list-style-type: none"> - All landowners in a polygon (project area) should achieve the same profit out of development in proportion to their initial land holdings. - A fair distribution of development gains - In general a high ration of (at least 80%) consensus of landowners required. 	<ul style="list-style-type: none"> - Room for speculative rents due to delay between readjustment and construction - lack of motivation for landowners to develop - costly and time-consuming process - Room for negotiation and public participation
Transfer of Development Rights United States of America, Italy	<ul style="list-style-type: none"> - Inequity of zoning is mitigated by distributing the land value among all landowners via distribution of development rights that they can trade. - Equitable in the sense that the wealth of development is spread by compensating landowners in restricted areas according to their losses. - The resistance of property owners in acquisition process is overcome. 	<ul style="list-style-type: none"> - Complicated and expensive to implement compared to traditional zoning. - Receiving areas may not want to host more density but on the other hand; <i>agglomeration rent</i> is in favor of the densities. - Needs social training. - Room for community participation.
Land Leasing Hong Kong, The Netherlands	<p>Grants to social housing and non-profit organizations allows relatively cheaper housing for low and middle income families</p>	<ul style="list-style-type: none"> - Private ownership vs. public ownership - Bidding process in the auctions increase local government finance - It also brings additional prices to land and housing. - Contract; a critical regulation and control tool. Provides certainty to lessee for during contract period. - Room for negotiation
Participacion in Plusvalias Colombia	<ul style="list-style-type: none"> - Social welfare and re-distributive concerns shapes the design of this instrument. Some part of revenues is used for areas in need. - Payment should be done when the landowner effectively perceives the benefit of public intervention 	<ul style="list-style-type: none"> - Base value calculations is a complex issue - The clarity of principles and framework is crucial as it is relatively a comprehensive instrument. - Integration of many instruments for one project. - - Room for community participation and negotiation

A similar but relatively milder critique can be done for land leasing schemes. It is argued in Hong Kong that, auctions cause housing prices to increase, and decrease access to housing by low and middle-income groups. But, ironically, they are substantial mechanisms of raising more revenue via premia. This recalls a trade-off between these two points.

After all, it can be inferred for these instruments that, equity objective is sometimes ignored in favor of raising revenue. The worse is; sometimes the real objective is not even clear enough. Under these conditions, it becomes very difficult to apply any success criterion or assess performance. What we may call “weakness” in a value capture instrument may become its strength as a fiscal objective depending on different interpretation of the outcomes. This stems from a lack of linkage between the theory and practice. So it can be concluded that; *it is crucial for such instruments to redefine their objectives, and derive their actions from theoretical principles*

The rest of our instruments; *land readjustment, transfer of development rights and participation in increased values*, have also some weak points. All the three are relatively complicated and expensive to implement. Their incorporation of *public participation* and *negotiation* mechanisms in their design makes them even more complicated and vulnerable to critiques. However, this flexible nature of them allows them to comply with dynamic nature of cities. They are more elaborated in their design in order to cover comprehensive issues and meet basic objectives. Cost benefit sharing in project financing, redistribution and compensation according to a plan are their key concepts and concerns. In this sense they comply with the theory. Nevertheless, the problems arise with these instruments in the implementation phase. So it can be said that *the success of such value capture instruments relies on getting over of some technical problems and getting them in tune with socio-political environment.*

Finally it is remarked that among the selected instruments that can incorporate community participation and negotiation has more flexible designs that can deal with the dynamic nature of urbanization and account for expectations. For instance, transfer of development rights programs allows property right owners a kind of autonomy over their development rights as well as compensation.

It is acknowledged that each country or urban context deals with similar problems with their own techniques in which they are strong. The strengths are no doubt driven from the historical and cultural background, the socio- economic environment, or legal and institutional framework; etc. For instance, the popular value capture schemes in United States for infrastructure financing are with *cash* payments, while it is *in-kind* contributions in some other countries which have problems with property tax schemes. There may be plenty of reasons behind this fact, but obvious is that the ability of targeted groups to pay in United States allows these schemes to be maintained.

3.4 Evaluation

The analysis provides us with several important remarks. To summarize;

1. There are some practices that comply with theory, and serve all three objectives of land policy. But in these schemes, implementation appears as a problematic issue.

For instance; transfer of development rights programs and Colombian experience have strong link with the three objective of land policy, but implementation is costly and time consuming in many cases.

2. There are some practices that successfully realize cost recovery and transfer the burden from public to private sector. But they bring about some equity and legitimacy problems. *For instance, impact fee and tax incremental financing schemes, are practiced quite often in USA, although some empirical studies proves that the revenue generated is not always the **surplus values** as it is supposed to be in value capturing perspective.*
3. With each instrument, one or two specific objectives are accentuated. *For instance, with transfer of development right programs **equity objective** is more accentuated than it is with impact fees, while it is **raising revenue** for impact fees. Nevertheless, practices indicate that transfer of development right programs are also an effective funding tool.*
4. It is seen that some instruments are faltering between objectives and actions. *For instance, it is believed that auctions, besides raising more revenue for government, contribute to price increases in housing.*
5. The ambiguity in the objective definitions of instruments allows them to be interpreted in different ways and may yield outcomes far from value capturing objectives *In the case of impact fees, the benefits of improved infrastructure may be capitalized into existing home values, which are unearned income for those houses. But this outcome may be welcomed in terms of its tax base increasing effect on property taxes.*
6. Relying only on fiscal or regulatory instruments may end up with the ignorance of some specific objectives For instance, in United States; the ignorance of regulatory instruments can be traced in the inefficient forms of urban development²⁹.
7. Each locality tries to develop the relevant instruments according to their problems, and more importantly to their socio-economic backgrounds. The level of complexity of urban problems triggers trial and innovation; many times on case by case basis.
8. Community participation and negotiations help instruments to adapt to the dynamic nature of urbanism.

Recommendations

Considering summary remarks above, and variety in instruments and objectives, **Tinbergen rule**³⁰ provides a useful framework to present recommendations. Tinbergen rule suggest that a separate tool or instrument is needed to achieve individual economic objectives. Tinbergen, in his study of macroeconomics found that fewer instruments are likely to force policy makers to sacrifice one of their objectives; especially when funds are scarce or the requirements for the various goals conflict (Sanford and Sandhu 2002).

This rule can be applied to land policy domain in the sense that objectives are not *always* compatible or, not always necessarily guaranteeing each other. For instance, effective value capturing doesn't indicate that redistribution is also effective, or in the same manner, an effective redistribution doesn't necessarily increase access to amenities.

Thus, based on Tinbergen rules, such conclusion can be inferred:

- Instruments should be designed according to the objectives they are meant to serve.

²⁹ i.e., urban sprawl and leapfrog development patterns.

³⁰ The principle advanced by Jan Tinbergen, the Dutch economist and Nobel laureate (1969)

- Different instruments should be used in an integrated manner to achieve multiple objectives
- Different instruments should be coordinated.

In addition and complementary to these suggestions concluding remarks can be presented:

- Despite the complexity and context-dependency of urban problems, there should be some common principles that urban policy derives their objectives (i.e., equity).
- On this background, some specific objectives should be defined which doesn't contradict with the overall principles (cost recovery, redistribution of benefits, capturing value increments yielded by public investment/increased demand, etc.).
- For each specific objective some specialized instruments should be designed. In their design the historical, socio-economic institutions should be of important concern. Community participation and negotiation are two channels of fine-tuning.
- Every entity should try to develop various types of instruments. Relying only on fiscal or regulatory instruments may end up with the ignorance of some specific objectives.

Chapter 4 Implication of value capturing for local government finance

Throughout the thesis, the attempt has been to understand the rational behind value capturing. It has been basically a smooth intervention in our actual understanding of the aspect, and a search for the grounds the idea stems from. In this sense, it has been a retrospective search so far. However, an effective value capturing practice is just a means to ends. Therefore, at this point a prospective approach is inevitable. Accordingly, this chapter deals with the implication of value capturing for sound local government finance.

4.1 Some Trends and Local Government Finance

The twentieth century experienced a great urban explosion. Between 1950 and 2000, worldwide urban population tripled, increasing by 2.12 billion persons (Dowall 2003). This trend continues and almost 1.5 billion people are expected to be added to urban population over the next 20 years, which is going to be felt fastest in developing countries (Dillinger and Yusuf, 2000).

Table 4.1: Projected urban population in Developed and Developing Countries, 1990-2025

year	Developed countries		Developing countries	
	Urban population (millions)	%of total	Urban population (millions)	%of total
1990	877	72.5	1357	33.6
2000	950	74.4	1904	39.3
2010	1011	76.0	2612	46.2
2020	1063	77.2	3425	53.1
2025	1087	77.8	3845	56.5

Source: in Dowall (2003), United Nations (1986), Urban and Rural population projections, 1950-2-25

By 2025, half of the world's population will reside in cities. Rural population in developing countries is likely to stabilize by 2015, and thereafter all net growth will occur in cities (Dowall 2003).

Table 4.2: Population trends in the World's largest 15 largest Mega-Cities, 1960-2000

Mega-City	Urban population (millions)			Annual average percent change	
	1960	1980	2000	1960-1980	1980-2000
Mexico City	5.2	14.5	25.8	17.90	7.80
Sao Paulo	4.8	12.8	24	16.70	8.80
Tokyo/Yokohama	10.7	17.7	20.2	6.50	1.40
Calcutta	5.6	9.5	16.5	7.00	7.40
Bombay	4.2	8.5	16	10.20	8.80
New York	14.2	15.6	15.8	1.00	0.10
Seoul	2.4	8.5	13.8	25.40	6.20
Tehran	1.8	5.8	13.6	22.20	13.40
Shanghai	10.7	11.8	13.3	1.00	1.30
Rio de Janeiro	5.1	9.2	13.3	8.00	4.50
Delhi	2.3	5.9	13.2	15.70	12.40
Jakarta	2.8	6.7	13.2	13.90	9.70
Buenos Aires	6.9	10.1	13.2	4.60	3.10
Karachi	1.8	5.2	12	18.90	13.10
Daka	0.7	3.4	11.2	38.60	22.90

Source: in Dowall (2003), United Nations (1986), Urban and Rural population projections, 1950-2-25

Parallel to rapid urbanization trends, there is strong orientation towards decentralization. Decentralization in general sense refers the transferring of functions and responsibilities from higher level of governments to sub-national levels, and this trend is obvious in many countries. For instance Brazil, Mexico, Poland have all decentralized primary education, while Colombia and Philippines decentralized healthcare. The sub-national share of public expenditure has accordingly increased: in Mexico this share increased from 11% in 1987 to 30% in 1996, and in South Africa from 21% to 50 % (Dillinger and Yusuf 2000).

Fiscal decentralization is another dimension of decentralization, and it is formulated on the theoretical argument presented that *each public service should be provided by the jurisdiction having control over the minimum geographic area that would internalize benefits and costs of such provision* (Oates 1972 in *decentralization.org*).

Both rapid urbanization and decentralization have important implications for the *financing of cities*:

- The rapid urbanization increases the demand for infrastructure finance. Absorbing the 2.4 billion new residents over the next 30 years will require massive investment in housing, water and sanitation, transport, power and telecommunications, etc. (Dillinger and Yusuf 2000).
- Due to decentralization, it seems that the responsibility of this increased infrastructure demand will fall more on local governments.

In order to meet the forthcoming demands, establishment of *a sound local government finance* system is crucial, and this requires an increased fiscal decentralization and increased own resource generation (Dauskardt 2004).

Box 4.1 Blocks of Local government finance³¹

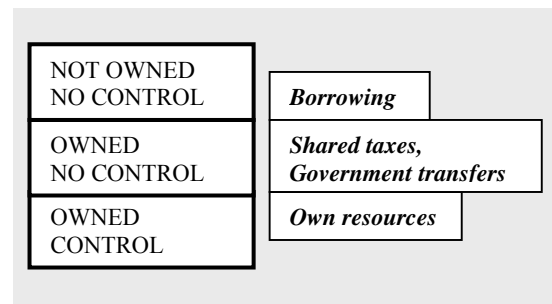
Local government finance can be simply categorized under three blocks according to the control a local government have on the sources. The basic block consists of owned & controlled money. This type of money allows a degree of autonomy for local governments. The 2nd block refers to grants and shared taxes that local government own but whose allocation is controlled by higher levels of government. Finally, the 3rd block refers borrowing credits that we don't own or control.

Local governments try to cover operating costs and capital expenditures through **own-source revenues** and **central government transfers**. Where these resources are insufficient to fund *capital investments*, they try to fill the financing gap through **borrowings** (Daher 2000).

Borrowings allow local governments to reach greater amounts of sources. However, the access to credits is not always easy for local governments. Daher (2000) lists five criteria that would make a local government creditworthy enough to access domestic or international credits

1. overall quality and efficiency of local (real and financial) **asset management**;
2. institutional vehicles and operational mechanisms for local service delivery
3. **selection criteria for local public investments**, especially the benefits these would yield at the local level;
4. pricing policies that contribute to **the sustainability of service provision**;
5. laws and regulations regarding such credit-related issues as local asset pledge, bankruptcy and default remedies.

In the following section, the implication of value capture on some issues (those marked with bold writing) will be mentioned.



³¹ Lecture notes from "Introduction to Local Government Finance" lectured by Aloysius Bongwa, for in UMD2 the Institute for Housing and Development Studies, Rotterdam, 2006

Need for Increased fiscal decentralization

As stated above a sound local government finance requires an increased fiscal decentralization. In this manner, a local government finance strategy has to consider; firstly developing a basic financial management system, and secondly improving (a) revenue mobilization, (b) expenditure management, (c) asset management and (d) capital financing issues³²

Budget system and accounting is two basic components of local government finance. Improving them could be a way of developing ***the basic financial management system***. For instance *budget* can be used as a financial management tool. A performance budgeting is good way of linking objectives to resources. On the other hand, introducing an accrual accounting system in which all assets, liabilities, revenues, expenses are indicated on the balance sheets would certainly provide an auto-control for local governments. Only after getting such basics right, we can focus on other objectives.

Revenue mobilization mainly refers to increasing own resources. This can be realized via increasing tax rates and fees, introducing new schemes, or increasing efficiency of the existing schemes. ***Expenditure management***, on the other hand, necessitates reduction in expenditures via some measurements such as increased outsourcing, reduction in personnel management, etc.

Asset management in original sense deals with evaluating the financial performance of a property and deciding whether to acquire, hold, or dispose it (Kaganove and Stone, 2000). Due to financial restrictions, after 1980s this approach has been adopted also in public sector. Public real estate is started to be treated as a productive, or at least not as a cost-neutral asset. Under public real estate management schemes governments decide to acquire, hold, dispose, allocate public land for development, or participate in land development (Kaganove and Stone, 2000).

Finally, ***capital financing*** issue requires that public projects are feasible in both economic and financial terms. In addition to own resources and central government transfers, borrowing is an important and effective way of capital financing.

4.2 Implications of Value Capture for a Sound Local Government Finance

- ***Value capturing for own resource generation***

A sound strategy for effective decentralization requires improved capacity for stable own resource generation by local governments (El Daher 2001, Samir 2001, Dauskardt 2004). Own resources are the assets that a local government owns and controls. Own resources allow local governments to enjoy a greater autonomy in their investment decisions and to fine-tune them according to local needs. Fees and taxes are most common ways of mobilizing own resources. In this sense any improvement in value capturing practices directly contributes to this basic block of finance. Considering ever-increasing demand for land, this revenue can become sustainable revenue for local governments with necessary arrangements in management systems.

³² Lecture notes from “Local Government Finance” lectured by Rolf Dauskardt, for UMD2- the Institute for Housing and Development Studies, Rotterdam, 2006

- ***Value capture and real property asset management***

A value capturing oriented land policy makes similar decisions to those of asset management related to urban land and land uses. A coordinated approach between real property asset management and value capturing might help categorizing public real properties according to their cost efficiency and revenue potential, and then allocating them to their highest and best uses.

- ***Value capture as revenue item in financial analysis sheet***

For any urban project, financial feasibility is inevitable. On the other hand, some project, especially those with public good character, cannot always provide cost recovery; and therefore, private sector stays reluctant to undertake these types of projects. Nevertheless, if land value increments that are posed by the project are incorporated in cash flow analysis as a revenue item, many projects may return to be feasible.

- ***Value capture for increased production***

If captured value is allocated to a financially feasible urban infrastructure project, a further implication can be mentioned based on the argument of Brakman et al (2000). Assuming that *the public infrastructure enters the production function of firms; and reduces their cost of production*; such a public investment may foster agglomeration of activity and human capital in an urban area which in turn engenders agglomeration rent enabling this region to apply a higher tax rate.

In summary, it can be inferred that value capturing has a critical role in strengthening of local government finance in terms of both internal and external finance. If complemented with finance improvement schemes, the significance of value capturing and the opportunities of own resource generation are likely to increase. On the other hand, local borrowing opportunities may also increase thanks to a better management of real property assets.

4.3 General Evaluation and Conclusion Remarks

After having answered the last research question about the implications of value capturing for local government finance, now we can incorporate all answers and conclusions to our methodological model (p.4) to depict the causal links between different aspects and reach a consistent framework.

The conclusions and ***building blocks*** of the argument can be presented as such:

1. Rent is an inner dynamic of cities, and has an unearned nature in terms of income for individuals
2. Value capturing as a necessity of land policy; in general sense serves land policy objectives, and in specific sense pursues the objective of returning socially created value to society.

Based on these arguments theoretical objective is stated as:

To capture unearned value increases and return it to society based on land policy objectives.

3. There are some practices serving theoretical objectives and deriving their actions from theoretical principles. However they are not without problems. The problems arise basically from the ambiguity in objectives, or technical inefficiency.

Accordingly it is concluded that:

If instruments are designed according to the objectives they are meant to serve, and used in an integrated and coordinated manner; multiple objectives of land policy can be achieved.

4. Fast urbanization and decentralization trends require local governments to increase their own-resources and improve their financial structures. Rent as an inner dynamic and ever existing characteristic of cities can be a sustainable own resource for sound local government finance through value capturing.

Finally it is suggested that:

If value capturing is treated as a component of fiscal improvement schemes, it may play a substantial role for sound local government finance and urban economic development.

As we conclude, the incompleteness of the study should be indicated. This study is, instead, a step for further studies that brings urban planning and its instruments together with economic and financial aspects in an urban context.

Table 4.3 General Evaluation Diagram

	THEORETICAL OBJECTIVE		PRACTICE POSSIBILITY OF THEORETICAL OBJECTIVE		PRACTICAL OBJECTIVE
CHAPTER	2.1 LAND RENT THEORIES	2.2 VALUE CAPTURING AS AN URBAN LAND POLICY	3 VALUE CAPTURING PRACTICES AROUND THE WORLD		4 VALUE CAPTURING FOR SUSTAINABLE LOCAL GOVERNMENT FINANCE
RESEARCH QUESTIONS	1. What is it that we capture? 2. Where does value capturing idea stem from?	3. Where does value capturing derive its objectives? 4. What are its instruments?	5. What are some value capturing practices around the world?		6. What may value capturing imply for local governments?
CONTENT	<ul style="list-style-type: none"> • Ricardo • Marxists • Neoclassical Economists • Henry George 	<ul style="list-style-type: none"> • Land policy objectives • Value capturing objectives & instruments <ul style="list-style-type: none"> - Regulatory <ul style="list-style-type: none"> - Government intervention - Joint development - Fiscal <ul style="list-style-type: none"> - Tax, fee 	Mechanism	Country	<i>Given:</i> <ul style="list-style-type: none"> - The trends for urbanization, decentralization - The fiscal constrains of local governments for public services - The need for own resource generation
			Tax Incremental Financing	USA	
			Impact fee	USA	
			Land Readjustment	Spain, France, Japan	
			Transfer of Development Rights	Italy, USA	
			Land Leasehold	The Netherlands, Hong Kong	
			Participation in Land Value	Colombia	
CONCLUSION REMARKS	<ul style="list-style-type: none"> • Rent is an inner dynamic of cities • An unearned income • Externality and rent are interrelated phenomena 	<ul style="list-style-type: none"> • Value capturing is a necessity of land policy • It shares the objective of land policy: equity, efficiency, raising finance • Its specific objective is returning socially created value to society 	<ul style="list-style-type: none"> • Though imperfect, there are some practices about value capturing with strong links to theory. • Each instrument emphasizes one or two policy objective(s) more than others. • If instruments are designed according to the objectives they are meant to serve, and used an integrated and coordinated manner, multiple objectives of land policy can be achieved. 		<ul style="list-style-type: none"> • <i>Fast urbanization and decentralization trends require local governments to increase their own-resources and improve their financial structures.</i> • <i>Rent as an inner dynamic of cities can be an sustainable own resource for sound local government finance</i> • <i>If value capturing is treated as a component of fiscal improvement schemes, it may play a substantial role for sound local government finance and urban economic development</i>
	Capturing unearned rent (value increases) and return it to society based on land policy objectives.				

BIBLIOGRAPHY

- Adams F.G., Grace Milgram, Edward W.G & Mansfield C. 1968, *Undeveloped Land Prices During Urbanization: A Micro-Empirical Study Over Time*, *the Review of Economics and Statistics*, Vol. 50, No.2. pp.248-258
- Adams J.S., Jidell, Hansen,Ryu, VanDrasek & Jung 1999, *Development Impact fees for Minnesota: A review of principles and national practices*, Centre for Transportation Studies, University of Minnesota.
- Alonso, W. 1964, *Location and Land Use*, Harvard University Press, 1964
- Aydoğanlı M. 1996 *Urban land policies in Turkey with reference to urban planning and privatization process as a way of government intervention in urban land*, ICP.95-3, METU, Ankara.
- Ball, M. 1976, *Marx's theory of rent and the Role of Landed Property*, Discussion Papers in Economics No:48, Birbeck College, University of London, 1976
- Batt, W. H. 2001, *Value Capture as a Policy tool in transportation Economics. An exploration in public finance in the tradition of Henry George*, *American Journal of Economics and Sociology*, Vol. 60, No. 1, January, 2001
- Biderman, Ciro, Sandroni, P. & Smolka M. 2006, *Large scale Urban Interventions: The Case of Faria Lima in Sao Paulo*, *Land lines*, April 2006, vol.18, no:2
- Brakman, S., H. Garretsen, and C. van Marrewijk 2001, *An Introduction to Geographical Economics*, Cambridge University Press, Cambridge, U.K. (BGM)
- _____ 2002, *Locational competition and agglomeration: The role of government spending*, CESIFO
- Bourassa, S.C and Yu-Hung Hong 2003, *Leasing Public Land, Policy debates and international experiences*, Lincoln Institute of Land Policy, Cambridge, USA.
- Brown P.K. & Hepworth M.A. 2002, *A study of European Land Tax System*, Second year report, Lincoln Institute of Land Policy, Cambridge, USA.
- Carion, C. & Libby, L.W 2002, *Development Impact Fees: A primer*, The Ohio State University Working Paper: AEDE-WP-0022-01
- Clarke W. & Evans J. 1999, *Development of impact fees and the acquisition of infrastructure*, *Journal of Urban Affairs*, volume 21, number 3, 281-288
- Copello, Mercedes, Smolka 2003, *Using Value Capture to benefit the Poor: The Usme Project in Colombia*, *Land Lines*, vol. 15, no. 3, Lincoln Institute of Land Policy, Cambridge, MA
- Council of the European Union 2004, *EU Guidelines to support land policy design and reform processes in developing countries*, -Commission Staff Working document annex to the Communication from the Commission to the Council and the European Parliament.
- Davis, D. 1986 *Tax Increment Financing*, Best Student Manuscript Award in Public Administration 1986-1987, *Public Budgeting and Finance*, Spring 1989 pp.63-73

- Dauskardt, R, *Financial improvement planning in local governments in southern Africa, with special reference to Zambia*, Development Southern Africa Vol.21, No.2, June 2004
- Deak, C. 1985, *Rent Theory and the price of urban land*, PhD thesis, University of Cambridge, UK
- Dillinger and Yusuf 2000, *Financing Cities: The View from the WDR 2000*, World Development Report 1999/2000
- Doebele, W. (x), *Value Capture Around the World*
- _____ 1982, (ed.) *Land Readjustment, A different approach to financing urbanization*, Lexington Books, Massachusetts, Toronto
 - _____ 1998, *The recovery of “socially created” land values in Colombia*, Land Lines, vol. 10, no. 4, pp. 5 – 7. Lincoln Institute of Land Policy, Cambridge, MA
- _____ 2002, *Introductory Remarks*, Conference Paper code: CP02C03, Lincoln Institute of Land Policy Cambridge, MA.
- Dowall, D.E. 2003, *Land into cities: Urban Land Management Issues and opportunities in Developing Countries*, Conference Paper code: CP98A01, Lincoln Institute of Land Policy Cambridge, MA
- Dye R.F. & Merriman D.F. 2006, *Tax Increment Financing, A tool for Economic Development*, Land Lines 2006 pp.2-7, Lincoln Institute of Land Policy, Cambridge, MA
- Edwards, M. 1985, *Planning and Land Market: Problems, Prospects and Strategy*, pp. 203-220, Part 4 of Land Rent Housing and Urban Planning compiled by Ball M., 1985,
- El Daher, S. 2001, *The Building Blocks of a Sound Local Government Finance System*, Infrastructure Notes, the World Bank, Urban No. FM- 8e
- Evans, A.W. 1999, *On minimum rents: Part 1, Marx and Absolute Rent*, Urban Studies, Vol. 36, no.12, pp.2111-2120
- Fine, B. 1982, *Theories of the Capitalist Economy, Ch. 4Ricardo and Marx on the formation of Rent.*
- Franzen, R.C.D. & McCluskey, W.J. 2001, *Land Value Taxation: A Case Study Approach*, Lincoln Institute of Land Policy Working Paper, Lincoln Institute of Land Policy, Cambridge, USA.
- Fujita, M. 1989, *Urban Economic Theory*, Cambridge University Pres, 1989
- Furtado, F. 2000, *Colombia-economic aspects of the country's land use*, American Journal of Economics and Sociology, The, Dec, 2000 available on-line at: http://findarticles.com/p/articles/mi_m0254/is_5_59/ai_70738918
- Gaffney M. 1972, *Land Rent, Taxation and Public Policy "Sources, Nature and Function of Urban Land Rent."* American Journal of Economics (AJES) 31(3):241-58 (July 1972).

- George H. 1879, *Progress and Poverty, Book III- Ch. 1: the Laws of Distribution, Ch2: Rent and the law of Rent, Book IX- Ch.1: On the Effect upon the production of wealth*, Robert Schalkenbach Foundation, 2001
- _____ 1887, *Why the Landowner Cannot Shift the Tax on Land Values*, an editorial reprinted from *The Standard*, 1887 available on line at:
http://www.wealthandwant.com/HG/why_the_landowner_cannot_shift.html
- Gihring, T.A & Smith J.J 2006, *Financing Transit Systems through Value Capture, An annotated Bibliography*, Victoria transport policy institute, Canada.
- Hanly-Forde, J., Homsy, G., Lieberknecht, K. & Stone, R. 2004, *Transfer of Development Rights Programs, Using the Market for Compensation and Preservation*, Cornell University web site, available on line at:
[http://government.cce.cornell.edu/doc/html/ Transfer%20of%20 Development%20Rights%20Programs.htm](http://government.cce.cornell.edu/doc/html/Transfer%20of%20Development%20Rights%20Programs.htm)
- Harvey 1973, *Social Justice and the city*, Blackwell Publishers, 1988
- _____ 1982, *Limit to capital- Ch.11 the Theory of Rent* Blackwell, London
- _____ 1985, *The Urbanization of Capital- Ch.4 Land rent under capitalism* John Hopkins University press.
- Hong, Yu-Hung 1996, *Can leasing be an alternative source of local public finance?*, working paper, Lincoln Institute of Land Policy, Cambridge, Massachusetts.
- _____ (1999) *Myths and Realities of Public Land Leasing: Canberra and Hong Kong*, Land lines, Volume 11, Number 2, available on-line at:
<http://www.lincolninst.edu/pubs/pub-detail.asp?id=363>
- _____ 2003, 'Policy Dilemma of Capturing land value under the Hong Kong public leasehold system' in , *ed.Bourassa and Hong*, Lincoln Institute of Land Policy, Cambridge, Massachusetts pp. 151-179
- Hui, E. Chi-Man, Ho, V. Sze-Mun & Ho, D. Kim-Hin 2004, *Land value capture mechanisms in Hong Kong and Singapore, A comparative analysis*, Journal of Property Investment and Finance, vol.22, no:1 pp.76-100
- Jager J. 2003, *Urban Land Rent Theory: A Regulationist Perspective*, International Journal of Urban and Regional Research vol. 27 pp. 233 - 249, June 2003 Volume 27 Issue 2
- Johnston, R.A & Madison, M.E 1997, *From Landmarks to Landscapes*; Journal of the American Planning Association, 01944363, Summer97, Vol.63, issue 3
- Kaganova, O. & Stone, R.N 2000, *Municipal Real Property Asset Management. An overview of World experience, trends and financial implications*, Journal of Real Estate portfolio Management, vol.6 no.4, 2000
- Keiper S., Kurnow E., C. D. Clark & H. H. Segal 1961, *Theory and Measurement of Rent* (Philadelphia: Chilton Co.)
- Klacik, J.D. & Nun, S. 2001, *A Primer on Tax Increment Financing*, Chapter 2 in *Tax Increment Financing and Economic Development* edited by Johnson, C.L. & Man J.Y, 2001, State University of New York.

- Klosterman, R.E. 1985, *Arguments Against Planning*, in “Readings in Planning Theory” by Fainstein, S. & Campbell S., 1996, Ch.6 pp.151-167
- Larsson G. 1997, *Land Readjustment: A Tool for Urban Development*, Habitat International Vol. 21, No2, pp. 141-152
- Lawrence, T.J. 1998, *Transfer of Development Rights, Land use series*, Fact sheets, CDFS-1264-98, The Ohio State University, available on line at: <http://ohioline.osu.edu/cd-fact/1264.html>
- Lewis S. R. 1984, *Taxation for Development: Principles and Applications*, New York (etc.)Oxford University Press, 1984
- Man J. 2001, Effects of tax increment financing on Economic Development, Chapter 7 in *Tax Increment Financing and Economic Development* edited by Johnson, C.L. & Man J.Y, 2001, State University of New York
- Mendoza C. 2005, *Value Capture For Funding Colombian BRTS Infrastructure: The case of Transmilenio in Bogotá*, UMD-1-08, HIS, Rotterdam
- Marx, K. 1909, *Capital Volume III*, CH.27 to Ch.45, available on line at: <http://www.econlib.org/library/YPDBooks/Marx/mrxCpC.html>
- Marshall, A. 1890 *Principles of Economics*, available on line at: <http://www.econlib.org/library/Marshall/marP.html>
- Micelli, E. 2002, *Development Right Markets to Manage Urban Plans in Italy*, Urban Studies, Vol.39, No. 1, 141-154
- Mills, D.E. 1980, Transferable development rights markets, *Journal of Urban Economics* 7, 63-74 (1980)
- Offermans, R. 2003, *Gains for trains: capitalizing on transit investments – possible value capture funding methods for Dutch cities*, Doctoral Thesis, Department of Regional Economics & Transport and Port Economics, Faculty of Economics, Erasmus University, Rotterdam.
- Ott, S.H. and Read, D.C. 2006, *The Effect of Growth Management Strategies: Adequate Public Facilities Ordinances and Impact Fees A Review of Existing Research*, A Center for Real Estate at University of North Carolina(UNC) Charlotte Working Paper, UNC
- Ricardo, D. 1817, *Principles of political economy and taxation*, Dent & Sons, London,1973, introduction by Donald Winch
- Riera, P. 2000, *Economic Implications of the Spanish Planning System, with emphasis on value capture mechanisms*, Lincoln Institute Research Report, Lincoln Institute of Land Policy, Cambridge, USA
- Rothbard M.N. 1997 *The Single Tax: Economic and Moral Implications and a Reply to Georgist Criticisms*, London: Edward Elgar, 1997, pp. 294-310
- Rybeck, R. 2004, ‘Using value capture to finance infrastructure and encourage compact development’, *Public works management & policy*, vol. 8, no. 4, pp. 249 – 260.
- Samuelson, Nordhaus, *Microeconomics*, Mc GRw Hill, 16th ed.

- Sandford, C. 1992, *Economics of Public Finance, University of Bath, UK, Pergamon Press, Oxford UK.*
- Sanford, J.E. and Sandhu, A 2002, *Developing Countries: Definitions, Concepts and Comparisons*, Congressional Research Service Reports, Washington, DC.
- Shoup, C. 1960, *Ricardo on Taxation, Gregg Revivals, 1992*
- Smolka, M.O. & Amborski, D. 2000, *Value capture for urban development: an Inter-American comparison*, Lincoln Institute of Land Policy, Cambridge, MA.
- Sorensen, A. 1999, Conflict, consensus or consent: Implications of Japanese land readjustment practice for developing countries, *Habitat International* 24(2000) pp.51-73
- UNESCAP, “*Urban land Policies for the uninitiated*”, available on line at: http://www.unescap.org/huset/land_policies/index.htm, last accession date 23.07.2006
- World Bank 1978, *Urban Land Policy Issues and Opportunities, Volume II- Working Paper no: 283*, prepared by Dunkerley, H., Walters A., Courtney J.M., Doebele W.A., Shoup, D.C, Rivkin M.D, and Urban Projects Department, Washington, USA
- World Bank Institute, *Intergovernmental Fiscal Relations & Local Financial Management Program- topic 1*, available on line at: http://www1.worldbank.org/wbiep/decentralization/Module1/Topic01_Printer.htm#EN1
- Wuensh J., Kelly, F. & Hamilton T. 2000, *Land Value Taxation Views, Concepts and Methods: A Primer*, Lincoln Institute of Land Policy Working Paper, code: WP00JW2.
- Yomralioglu, T. 1993, *A Nominal Asset Value-Based Approach for Land Readjustment and its Implementation Using Geographical Information Systems, Ch.2 Land Readjustment*, PhD thesis to University of New Castle upon Tyne, 1993
- Nobelprize.org., *Finn Kydland and Edward Prescott’s Contribution to Dynamic Macroeconomics: The Time Consistency of Economic Policy (1977) And the driving forces behind business cycles*, available on line at: http://nobelprize.org/nobel_prizes/economics/laureates/2004/eoadv.pdf

ANNEX

Fiscal instruments

Taxes

- Temporary tax rate: It is used for financing large scale urban infrastructure and collected from residents who benefit directly or indirectly as an increase in their property values (Smolka 2000).
- Land value tax: Also known as site value taxation. The type of property tax that falls entirely on the land but not on the value of any buildings or structures (Smolka 2000). Lewis Jr.(1950) mentions that taxation of site values of land has been argued for decades as an *ideal tax*, since such a tax would be likely to fall *wholly* on economic rents accruing to the owner of that particular piece of land.
- General property taxation: total value of land and buildings are taxed at one rate.
- Two-rate tax: Also known as general property taxation. It refers to taxes that apply different rates to land and to buildings or improvements (Smolka 2000).
- Progressive taxation on vacant land: Applying a higher rate of taxation to vacant land as an incentive for development and protection for land speculation (Smolka 2000).
- Land speculation taxes: An intervention applied when property markets have rapidly raising prices (Smolka 2000).
- Capital gains tax: A tax applied in North and Latin America on land values excluding primary residence. It is a revenue generation for central government (Smolka 2000).
- Tax increment financing*: A technique especially applied in some jurisdictions of United States, in which expected future enhanced property tax revenue serves as collateral to financial incentives (Smolka 2000).

Fees

- Special Districts³³: These are districts over which some type of charge or fee are imposed for capital and operation costs of a specific utility
- Special Districts for Business: To increase the business attractiveness of an area, some municipalities have legislative rights to designate “Business Improvement Areas” and charge businesses and property owners for the development of that area.
- Special Assessment Districts: Applied in United States. They are one time or recurring charges imposed by government on property in a defined area (district) in order to pay for

³³ United States has many types of special purpose districts such as school districts, hospital districts, etc. Specialized services are provided within these districts; different property tax schemes can be applied.

improvements in that area (Offermans 2003). Municipality undertakes the works in an area, issue bond and pay the debt with the property tax bill collected from benefiting properties (Smolka, 2000).

- **Development Charges (development impact fee):** These fees charge *developers* for all of the public costs that will be incurred by their action before permission to develop is given (Doebele, x). They are usually levied at the time of new development of properties in the benefiting areas and are often used as a condition for obtaining site plan approval or a building permit (Offermans, 2003). According to Doebele (x), these fees don't attempt to collect "socially created value" as such, but have proven to be highly effective ways of protecting local governments against the often very high capital costs of new urbanization in United States.
- **Impact fee*:** They are very similar to development charges. The difference is that they are applied to all properties while the development charges only apply to *new* developments. Impact fees are means of implementation of a plan and are tied to land-use plans. They can be considered as a *gap funding* mechanism. Because; after the service requirements and costs are estimated for 20-30 years for a planned area, the shortfall in the budget becomes the basis of the amount to be collected with impact fees (Offermans, 2003).

Regulatory Instruments

Government Intervention

- **Participation in added values*:** It is a mandated right of the public to participate in 30 to 50% of the assessed added values in forms of money or in kind, resulting from administrative actions such as changes in land-use, zoning, etc. (Smolka 2000).
- **Selling of building rights:** It is developed on the basis of the separation of the building rights from land ownership rights. It targets value increments derived with provision of building rights by the government.
- **Eminent domain /expropriation right:** It is the authority of government to acquire land for any public use, without any need for consent from the property owner. Smolka (2000) mentions the application of this approach for anticipation of a specific public investment that will increase land values or for the purposes of facilitating some form of a specific project. In some countries laws give municipalities to buy land at prices before development plans were made which is lower than market price (Offermans, 2003).
- **Full public land ownership:** Communist and Socialist doctrine embraces this principle. In some countries such as Hong Kong, Netherlands several mechanisms are applied under full public ownership. Land leases are such practises and they are going to be analyzed in chapter 3.
- **Nationalization/ Heavy taxation of development rights:** This approach was applied in Britain after World War II. They put all the development rights in the hands of nation (Doebele, x). With an act, they divided all value of land into two categories: current value (the capitalized value of its current use) and development value. A buyer had to buy both

* Techniques marked with asterisk (*) are analyzed with case studies in chapter 3

the value of current use and (if it is allowed in plan) the development rights that she wished to have (at 100 percent of value that the new development would create). This was similar to Henry George's concept of land taxation. However, this approach had difficulties related to incentives and administration. By the time practices changed.

- Land banking: It is the acquisition of land by government and being kept for relatively long period, in advance of development. The objectives are to better control the pace and the use of land, prevent speculative waves and --through their ultimate sale or lease-- capture for the public benefit any increase in land value resulting from public actions or the market (Smolka 2000). Different from expropriation, land banking is dependent on the willingness of landlords to sell.
- Land price freezing: It is a way of prohibiting price increases legally. In theory it is not a way of value capturing but it is a way to limit the unearned profits of landowners in some areas. In France, in "deferred development zones" this technique was applied and made an important facility in the construction of new towns around Paris in 1970s one of which is Euro-Disneyland (Doebele x).
- Land assembly: It is bringing (fragmented, irregularly shaped, small, etc.) plots of land together for development purpose. Expropriation and land readjustment are two ways of serving this objective.
- Land readjustment*: It is a way of implementing the joint development of a group of parcels according to plans which, according to Doebele (2002) better serve the public interest than can be achieved if the process were to be left to voluntary association of the individual landowners. These are initiatives, whereby governments take, purchase, or acquire land in some way and then --usually through a land trust-- readjust the ownership patterns, redistributing all or part of the land to existing or new land owners (Doebele 1982, in Smolka 2000).
- Administrative guidance: Offermans explains "administrative guidance" as a scheme in which new town transit infrastructure costs are shared among several actors, such as developer, or bodies of government. It is cost-sharing scheme and more a financial mechanism rather than a value capturing one.
- Bonus zoning or density zoning: these schemes are developed to encourage private developers to voluntarily locate near to specific locations such as transit stations, city squares, etc. While developers gain increased density and extra floor area ratios; the public authority gains from some kind of developer contributions for the infrastructure (Amborski, Smolka 2000; Faber 2000 in Offermans 2003)
- Development rights auctioning: It is similar to density bonusing in which fix amount of density is put up for auction (Sims& Berry 1999 in Offermans 2003). The highest bidder gets the development right.
- Inclusionary zoning*: In this mechanism, increased density is granted in exchange for some proportion of the new building providing social or affordable housing(Smolka 2000).

- Linkage: Similar to inclusionary zoning but the compensation by the builder isn't necessarily in the same location or building.
- Certificates of building potential rights: It is the mechanism in which a specified area benefited by a public investment is funded by the revenues generated by the auctioning of the certificates of building potential rights. In Brazil, the price of these certificates are defined by public auction and since 2003 they are tradable in Brazilian Stock Exchange (Biderman et al 2006)
- Transfer of development rights*: It is a mechanism which allows development rights to be bought, sold or transferred to other designated parcels of land where the higher density is desirable or tolerable in government's perspective.
- Land swaps: A privately owned parcel might be good for a public service. In addition, the private owner might not have government approval to develop all of the land. In such cases a land swap policy offers local land use approvals for a new development in higher density in smaller area in exchange for the title to ownership of the land itself (Mendoza 2005).

Joint Development

- Public private partnership/concessions: Agreements that often supersede the regulatory environment involve the permits to development land and build structures, along with the requirements of the private sector partner for providing public benefits (Smolka 2000).
- Land leasing and air right development*: Agreements which give the lessee the right use and develop but not the ownership of a land. These are used as leverage to capture land value increments from projects developed in publicly owned land (Smolka 2000).
- Benefit sharing: It is a method in which; private actors agree to share the benefits above a certain predetermined threshold, with public because of a commercial activity which would not been possible without the contribution public funding (Offermans 2003).
- Connection fees: they are also known as service charges. They are paid by a property owner to be connected directly to the transit system. It often concerns linking a property to a transit terminal by a pedestrian walkway (Offermans 2003).
- Developer contribution: Voluntarily established contributions done by developers to contribute to ensure that the public investment project goes ahead and possibly in such a way that is extra beneficial to them (Offermans 2003).
- Super developer: In this approach, a low profit infrastructure project is made profitable by linking it to a high profit project (land development), and the project in total is provided by a super developer .This is not a value capturing method, but more a way of project financing. Japan and Hong Kong, where land scarcity is high, this approach is applied successfully (Offermans, 2003)