The Land Use Implications of Alternative Municipal Financial Tools: A Discussion Paper

by Enid Slack

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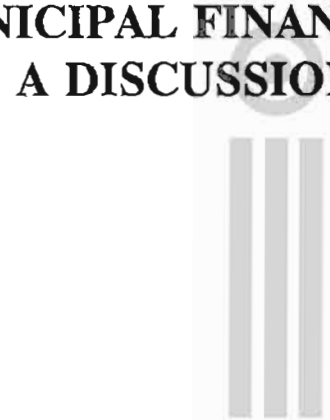
THE LAND USE IMPLICATIONS OF ALTERNATIVE MUNICIPAL FINANCIAL TOOLS: A DISCUSSION PAPER



Enid Slack
Enid Slack Consulting Inc.

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FOREWORD

On behalf of the Intergovernmental Committee on Urban and Regional Research (ICURR), we are pleased to present Dr. Enid Slack's discussion paper *The Land Use Implications of Alternative Municipal Financial Tools*. Issues related to municipal finance are an important additional area of interest for ICURR's research program. We intend to pursue further issues in this area in the future, complementing our already well established research in municipal governance issues and topics related to urban sustainable development. ICURR wishes to acknowledge the contribution of the Ontario Ministry of Municipal Affairs in bringing this report to publication.

The purpose of this paper is to evaluate the impact of alternative financing tools on land use and development. Such an impact is very important; if a municipality pursues a particular land-use policy such as residential intensification and at the same time levies a tax that encourages sprawl, the two policies are inconsistent. The thorough review by Dr. Slack of five municipal revenue sources and their impact on land-use decisions should capture the imagination of planners, economists and all those who have an interest in effective policy implementation within municipalities.

ICURR would like to thank Dr. Slack for the enthusiasm and dedication she manifested in the preparation of this discussion paper.

Michel Gauvin, MCIP
Executive Director

Dr. Claude Marchand
Research Coordinator

Intergovernmental Committee on Urban and Regional Research

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Biographical Notes

Dr. Enid Slack is an economic consultant specializing in public policy research in the area of public finance, with special emphasis on municipal and educational finance. She has been president of Enid Slack Consulting Inc. since 1981 and teaches part-time at the University of Toronto. Dr. Slack consults to a variety of clients in Canada and abroad including school boards, municipal, provincial, territorial and federal governments, government commissions and private companies. She has co-authored three books and has published many articles on various aspects of municipal and provincial government finance. Her most recent book, *Urban Public Finance in Canada (2nd edition)* was published by John Wiley and Sons this year.

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ACKNOWLEDGEMENTS

The idea for this study came from teaching a course on Public Finance for Planners at the University of Toronto. I have written this paper partly in response to my students who, over the last ten years, have asked me why a municipal finance course is so important to planners. I hope that this paper provides some answers.

I have benefitted from the comments of many people on the first draft of this paper and I would like to take this opportunity to thank them: Nancy Bardecki, Margaret Allan, Almos Tassonyi, Marianne Farag, Ron Davis, Jennifer Whybrow, Keith Ward and Bob Lehman. I would also like to thank Michel Gauvin and Claude Marchand of ICURR for their support on this project. Of course, any errors or omissions remain my responsibility.

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Executive Summary

Background

Municipalities are increasingly interested in the fiscal impact of land use planning decisions: which types of developments will generate the most revenue for the municipality? However, there seems to be less interest in the impact on land use decisions of alternative financing tools. For example, do property taxes affect the location and density of development? Do user fees alter development decisions less than property taxes? How do development charges affect the location and density of development?

The impact of financing tools on location and land use is extremely important: if a municipality is pursuing a particular land use policy such as residential intensification and, at the same time, is levying a tax which encourages urban sprawl, then the two policies are inconsistent and it will be difficult to meet the land use objective.

Purpose

The purpose of this paper is to evaluate the impact of alternative financing tools on land use and development. The paper reviews the expected impact of three currently used revenue sources -- user fees, property taxes, and development charges -- as well as two potential revenue sources -- site value taxes and land value capture taxes.

The Findings

The findings of the paper suggest the following:

- Where local public services are financed by user fees based on marginal cost pricing, there will be no impact on development decisions.
- Where the marginal cost of services is not equal to the marginal benefit, there will be an impact on land prices, land uses and location decisions.
- Other things being equal, property taxes not matched by service benefits of equal value will discourage investment in improvements and new buildings and will result in a reduction in the density of development.
- Replacing the property tax with a site value tax (or land value capture tax) will speed up development and result in more intensive uses of land.

- In general, heavier taxation of the land portion of a property will encourage more intensive uses of the land; heavier taxation of the improvements portion will discourage more intensive uses.

- Development charges that are based on marginal cost pricing (that is, where the charge varies by development) will result in efficient land use decisions; development charges based on average cost pricing (the same per unit charge in all parts of the municipality) may lead to urban sprawl and inefficient development patterns.

The findings on property taxes suggest that, other things being equal, property taxes do affect development decisions. While economists generally believe that distortions in decisions created by taxes are inefficient, there are circumstances in which altering development decisions may be efficiency-enhancing. For example, where the benefit to society is greater than the benefit to an individual developer (such as may be the case with the preservation of open space), taxes may be used to encourage the developer to preserve more open space to achieve societal objectives.

However, in practice, it is difficult to know what level of taxes will achieve the desired objective. Tax policy is a blunt instrument for addressing land use objectives and may have unintended side effects. For these reasons, it is suggested that tax policy should probably be designed to be at least neutral with respect to development decisions.

Further Research

While the paper raises a number of issues concerning the relationship between land use planning and municipal finance and suggests what the impact is likely to be of alternative municipal financial tools, it does not provide rigorous theoretical or empirical analysis. It is the intent of the paper to show that there is a significant impact of municipal financial tools and to inspire further research in this field.

Suggestions for further research include:

- a comparison of property taxes paid relative to benefits received for different property classes — residential, commercial and industrial

- determination of how the costs of "soft" services (for example, education, health and social services) vary with the density of development

- an analysis of the impact on land values, location decisions and the density of development of differentials in net fiscal benefits (difference between taxes

and service benefits)

- a comparison of the impact on land use development patterns of alternative development charge pricing techniques

- determination of the increase in land values that can be attributed to a major public investment.

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INTRODUCTION

As provincial transfers to municipalities decline and there is increased pressure to keep property taxes down, municipalities in Canada are becoming more and more interested in the financial impact of different types of development. In particular, they want to attract those developments that generate more in revenues than they require in services. As an example, commercial and industrial developments are favoured over residential developments because they are assumed to generate more revenues than costs to the municipality. To the extent that municipalities have recognized a relationship between municipal finance and planning, the interest has centred largely on the fiscal impact of land use planning decisions.[1]

While there are some studies on the fiscal impact of alternative land uses, very little has been written on the impact of financing techniques on land use. For example, how do property taxes affect the location and density of development? Do user fees distort development decisions less than property taxes? How do development charges affect the location of development? The impact of financing tools on location and land use is extremely important: if a municipality is pursuing a particular land use policy such as promoting denser developments while levying a tax that encourages urban sprawl, then the two policies are inconsistent and it will be difficult to fulfill the land use objective.

The purpose of this paper is to evaluate the impact of alternative financing tools on land use and development. The paper reviews the expected impact of three currently used revenue sources — user fees, property taxes and development charges — as well as two potential revenue sources: site value taxes and land value capture taxes. The paper concludes that financing tools can have a significant impact on land use and that financing techniques should attempt to be neutral with respect to land use objectives.

The paper is divided into six sections as follows:

- The first section presents a model of local government finance based on the benefits received from local government services. It includes a discussion of the role of local government and the appropriate financing tools to carry out this role.

- The second section reviews the sources of revenues used by municipal governments, outlines recent trends in the use of these revenues and evaluates the extent to which these trends have been consistent with the benefit model of local finance.

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[1] For example, the Sewell Commission (1992) briefly addresses the issue of the fiscal impact of development and recommends that municipalities pay closer attention to the costs and benefits of development. Unfortunately, the commission devotes no further attention this important topic.

- The third section reviews planning tools used by municipal governments, highlights recent trends in planning and briefly discusses the relationship between planning and municipal finance.

- The fourth section analyzes the impact on land use decisions of three sources of revenue currently used by Canadian municipalities: user fees, property taxes, and development charges.

- The fifth section of the paper considers the potential impact on land use decisions of two revenue sources not currently used by Canadian municipalities: site value taxes and land value capture taxes.

- The sixth section summarizes the findings of the paper and discusses the implications of using tax policy to achieve land use objectives. This section also suggests some topics for further research.

The paper raises a number of issues regarding the relationship of land use planning and municipal finance. While it suggests what the land use implications are likely to be for different municipal financing tools, it does not provide a rigorous theoretical or empirical analysis of the impact. Rather, the paper is intended to suggest that municipal financial tools can have a significant impact on land use planning and to inspire further research in this field.

CHAPTER 1
THE BENEFIT MODEL OF LOCAL GOVERNMENT FINANCE

The benefit model of local government finance defines the appropriate role for local government and, based on that role, identifies the characteristics of local government revenue sources necessary to carry out that role.[2]

1.1 THE ROLE OF LOCAL GOVERNMENT

The main role for local governments is to provide goods and services (known as allocation in the public finance literature). It is not appropriate for local governments to carry out monetary and fiscal policies (to achieve full employment, stablize prices and so on), nor is it appropriate for them to focus on redistributing income.[3] These functions are performed better by the federal and provincial governments.[4]

Providing goods and services is not only considered to be an appropriate function for local governments but to do it efficiently *requires* a local government role. Some goods known as "public goods", have certain characteristics that make provision by the private sector very difficult.[5] Ideally, the government jurisdiction that provides these goods and services should include people demanding the same public goods and the benefits should be enjoyed by residents of those jurisdictions. In terms of the benefit model, the primary role of local government is to provide goods and services whose benefits are spatially limited, thus aiding the efficient allocation of resources.

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[2] This section of the paper draws heavily on Bird and Slack (1993), chapter 3.

[3] While it is not appropriate for local governments to make redistribution their primary objective, local governments do affect the distribution of income. Whenever local governments levy taxes (for example, property taxes) and/or provide services (for example, roads, welfare etc.), they will affect the income distribution.

[4] The three functions of government (stabilization, distribution and allocation) were originally set out by Musgrave. For a fuller discussion of these functions and the appropriate level of government to perform them, see Musgrave, Musgrave and Bird (1987).

[5] Public goods are defined by two characteristics: nonexcludability and nonrivalness in consumption. Nonexcludability means that it is very difficult (or very costly) to exclude anyone from enjoying the benefits of the good or service. Nonrivalness in consumption means that one person's enjoyment of the good or service does not take away from another person's enjoyment. For a discussion of why the market fails where there are public goods and why government provision is required, see Bird and Slack (1993), chapter 3.

Traditionally, local governments have provided services such as fire and police protection, streetlighting, roads and transit, recreation and culture and other services. However, as Nowlan (1993) notes, the role of local governments has been expanding to include the efficient management of the environment (air, water and land), the conservation of resources, the recognition of the true costs of activities such as garbage collection and water consumption and other activities.

1.2 FINANCING TOOLS AND THE EFFICIENT PROVISION OF LOCAL GOVERNMENT SERVICES

To provide local goods and services efficiently, the lines of responsibility and accountability have to be clearly identified. This means that, wherever possible, local governments should charge directly for the services that they provide. In this way, the user of the service knows how much it costs to provide that service and can make an efficient, informed choice on how much to consume. Where the costs are unknown to the consumer or where the consumer is not charged according to their use of the service, they will not make an informed choice and may consume too much or too little of the service. For example, where a flat rate is charged for water, consumers will tend to overconsume water relative to the efficient amount (or the amount that they would consume if charged according to their use).

To ensure efficient provision by linking costs and benefits, Nowlan (1993) suggests that two conditions have to be met:

- The tax or charge has to reflect the marginal social cost of the activity. For example, in charging for water usage, the marginal cost reflects the additional cost of providing the service to the user. The marginal social cost includes not only the private costs of provision but also includes, e.g., the costs associated with not conserving water for future users.

- Taxpayers have to be able to alter their consumption of the service and, in that way, adjust the costs and benefits. For example, if the taxpayer decides to make use of the local swimming pool, she pays to use it. She can decide to use it daily, once or week or at other intervals but the amount she pays reflects her use of the pool.

Where the costs of a service reflects the marginal social cost of its provision and where individual taxpayers can alter their use of the service, local taxes are very much like prices in the private marketplace. The result is efficient government spending at the local level. The local revenue source that most closely approximates private market prices is the user fee. In some cases, as will be discussed below, the property tax can also approximate a user fee.

However, in some cases, direct charging is not practical: where it is difficult or impossible to identify the beneficiaries, where it is costly to exclude those who do not pay, where income distribution is an important consideration, or where there are externalities in the provision of the service.

Where direct charging cannot be used, local governments should finance these services from taxes that paid by local residents.[6] In principle, local governments should have access to those revenue sources that they are equipped to use and that clearly fall on local residents: user fees and residential property taxes. Because non-residential property taxes can be exported to other jurisdictions, they are less likely to be borne by local taxpayers and are probably less appropriate as a source of revenue for local governments. Where charging is inappropriate because of income distribution considerations or because of spillovers, it may be necessary to use income taxes at the local or provincial level to finance these services.

In summary, where taxes or charges reflect public service benefits, the provision of local public goods and services will be efficient. Further, there will be no impact on land use decisions since taxes are offset by benefits. Where taxes are not equal to service benefits, some locations and land uses will be preferable over others. The impact of this differential on land use will be analyzed in section 4 below.

1.3 HARD AND SOFT SERVICES

As the above discussion indicated, local governments provide a wide variety of goods and services and different types of services lend themselves to different types of financing tools. This section briefly summarizes some of the important differences between hard services (such as water, sewers and roads) and soft services (such as education and social assistance):

- Hard services such as water and sewers (and, to a lesser extent, roads) can be financed by user charges: the beneficiaries can be easily identified and excluded if they do not pay. Soft services such as education and social services, on the other hand, are more appropriately financed from general revenues and not on the basis of benefits received. Other services such as recreation (sometimes classified as a hard service and sometimes as a soft service) can be financed by user fees.

[6] Where local governments are acting as agents for the provincial or federal government, then some form of intergovernmental transfer may be appropriate. For a discussion of the rationale and impact of intergovernmental transfers, see Bird and Slack (1993), chapter 8.

- Hard services tend to have a large capital component requiring substantial investments in physical plant. Large capital expenditures require up-front charges (e.g., on developers), the use of borrowing or the use of reserve funds. Soft services require relatively more operating expenditures, mainly wages and salaries.

- There is likely to be a significant impact of hard services on land use: where water and sewer infrastructure are provided, there will be development. The impact of soft services on land use is less evident, with the exception of school infrastructure. Developments can be held up by school boards where there are not sufficient places in existing schools to accommodate additional pupils.

- The per capita cost of hard services tends to increase with decreases in density, but the same is probably not true for soft services.

The relationship between density and the costs of services has been explored in the literature. There have been a number of studies (mainly engineering studies) which estimate how the costs of hard services vary with residential density. A review of American and British studies (Marchand and Charland, 1992) concluded that the costs of many hard services increase with decreases in residential density. These services included water supply, sanitary sewers and storm drainage. Sewell (1993) suggested that, while the evidence on fiscal impact is somewhat confusing, it appears that medium-density mixed-use projects are more cost-effective than low-density single-use projects. In short, denser developments are felt to be more cost effective for municipalities (and for the private sector).

There are few recent studies, however, of how the costs of soft services vary with the density of development. While it is generally believed that the costs of services such as recreation, policing, social services and education probably increase with density, there is no empirical evidence to support this relationship. Given that local governments are required to spend a significant portion of their budgets on soft services, the relationship between density and the costs of these services should be an important component of the fiscal impact of land use decisions.[7] Until more research is done on the impact of density on the costs of soft services, the conclusions regarding density and the costs of services should be treated with caution.

[7] It can also be noted that the demand for many of these services is determined by external forces that are beyond the control of the municipality, such as changing demographics and the state of the economy.

In summary, municipalities provide many different types of service. Some can be financed through user fees; others require general revenues such as property and income taxes. The impact on land use and development will also be different for different types of services. While studies show that the cost of hard services decreases with increased density, it is probably not true for soft services.

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CHAPTER 2
TRENDS IN MUNICIPAL FINANCE

Local governments and special purpose bodies make capital and operating expenditures to provide services to local residents and businesses. These services include: education, general government, police and fire protection, roads and transit, health and social services, water, sewage, garbage collection and disposal, recreation and culture, planning and development.[8]

To finance the operating costs associated with these services, local governments rely mainly on property taxes, transfers from the federal and provincial governments, user fees and other miscellaneous revenues such as licence fees, permits and parking violations. Municipalities are not permitted to run a deficit in their operating budgets. To meet capital requirements, municipalities use property taxes, user fees, transfers from the federal and provincial governments, long term liabilities (borrowing) and charges to the private sector such as development charges and other exactions.

2.1 TRENDS IN LOCAL EXPENDITURES

In 1991, local governments in Canada spent almost $65 billion or about $2,400 per capita on municipal services and education.[9] Table 1 shows expenditures per capita by function for 1991, the distribution of expenditures by function and the annual average growth rate (in constant dollars) over the period from 1965 to 1991.[10] Based on this table and the findings

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[8] Education is provided at the local level by school boards. These are generally elected and are not part of the municipal government. Education expenditures are generally financed by a combination of property taxes and provincial transfers.

[9] For a detailed analysis of trends in municipal finance in Canada, see Kitchen and Slack (1993b).

[10] Municipal expenditures include expenditures made from provincial transfers as well as from local revenues. The data are presented in per capita terms to give an indication of expenditures relative to the size of the population. Since expenditures (and revenues) increase from year to year, in part, because there are more people requiring services, it is important to analyze how expenditures per capita have changed over time. The annual average growth in expenditures is calculated for expenditures per capita in constant (1986) dollars. Per capita expenditures have been deflated by the implicit GNE price deflator for total government expenditures. Another reason why expenditures have increased is because of a general increase in the price level, which is beyond the control of any individual local government. To analyze trends over time, it is important to look at the growth in constant dollar expenditures per capita. The annual average growth rate is the effective compound annual rate of increase over the period.

in Kitchen and Slack (1993b), the following can be noted:

- The largest expenditure function of local governments in 1991 was education at $937 per capita (or 39 percent of total local expenditures), followed by roads at $210 per capita (8.7 percent), recreation and culture at $148 per capita (6.1 percent), and debt charges at $143 per capita (6.0 percent).[11]

- Kitchen and Slack (1993b) note that the trend in municipal debt charges relative to operating expenditures varies across provinces. Debt charges are high in municipalities in B.C. and Quebec, though they have been declining as a percentage of municipal operating expenditures in Quebec. In Ontario, debt charges represent a small percentage of operating expenditures and have been declining over the last twenty years.

- In terms of growth per capita in constant dollars over the period 1965 to 1991, expenditures grew at an annual average rate of 2.0 percent. For a number of functions, the rate of growth exceeded the average: general government, protection (fire and police), health and social services, resource conservation and industrial development, water and garbage, recreation and culture, housing, regional planning and development, transfers to own enterprises and other miscellaneous expenditures.

- If hard services are defined to include expenditures on roads, water and sewers and soft services are defined to include expenditures on education, health and welfare, then one can conclude that the rate of growth in expenditures on soft services has exceeded the rate of growth of expenditures on hard services. Kitchen and Slack (1993b) note that soft services have grown (in constant dollars per capita) at 2.4 percent per year compared to 1.6 percent per year for hard services.[12]

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[11] Education is a local function in all provinces except New Brunswick, Prince Edward Island and Quebec. In British Columbia, the province funds education through property taxes and general provincial revenues.

[12] Social assistance is entirely a provincial responsibility in some provinces, e.g., B.C., Alberta, Quebec and New Brunswick. In other provinces, municipalities are required to provide a certain level of social services. In other words, these are mandatory, not discretionary, expenditures. A large proportion of the local expenditures on social assistance are funded by the provincial governments.

Table 1: Trends in Local Government Expenditures, Canada

Service	Per Capita Expenditures 1991	Distribution 1991	Ann. Avg. Growth Constant Dollar Expenditures per Capita 1965-91
General Government	129.10	5.4%	2.5%
Protection			
- fire	63.24	2.6%	3.2%
- police	110.24	4.6%	3.3%
- other	16.57	0.7%	-1.1%
Transportation			
- roads	209.74	8.7%	0.6%
- transit	1.86	0.1%	-1.9%
- other	34.16	1.4%	1.5%
Health	133.65	5.6%	2.4%
Social Services	128.12	5.3%	4.7%
Education	937.08	39.0%	1.4%
Conservation & Dev.	25.65	1.1%	6.6%
Environment			
- water	95.44	4.0%	2.1%
- sewage	85.99	3.6%	1.9%
- garbage	47.68	2.0%	3.8%
- other	4.44	0.2%	6.7%
Recreation and Culture	147.58	6.1%	4.4%
Housing	12.20	0.5%	8.4%
Planning and Dev.	20.83	0.9%	2.2%
Transfers to Own Ent.	42.56	1.8%	9.6%
Debt Charges	143.05	6.0%	1.4%
Other	12.14	0.5%	6.3%
TOTAL EXP.	2401.32	100.0%	2.0%

Source: Statistics Canada, Public Finance Historical Data 1965/66-1991/92

Table 2: Trends in Local Government Revenues, Canada

Source of Revenue	Per Capita Revenues 1991	Distribution of Revenue Per Capita 1991	Ann. Avg. Growth Constant Dollar Revenues Per Capita 1965-91
Property and Related Taxes			
- real property	648.22	30.2%	1.0%
- special assessments	38.21	1.8%	0.9%
- business	85.53	4.0%	3.9%
- other	20.67	1.0%	15.5%
- total	792.62	36.9%	1.3%
Payments in Lieu of Taxes	51.65	2.4%	5.3%
Miscellaneous Taxes	7.27	0.3%	1.4%
Licences, Permits	15.85	0.7%	1.7%
Sales of Goods and Services			
- intergovernmental	8.78	0.4%	14.2%
- water	59.89	2.8%	0.3%
- rentals	18.09	0.8%	7.8%
- other	170.50	7.9%	12.1%
- total	257.26	12.0%	6.2%
Return on Investment	58.87	2.7%	5.5%
Other Own Source Revenues	35.66	1.7%	1.0%
TOTAL OWN REVS.	1219.17	56.7%	2.4%
Unconditional Transfers	61.71	2.9%	0.7%
Conditional Transfers			
- federal government	10.50	0.5%	11.4%
- provincial government	858.19	39.9%	4.0%
- total	868.68	40.4%	4.0%
TOTAL TRANSFERS	930.39	43.3%	3.7%
TOTAL REVENUES	2149.56	100.0%	2.9%

Source: Statistics Canada, Public Finance Historical Data, 1965/66-1991/92

2.2 TRENDS IN LOCAL REVENUES

Total revenues of local governments in Canada in 1991 were $58 billion or about $2,150 per capita.[13] Table 2 presents information on revenues per capita for 1991, the distribution of revenues and the annual average growth in revenues in constant dollars per capita. The table shows the following:

- The largest source of revenue for local governments in 1991 was government transfers ($930 per capita or 43.3 percent of local revenues), the largest component of which was conditional transfers.[14]

- The second largest source of revenue was the property tax at $793 per capita or 36.9 percent of total revenues.

- User fees (sales of goods and services) as a proportion of local government revenues were 12.0 percent in 1991.

- In terms of growth rates over the 26 year period from 1965 to 1991, the fastest growing revenue source was user fees at an annual average rate of 6.2 percent per year. Property and related taxes increased at the annual average rate of 1.3 percent.

- An analysis of revenue trends by Kitchen and Slack (1993b) showed that the pattern of revenues changed during this period. In the early part of the period, from 1965 to the late 1970s, transfers increased but user fees were relatively small. In the second part of the period, from the early 1980s to 1991, transfers declined in relative importance and user fees increased. The pattern for other revenue sources was fairly consistent throughout the period.

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[13] Revenues were $7 billion less than expenditures for all municipalities combined in 1991. As noted above, provincial legislation requires that municipalities and school boards not run deficits in their operating budgets. However, they are permitted to borrow funds to meet capital expenditures. In most provinces, the use of borrowing is restricted by the provincial government. For more detail on municipal borrowing, see Bird and Slack (1993).

[14] Conditional transfers have to be spent on the functions determined by the donor. There are often other more specific conditions as well. Unconditional transfers can be spent in any way the municipality chooses. For a discussion of intergovernmental transfers, see Bird and Slack (1993), chapter 8.

- In summary, in the last ten years, the reliance on provincial transfers has fallen and the use of local revenue sources (property taxes and user fees) has been increasing. With increasing deficits at the provincial level, it is anticipated that the provincial funding for municipalities will decline further in the future.

2.3 TRENDS IN MUNICIPAL FINANCE AND THE BENEFIT MODEL

The discussion above on the benefit model of local government finance suggested that the most appropriate role for local governments is the efficient provision of local government services. To ensure efficiency, it was argued that costs and service benefits need to be linked. Wherever possible, local governments should use user fees; where user fees are not possible, taxes should be levied on local residents.

The review of trends in municipal finance suggests that user fees have been increasing as a source of revenues to municipal governments. While it is most likely that these fees have increased because of the pressure to keep property taxes down (and not because local policymakers are concerned with efficiency), the result from the perspective of the benefit model has been positive.

CHAPTER 3
TRENDS IN PLANNING

Land use planning involves both land-use policy and regulation. In terms of policy, the main tool is the formulation of official plans.[15] An official plan is defined in the Ontario Planning Act as:

> a document approved by the Minister, containing objectives and policies established primarily to provide guidance for the physical development of a municipality or part thereof or an area that is without municipal organization, while having regard to relevant social, economic and environmental matters.

Regulation is achieved mainly through municipal zoning bylaws, subdivision control bylaws, site plan reviews and development permits. Zoning bylaws prohibit or restrict height and density and regulate the uses of land. Small adjustments to zoning bylaws are achieved through minor variances. Subdivision control regulates the division of land into smaller parcels and can require developers to provide certain services (roads, open space, etc.) before subdivision approval is granted. Site plan review regulates the qualitative aspects of development such as landscaping and ensuring that the proposed development fits in with the neighbourhood.

In addition to the tools summarized above, land use is also regulated by municipal (and provincial) decisions on public works and the provision of municipal services. In other words, in the urban context, development will only occur where there are services, such as water, sewers and roads.

Trends in planning have been described in three stages (see Baldwin, 1986): physical planning, social planning and fiscal planning. Prior to the 1960s, the physical element of planning dominated. The primary concern was to provide infrastructure to the outlying areas making development possible. In Ontario, for example, the construction of a major sewer line in the early sixties to service the Mississauga/Brampton area opened up a new area for development to the west of Metro Toronto. In subsequent years, the York/Durham servicing scheme opened up land for development to the north and east of Metro Toronto. While planning was largely exercised at the local level during this period, the province exerted influence over planning decisions through provincial transfers for infrastructure (Macaulay and Doumani, 1993).

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[15] These are also known as master plans, community plans and municipal plans.

In the 1970s and 1980s, the social element in planning dominated. New developments were to provid day care centres, affordable housing, parkland and other social amenities. Schemes such as density bonusing, for example, were used in Toronto whereby developers were given additional density rights in return for which they were required to provide some of these amenities. There was more local control over planning issues during this period with provincial interest being limited to broad social, environmental, financial and economic matters. The provincial government moved away from a policy role and became almost exclusively an administrator of the development process.

By the late 1980s and early 1990s, the fiscal element had come to dominate planning concerns. This was a consequence of increased pressure to generate revenues to meet mounting expenditure demands, in part, because provincial transfers had started to decline. In the case of new developments, the philosophy that "growth should pay for itself" led to increased use of development charges and other exactions on developers.

In the current economic climate, the planning emphasis is on the impact of alternative developments on municipal finances. Some examples of recent studies highlight the current thinking on the fiscal elements of planning:

- The IBI (1990) study of the Greater Toronto Area evaluated the implications of three growth concepts: spread (or sprawl), central and nodal. The study concluded that the highest cost for utilities (trunk water and sewers, solid waste disposal and capital site-related utility costs for land development and re-development) were for the spread model and the lowest were for the central model.

- The Ontario Ministry of Municipal Affairs' Growth and Settlement Policy Guidelines suggested that, where new infrastructure and services are required, growth and settlement should be planned to allow for the efficient provision of services. They argued that new development should be compact and minimum densities should be specified.

- *The Intensification Report of the Canadian Urban Institute* (March 1993: 1) supports residential intensification and suggests that this concept emerged in the 1980s "in reaction to the detrimental consequences of sprawl: traffic congestion, declining transit ridership, increasing infrastructure costs, environmental deterioration, disappearance of prime agricultural land, declining quality of life in low-density neighbourhoods, and so on."

At the same time that the emphasis in planning has moved from the physical to the fiscal, the role of the province in planning matters has also changed. The increased provincial interest in planning is a direct consequence of a move to an ecosystem approach to planning, which integrates environmental, economic and social considerations (Crombie, 1992; Kanter 1990). Since ecosystems do not respect local jurisdictional boundaries, there is a role to be played by the Province to achieve broader environmental objectives. Some examples of geographic features that cross jurisdictional boundaries are the Fraser River Estuary in British Columbia and the Niagara Escarpment and Oak Ridges Moraine in Ontario.

While there has been some political activity at the provincial level in planning, provincial funding of local governments has been declining. The implications of more local flexibility with respect to finances combined with potentially less local flexibility in planning decisions could create problems for coordinating financial and planning objectives.

3.1 PLANNING AND MUNICIPAL FINANCE: COMPLEMENTARY OR CONFLICTING?

The above discussion has suggested that the emphasis in planning today is on the fiscal impact of alternative development patterns with a view to making developments cost efficient. It is worth looking at the interaction between municipal finance and planning to determine if planning decisions reinforce or conflict with financial decisions (and vice versa).

Two examples can be used to show the range of possible interactions: zoning policies and environmental taxes. Zoning decisions that restrict land uses may also restrict the revenue raising capabilities of the municipality. Efforts to discourage certain uses from a jurisdiction (e.g., zoning for residential uses only) may be desirable because the potentially negative spillovers from industrial and commercial property are minimized. However, this zoning policy may conflict with efforts to maximize net fiscal benefits (revenues minus expenditures) because it keeps out commercial and industrial properties, which generate relatively more revenues than residential properties (and require relatively fewer services).

On the other hand, zoning can be used to achieve municipal revenue goals by restricting land uses to those that provide the largest net fiscal benefit to the municipality. For example, zoning for minimum lot sizes can result in more expensive housing being built on large lots. This type of zoning, known as "fiscal zoning", results in land uses that generate large revenues relative to the cost of services.

Environmental taxes, such as taxes on polluters, provide another example of how the effort to improve the environment can generate municipal revenues. The planning goal (to reduce the negative externalities from pollution) and the financial goal (to maximize net fiscal benefits) in this case reinforce each other.

These two examples indicate that planning and financial goals sometimes complement each other and sometimes conflict. Sections 4 and 5 evaluate the extent to which specific revenue-raising tools complement or conflict with planning objectives. Section 6.2 considers the role of tax policy in achieving land use objectives.

CHAPTER 4
THE IMPACT OF ALTERNATIVE MUNICIPAL FINANCIAL TOOLS ON LAND USE

It has been suggested in this paper that the objectives of planning in the nineties are based on fiscal considerations: comparing the costs and benefits of new developments to determine their impact. The emphasis is on denser development, residential intensification, and the reduction of sprawl. This section considers the impact of alternative financing tools on these land use objectives.

4.1 USER FEES

A user fee or charge is an "amount of money per unit of goods or service produced or provided by the government which is collected from the recipient" (Bird, 1976: 3). User fees are currently charged by most municipalities to pay for services such as water, sewers, transit, recreational facilities, homes for the aged and other services. This section of the paper briefly summarizes the advantages and problems associated with user charges. The main focus of the discussion on user fees is in the second section, which analyzes the impact of user fees on the development of urban land.

4.1.1 Description of User Fees

Economists argue that there are many efficiency advantages to charging directly for local public services. There are three main advantages of user fees:

- User fees promote efficiency in the consumption of goods and services. Efficiency requires that the price equals the marginal cost (the cost of resources to society of producing an additional unit of the good or service). The price measures the value of an additional unit to the consumer. If the price is greater than the marginal cost, this means that society values an additional unit of the good by an amount that exceeds the cost to produce it. Society would gain by producing more of that good or service. If the price is less than the marginal cost, society values the good less than the cost to produce it and society would gain by producing less of it. Only where price is equal to marginal cost will there will be an efficient allocation of resources.

- Charging for goods and services directly lets governments know the quantity and quality that people want. Without pricing, there is really no mechanism (other than voting every few years) for citizens to register their demands for local goods and services. With pricing, individual actions in response to the prices that are set can signal shifts in demand more quickly and more accurately than the political process.

- User charges are equitable where equity is based on the benefit principle of taxation: charges are based on the benefits received. More precisely, the benefit principle of taxation states that each individual should pay taxes that reflect the marginal or incremental benefit they receive from a unit of the public good or service.

There are, however, some problems with pricing urban services. The two main ones are:

- pricing may result in undesirable distributional consequences
- it may be administratively costly to set and collect charges.

It has been argued that pricing is not fair because low-income people cannot afford to pay for services. Obviously, there will be problems trying to implement a pricing scheme where the distributional consequences are undesirable. Also, where the cost of collecting charges exceeds the revenues generated, it will not be worth pricing.[16]

4.1.2 User Fees and Urban Development

Some authors have claimed that user fees can improve the pattern of urban development. Based on evidence that the cost of services increases with decreases in the density of development, the most costly areas to service will be the outlying, low-density developments (see section 1.3 above). If the outlying areas are charged the marginal cost of services provided to them and central, more densely populated areas are charged the marginal cost of services provided to them, the result will be an efficient allocation of resources. If other forms of pricing are used, the result is not likely to be efficient. This issue is explored further below.

[16] For a comprehensive treatment of user charges and benefit taxes, see Bird (1976).

While marginal cost pricing is efficient, average cost pricing (which sets a constant price equal to the average cost of serving all of the consumers of the service) is more commonly used by municipalities. Downing (1973) compared the impact of marginal cost pricing, average cost pricing and property taxes on the development of urban land.[17] His analysis is based on estimates of the costs of sewer service in a hypothetical city of 100,000 people. The city is assumed to be circular, entirely residential and to be developed at three densities decreasing from the centre outwards.[18] Cost estimates are provided for each of the three densities, indicating that costs increase as density decreases.

If marginal cost pricing were used as the basis for charging for sewer services in this hypothetical example, each consumer would pay exactly the marginal cost of serving them and would neither receive nor pay a subsidy. However, if the average of these marginal costs were estimated and consumers were charged this average cost, then those in outlying areas (where costs are relatively higher) would pay less than the marginal cost of the service and they would, in essence receive a subsidy. Those in the central, high-density area would pay more than the marginal cost of the service and would pay a subsidy.[19]

Where benefits that accrue to a site are not fully charged to it (as is the case with average cost pricing in this example), there will be an impact on land values. Just as taxes or charges may reduce property values, the provision of municipal services will increase property values. Local services make a municipality a more desirable place to live. Better services increase the demand for properties in that municipality, leading to higher property values. These higher property values counteract the lower property values resulting from the charge or tax. If the charge exactly matches the service benefits, the two effects should cancel out. If the service benefits exceed the charge, there will be an increase in the land value; where charges exceed benefits, land values will be lowered.[20]

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[17] The remainder of this section compares the impact on development of marginal and average cost pricing. The impact of property taxes on development is discussed in section 4.2.

[18] Downing recognizes that the assumption of a circular city understates real world variations in the costs of services.

[19] In the hypothetical example posed by Downing, those in the medium-distance, medium-density area would receive a slight subsidy. The conclusions depend on the nature of the example and may not always hold for this area.

[20] There is a further effect that has to be considered in municipalities that also rely on property taxes. Suppose, for example, that a property owner is being undercharged relative to the value of services provided and that the differential is capitalized into higher property values. The property tax, if based on market value, will increase as a result of higher property values. In this way, the property tax reduces the implicit subsidy to the property

Where land values are affected, there will be an impact on development decisions. Downing considers a situation in which a developer is considering developing a residential development on the urban-rural fringe on land currently in agricultural use. He assumes that the value of land in residential use is worth one dollar less than its value in agricultural use; in other words, the land is on the verge of being developed. Now suppose that the municipality is considering installing a new sewer system in the area. This will change the productivity of the land for residential use but not for agricultural use. The issue for development is how this sewer system is financed. If it is financed by marginal cost pricing, then the marginal cost would equal the marginal benefit and the bid price of the land in residential use would not change and there would be no impact on the decision to develop. However, if average cost pricing were used, the bid price of the land for residential use would increase (since the marginal costs would be less than the marginal benefits and this differential would be capitalized into land values) but the bid price for agricultural use would be the same. An incentive is provided to develop the land for residential use.

In summary, other things being equal, a financing scheme that undercharges outlying areas will result in increased property values. Undercharging in outlying areas can lead to premature residential development of fringe land; similarly, overcharging central areas is likely to inhibit more dense developments. Pricing for local services has the potential to be efficient but only where marginal cost pricing is used.

4.2 PROPERTY TAXES

The property tax is a tax levied on residential and non-residential (commercial and industrial) properties. This section describes the characteristics of the property tax and analyzes its impact on development.

4.2.1 Description of the Property Tax

Property taxes are calculated as a tax rate times the assessment base. Tax rates are generally levied as mill rates which are expressed as dollars per $1,000 of assessed value. Sometimes rates are expressed as a percentage of assessed values. Property taxes are levied on land and buildings assessed at their market value. Market value is defined as the price that would be struck between a willing buyer and a willing seller in an arm's length transaction. The degree to which assessed values approximate market values varies considerably across the country. In B.C., for example, assessed values come fairly close to market values; in some municipalities in Ontario, properties are still assessed at their 1940 values. Thus, it is

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owner. Where up-to-date market values are not being applied, the subsidy from undercharging will not be reduced.

necessary to consider the nature of the assessment system when looking at theimpact of property taxes on urban development.

Most municipalities differentiate mill rates by residential and non-residential properties. For example, in Ontario, it is legislated by the province that the mill rate on residential property be 85 percent of the mill rate on commercial/industrial property.[21] In Nova Scotia, rates are differentiated by three classes of property — residential, commercial and resource. In Prince Edward Island, rates are differentiated by two property classes — commercial and non-commercial (which includes residential). In Alberta, rates are differentiated according to whether the property is residential, non-residential or farm.

While most provinces have legislated higher mill rates on non-residential property than residential property, the largest variation between property classes probably results from differentials in assessment practices. For example, a comparison of effective property tax rates (property taxes relative to market value) across property classes in Ontario municipalities indicated that there are wide variations in the tax treatment among single-family homes, apartments, commercial, industrial and other property classes (Kitchen and Slack, 1993a). There are also wide variations within property classes across municipalities.

In many provinces, an additional business tax is levied on the occupants of non-residential properties.[22] The base of this tax varies across provinces and includes percentage of assessed value, assessed gross rental value, square footage, and storage capacity. The business tax, combined with higher tax rates on non-residential property and an assessment system that discriminates against non-residential property, means that non-residential property tends to be over-taxed relative to residential property. When one considers that the benefits received by non-residential properties are probably less than those received by residential properties, the overtaxation of non-residential property is even stronger.[23]

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[21] In Ontario, the lower tier municipality is the tax collector. However, regional (or metropolitan) governments and school boards levy their tax requirements on the lower tier municipality. On average, the school board's share of local taxes is 50 percent and the lower tier and regional government shares are about 25 percent each.

[22] Not only does the business tax result in the overtaxation of non-residential property, there are many other concerns with this tax. For a review of the business tax, see Kitchen and Slack (1993a).

[23] One of the justifications for the higher taxation of non-residential property is that non-residential property owners can write off their property taxes against income for income tax purposes. Homeowners in Canada (though not in the U.S.) are not permitted to write off property taxes against income taxes; owners of rented residential can, however.

4.2.2 Impact of the Property Tax on Development

A property tax that is not matched by service benefits will have an impact on the nature and timing of development and the location decisions of firms. Some of these effects may be desirable; others may not be. From the perspective of tax policy, it is important to understand what these effects will be.

Does the Property Tax Discourage Development?

The literature on the impact of the property tax on development suggests that they will, other things being equal, alter the pattern of development and land use. This conclusion is based on the traditional view of the property tax, which analyzes the tax in two parts: as a tax on land and a tax on structures.[24] Land is assumed to be fixed in supply (completely inelastic or unresponsive to changes in price) and the part of the tax that falls on land is assumed to be borne by landowners. Because landowners cannot reduce the supply of land (it is fixed), they cannot shift the burden of the tax to others. The tax is said to be capitalized into land values.

Because the supply of structures can be altered through investment decisions, however, the portion of the property tax assumed to fall on structures can be shifted forward to consumers of the services provided by structures. If the supply of structures is assumed to be completely elastic in the long run (i.e., any amount will be supplied at the specified rate of return), all of the tax on structures will be shifted forward to tenants of residential rented property and to consumers in the case of non-residential property. In the case of owner-occupied housing, the tax will be borne by the owner-occupiers.

This view of the property tax rests on two critical assumptions: the supply of land is fixed and the supply of structures is perfectly elastic. If the supply of land is not fixed, then the tax on the land component of the property can be shifted to other factors of production or to consumers. For example, heavier taxes in an urban area surrounded by farmland may reduce the supply of land brought into urban use. This will raise housing prices and affect wages, profits and rents.

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[24] There are two views of property tax incidence: the traditional (partial equilibrium) view and the new (general equilibrium) view. To analyze the impact of the property tax on development in a particular municipality, the traditional view is the most appropriate. For a description of both views, see Bird and Slack (1993).

If the supply of land is fixed, the present landowners bear only those increases in land taxes that have been imposed since they obtained the property. All earlier taxes on land would have been capitalized, in whole or in part. This means that they would have resulted in a reduction in the selling price of the land at the time they were imposed. The taxes would have been borne by previous owners since the present owners would have paid less for the taxed property to ensure they received the normal rate of return after paying the property tax.

The empirical evidence on property tax capitalization is limited and generally analyzes only the residential property tax.[25] The results are mixed: two Canadian studies of capitalization of within-jurisdiction tax differentials (Wales and Wiens, 1974; Chinloy, 1978) found no evidence of capitalization. Hamilton (1975) found 50 percent capitalization of within-jurisdictional differentials and 28 percent capitalization of between-jurisdictional differentials. Chaudry (1983) and Islam (1989) found evidence of complete capitalization of between-jurisdictional tax differentials and Chaudry found evidence of compete capitalization of within-jurisdictional tax differentials. In short, the evidence on tax capitalization is mixed, ranging from zero to 100 percent capitalization. One can only conclude that there is likely some capitalization of taxes into land values but the degree of capitalization is not known with certainty.

The traditional assumption of a completely elastic supply of structures is probably not realistic in the long run either. This means that, if the tax on structures is to be shifted forward in the short run, it would require a completely inelastic demand curve. This assumption would imply that tenants (and consumers) are completely immobile in the short run, which is also an unlikely assumption. Thus, not all of the tax on structures is likely to be passed forward to tenants and consumers.

The implications of the traditional theory of property taxes is that the tax will discourage development. The tax on structures will reduce the supply of structures, initially by reducing repairs to the building and later by reducing the quantity supplied. Given that a larger and higher quality building will mean a higher assessment and therefore higher property taxes, the property tax creates a disincentive to improve or increase the size of the building. The reduction in quantity will cause the rental price to rise and the tax will be borne, in part, by tenants and consumers.[26] If the supply of land in urban use is not completely fixed, as has

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[25] For a good review of Canadian studies of property tax capitalization, see Day and Winer (1992).

[26] The ability to shift property taxes onto residential tenants depends on the existence and nature of rent regulation. In Ontario, for example, approval is required to raise rents more than the regulated amount. This means that property taxes could be passed onto tenants if the rent increase does not exceed the guideline rate or if the owner has received

been suggested, then the land portion of the tax may also discourage development.

To the extent that effective tax rates are higher on non-residential property than on residential property, one would expect (other things being equal) that commercial and industrial development will be discouraged relatively more than residential development.

Does the Property Tax Affect the Density of Development?

In theory, one would expect that a property tax would result in a reduction in density. Since the tax is levied on property values, any investment that will increase property values (such as increasing the density) will make the property subject to a higher tax.

Several empirical studies confirm that the property tax reduces the density of development. Some studies are based on analytical models and others are based on simulation models. Some of these have been reviewed by Nowlan (1993):

- Grieson (1974), using 1970 housing data in the United States, found that housing density would increase 23 percent if a 3 percent property tax were replaced by a non-property-related tax.

- Shoup (1978), using post-1945 data for Los Angeles office buildings, found that a property tax at an annual average rate of 2 percent would reduce the optimal size of an average building by about 14 percent.

- Haurin (1981) found that an increase in the property tax in one municipality not matched by increases in other municipalities will reduce the size of the municipality, its population and the density of residential building.

- Steen (1987a) found that moving from a head tax to a property tax leads to reduced population density in the central city and to urban sprawl as the urban area moves outward into undeveloped land.

In short, all of these studies suggest that property taxes reduce the density of development. This conclusion is particularly important in light of recent provincial government efforts, in Ontario for example, to encourage residential intensification.

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approval to raise rents more than the guideline.

Does the Property Tax Affect Location Decisions of Firms?

As noted earlier, non-residential properties are relatively over-taxed in most jurisdictions when compared to residential properties. This has led to increasing interest in the impact of the non-residential property tax on development. In particular, do property taxes affect the location decisions of firms?

The property tax is a component of the costs to a firm in a particular location. To the extent that the property tax is matched by expenditure benefits provided by the municipality, the property tax is similar to the payment of wages and salaries to labour. However, it is unlikely that property taxes on non-residential properties are equal to the benefits of local public services to non-residential properties (see the discussion on benefits below). To the extent that they are not, the property tax is a fixed charge that has to be paid. On the assumption that firms are profit-maximizers, property tax differentials across jurisdictions will influence their location decision in the same way as differentials in other production costs.

Interest in the impact of property taxes on the location of firms has led to a vast empirical literature on this topic. There are two types of studies of firm location: surveys of business executives and econometric studies of the determinants of business location.[27] Surveys allow researchers to obtain data at the micro-level but there are several problems with the survey technique, such as:

- the response rate is often low
- the right person is not always the respondent
- there can be problems with inaccurate responses
- the results may be unique to a particular industry and cannot be generalized.

Notwithstanding these problems, the results of these surveys suggest that taxation does not have a significant impact on location decisions. More important to the location decision are labour costs, transportation costs, and market conditions.

Econometric studies are superior to surveys because they test for the significance of the tax variable on a location decision while holding constant the impact of all other variables (such as wages, transportation costs etc.). Unfortunatly, the results of numerous studies have not provided conclusive evidence on the locational impact of property taxes.

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[27] The remainder of this section is based on Kitchen and Slack (1993a), where a comprehensive review of these studies can be found.

A closer look at these studies indicates that the results are sensitive to a number of factors:

- the measure of business activity that is used as the dependent variable
- the extent to which non-tax variables are used in regressions
- the nature of the property tax variable
- the existence of a variable that measures public services
- the type of industry
- the time period
- the unit of observation (whether the impact is being tested within or between metropolitan areas or states).

As with the survey results, most of the studies that measured tax differentials between metropolitan areas or states found that the property tax was not a significant determinant of location. However, studies *within* metropolitan areas showed the property tax variable to be statistically significant. Unfortunately, many of these studies tested the impact of property tax differentials without considering the impact of service differentials.

Evidence on non-residential property taxes across Canadian municipal jurisdictions indicates that there is fairly wide variability in effective tax rates (Kitchen and Slack, 1993a). There are also wide variations in effective tax rates between Canadian and American jurisdictions. Taxes are different for at least two reasons: the tax mix is different in different jurisdictions and the benefits received from local services are different. Evidence on revenue sources in several Canadian and American jurisdictions (Kitchen and Slack, 1993a) shows that, on average, non-residential property taxes are high in those jurisdictions that do not depend heavily on other sources of revenue such as user fees, local income taxes and other revenues. It is not enough to look at the impact of the non-residential property tax on business location in isolation. Rather, it is necessary to evaluate all of the taxes faced by businesses in each location. The next section considers the importance of also looking at the benefits received relative to taxes paid.

Is the Property Tax a Benefit Tax?

Where property tax differentials reflect service differentials, no impact on location or land use is expected. This section reviews to what extent the property tax can be regarded as a tax related to service benefits.

There is a literature in public finance that focuses on the extent to which the property tax can be regarded as a benefit tax. Hobson (1987) argues that the property tax is like a series of user fees for local goods and services and that local differentials in property tax rates merely reflect differentials in local services. This argument is based on the Tiebout model, which assumes that there is an infinite number of local jurisdictions each with its own tax and expenditure packages. On the basis of several assumptions, including that consumers are

perfectly mobile between jurisdictions, taxpayers "vote with their feet" and move to the jurisdiction with the tax-expenditure package that most satisfies their wishes. In this model, property taxes are like prices for local services.

On the other side of the argument, Netzer (1965) has argued that most local public services financed from property tax revenues yield benefits to residents that are not related to the value of their property.[28] For example, the use of educational facilities, day care centres and other "people-related" services are not correlated with property values. However, these services do enhance the value of real property because people choose to live in areas where services (such as schools) are good. This increases the demand for housing in those areas and increases property values. "Property-related" services (such as water and sewers) are also reflected in property values.[29]

The debate over whether the property tax is a benefit tax or not depends on whether benefits are defined on the basis of the individual user or on the basis of the property (in other words, property in general benefits from public services). As noted earlier, for a tax or user fee to be efficient, it is necessary that the individual taxpayer be able to vary his use of the service and thereby link benefits and costs on an individual basis.

While the distinction between property-related and people-related services is debatable (is fire protection a service to property or to people, for example?), it suggests that some services are more appropriately financed by property taxes than others. Some authors (e.g., Bossons, 1981) have proposed that part of the property tax be re-designed to make taxes more closely related to benefits. As an example, front footage is considered to be a better measure of the individual's use of water than are property values. While this may be true, it would seem that a user fee for water would be a more efficient way to pay for this service.

The property tax, as noted above, is a tax on residential, commercial and industrial property. The discussion in this section has concentrated on the residential property tax. There is an increasing concern, however, that non-residential property is over-taxed relative to residential property. One aspect of this over-taxation relates to use of services. It has generally been argued (e.g., Bartik, 1992) that non-residential property uses fewer services than residential

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[28] The link between benefits and non-residential property taxes is even less clear. One study of the non-residential property tax has suggested that the benefits of local services to these properties are far less than the taxes they pay (Kitchen and Slack, 1993a). Estimates for selected municipalities in Ontario showed that non-residential property taxes ranged from 28 percent to 51 percent of total taxes; the non-residential portion of local expenditures (including education), however, ranged from 13 percent to 21 percent.

[29] The distinction between "property-related" and "people-related" services is analogous to "hard" and "soft" services.

property. Kitchen and Slack (1993a) estimated that the differential between property taxes and benefits received for non-residential properties in selected Ontario municipalities ranged from 18 to 20 percentage points.

If the property tax were a benefits tax, then non-residential property should pay relatively lower taxes than residential property. In most jurisdictions, however, non-residential property pays relatively higher property taxes: both the mill rates and the assessment tend to be higher.

In terms of the impact of alternative forms of taxation or user charges on land use decisions, the point made earlier can be re-iterated: to the extent that the property tax or a user fee closely reflects the benefits received from local public services, it will be neutral with respect to its impact on development. When the method of payment is not related to the benefits received, there will be an impact on the development decision. A user fee will thus likely be the most neutral revenue source with respect to development. Property taxes that are differentiated according to benefits received will be more neutral than a uniform property tax.

What is the Impact of Differentials in Net Fiscal Benefits?

It has been noted that property taxes not matched by service benefits will affect land use decisions. It has also been suggested that the property tax can be regarded to some extent as a benefit tax, but not entirely. This section reviews the impact on land use and development decisions when property taxes are not equal to benefits.

The allocation of the costs of services on the basis of property values means that some taxpayers will pay less for services than the value of those services to them and some taxpayers will pay more. Downing (1973) investigated the circumstances under which taxpayers would be overcharged or undercharged. Going back to the example of a circular city with three zones decreasing in density from the centre to the outlying area (in Section 4.1.2), Downing assumed that property values (per average dwelling unit) are highest per capita in the outlying area and decrease as you move towards the central area.[30] Applying a property tax to property values yields higher per capita taxes in the outlying area and declining taxes as you move towards the centre. In his example, the outlying areas are charged more than the marginal cost of service; they are overcharged. Central areas are also

[30] This assumption is based on U.S. data in the 1970's and is not particularly applicable to Canadian cities today. The assumption is altered later and the implications identified.

overcharged but the medium density intermediate areas are undercharged.[31]

Going back to Downing's example of agricultural land at the fringe of a residential area, under a property tax regime the agricultural land would not be developed. Because the outlying areas are overcharged by the property tax , the price of land for residential use would fall and the land would not be developed. If central areas are also overcharged, more dense development there would be discouraged.

Downing's results, as he recognizes, depend crucially on his assumptions about relative property values in different parts of an urban area. Suppose, for example, that property values are highest in the central core, as in many Canadian cities. If properties in the municipality were assessed at market value, then central properties would be paying relatively more taxes than those in the outlying areas. Since it has been indicated that the cost of services is relatively lower in the central area, the result is that properties in the central areas would be overcharged and properties in the outlying areas undercharged. It is unclear, without a concrete example, what the impact would be on the medium density intermediate areas.

The analysis also depends on the nature of the assessment system. Suppose, for example, that properties are more valuable in the central areas but the assessment system is out of date. In other words, properties are not assessed for tax purposes at their current market values. If, as has been shown to be the case in Canadian studies, that the central area is relatively underassessed compared to outlying areas, then property taxes would be relatively lower in the central areas. This example — higher-valued properties in the central area and out-of-date market value assessment — would mean that central areas would pay relatively less taxes for relatively lower cost services and outlying, lower density areas would be paying relatively higher taxes for relatively more expensive services.

How is the Impact of the Property Tax Affected by Different Tax Bases?

Most of the analysis has assumed that the property tax is levied on a market value basis. In the preceding section on net fiscal benefits, it was suggested that up-to-date market values are not a reality in many parts of the country, most notably in Ontario. Where downtown properties are relatively underassessed compared to suburban properties, for example, it was suggested that downtown property owners would pay relatively less taxes for relatively lower cost services and suburban properties would pay relatively higher taxes for relatively higher cost services. From the perspective of land use efficiency, the out-of-date assessment system probably works better than market value for single-family homes.

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[31] Recall in this example that the costs of services were assumed to increase as density decreased.

However, under the assessment system currently used in Ontario, apartments are over-assessed relative to single-family homes. To the extent that the costs of services are lower in higher density developments, the current system, which favours single-family homes discourages investment in apartments (other things being equal). Similarly, the assessment system discriminates against commercial and industrial properties and there is a differentially higher mill rate on commercial/industrial properties in municipalities in most provinces. Again, to the extent that commercial/industrial properties use fewer services than residential properties, there is a disincentive to invest in commercial/industrial properties.

A variety of property tax bases have been proposed for use in Ontario. These include: front footage of lot, square foot of building, site value, market value in use, actual cost of replacement of improvements, and several variants of these.[32] The following briefly reviews the nature of the impact of these alternatives:

- To the extent that front footage of lot better reflects the use of services than does market value (as some authors have suggested), there would be no impact on land use decisions (Bossons, 1981). The tax based on front footage will be similar to a user fee for services. However, if property taxes based on front footage do not fully reflect the use of services, then there will be an impact on land use. Other things being equal, there will be an incentive to invest in properties with small front footage.

- Square foot of building as the base of the tax would discourage investments that increase the size of the building. Compared to a property tax based on market value which discourages investment in all property improvements, a tax on square footage of building would only discourage those investments which increased the size of the building.

- Another base for the property tax that has been proposed is market value in use. This means that the value of the property in its current use would be the base for the tax, as opposed to the value in the highest and best use. Value in current use is the base now used in Ontario and some other provinces for farmland. Other things being equal, value in current use serves to preserve farmland relative to pure market value which speeds up development. Similarly for properties that are not in their most profitable use, the tax will not create an incentive to develop them further. Relative to market value, value in current use will slow development and will not increase the density of development.

[32] Site value taxation is discussed in section 5.1 below.

- Actual cost of replacement of improvements has also been proposed as the base of the property tax. In the case of residential property, for example, the cost of the house (not including the land portion) would form the base. Since it is unlikely that there is a direct relationship between replacement cost and the use of services, there will be an impact on development of this type of tax base. Other things being equal, there will be an incentive to invest in less valuable structures and a disincentive to improve one's property.

In general, heavier taxation of the improvements portion of the property will discourage more intensive uses; heavier taxation of the land portion of the property will encourage more intensive uses.

4.2.3 Special Assessments

The findings of this section on property taxes suggest that, other things being equal, property taxes not matched by service benefits will:

- discourage development, and reduce improvements to property, building size, and the number of buildings
- reduce the density of development
- likely affect business location decisions within metropolitan areas.

To the extent that the property tax is more closely related to benefits received, the tax will be more neutral in its impact on development. In this context, special assessments provide an interesting alternative. Special assessments (and local improvement charges), which are used in a number of Canadian municipalities, are compulsory charges imposed on residential, commercial and industrial properties to pay for additions or improvements to existing capital facilities that border on those properties. They are most often used for capital expenditures to pave or repave streets, to install or replace watermains or sewers, to construct sidewalks, streetlighting, and so on.

Special assessments are often based on front footage of those properties that abut the capital works in question. While front footage is the base currently used for local improvements in Saskatchewan municipalities, proposed new legislation would expand the base to include area, equal amounts per lot, assessed value, intensity of development or some combination of these. Since different types of local improvements benefit different lands in different ways, this flexibility is expected to enhance the benefit link of special assessments.

While special assessments and local improvement levies are not as efficient as user fees because the charge is not directly related to the use of the service, they more closely approximate benefit taxes than does the property tax. Many public works increase the value of nearby land, providing a financial benefit to the owners. With a special assessment, the municipality constructs the works and then recoups the cost through a special assessment on the properties that directly benefit from the government expenditure.

4.3 DEVELOPMENT CHARGES

Development charges or levies are used by municipalities in British Columbia, Alberta, Saskatchewan and Ontario.[33] While it is difficult to obtain information on the magnitude of development charge revenues, Ontario municipalities collected $378 million in development charges in 1992; Alberta municipalities collected $159 million in 1990; and B.C. municipalities collected $64 million in 1991.

4.3.1 Description of Development Charges

Development charges (also known as development levies, lot levies, impact fees and development cost charges) are charges per lot or per acre imposed on developers to finance the off-site costs of development. While they have been around for a long time, they increased in magnitude significantly during the 1980s. Historically, they have been used to finance the hard services (trunk mains, sewage treatment plants, and roads mainly) but they have been extended to include the capital costs of city halls, recreation centres, libraries, and other facilities.

The main rationale for development charges is that growth should pay for itself. On the surface, the use of development charges (or exactions) would seem to be efficient to the extent that it relates the costs of services to the benefits received (Downing and McCaleb, 1987: 45):

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[33] In addition to development charges, municipalities in these provinces (and in other provinces) are permitted to levy other charges on developers. For example, the City of Regina imposes a hectarage assessment on new development of $55.43 per hectare for offsite charges. Other examples include parkland dedication provisions, which require developers to set aside 5 percent (or, in some cases, 10 percent) of their development for parkland or make cash-in-lieu payments to the municipality. Density bonusing is a scheme whereby developers are granted increased densities in return for providing services to the municipality such as affordable housing, day care centres etc.

> Exactions represent a potentially efficient method for paying for the costs of growth. New development typically imposes costs on existing public facilities, reducing the quality of services provided by these facilities to existing residents. A set of exactions designed to recoup the costs associated with new development would ensure that the growth pays for itself. To be efficient, the exactions imposed on new development must reflect the costs of providing the public services.

This means that development charges have the potential to be efficient if they reflect the true marginal cost of the services necessitated by the development. Since the cost of services varies by the type and location of development (for example, water and sewer services are less costly in denser developments than in sprawl developments), the development charge should also vary by these characteristics.

4.3.2 Impact of Development Charges on Development

There is considerable literature on the incidence of development charges but less has been written on the allocative effects. This section briefly reviews the impact on location, density and housing consumption.[34]

Impact on Location

Potentially, development charges can also lead to efficiencies in the location of development. If the development charge ensures that developers take account of the full costs and benefits of the development (including social costs and benefits), then they will make efficient decisions regarding the location and type of development. In the absence of development charges, developers consider the private costs and benefits of their development decision without considering the impact on the municipality of providing services. The development charge, if properly applied, requires the developer to take account of servicing costs. A privately beneficial development that imposes large costs on the municipality may thus be avoided.

[34] For a more detailed analysis of development charges, see Slack (1990).

Impact on the Density of Development

To the extent that development charges are structured to reflect *marginal* costs, they will be economically efficient. As noted earlier, evidence suggests that it is more costly to provide water in a low density neighbourhood than a high density neighbourhood.[35] However, if the development charge is based on average costs, the result will be to underprice water infrastructure in the low density neighbourhood and overprice it in the high density neighbourhood. The result is overdevelopment of the low density housing and underdevelopment of high density housing relative to what is economically efficient.

It has been noted by one author (Netzer, 1988: 47) that residential densities are lower in newly developed areas where average cost pricing is used for water and sewer connections. Where marginal cost pricing is not used, there is an incentive to develop low density developments, which are more costly to service because the developer does not have to pay the additional costs imposed by that type of development.

To reflect the true costs of development and to be economically efficient, development charges have to be differentiated by development. A development charge that is the same magnitude per lot regardless of where it is located in the municipality will not reflect the true costs associated with any one development and will not lead to efficient development decisions.

A review of development charges in B.C. and Ontario found that charges were levied on a development-by-development basis more frequently in B.C. municipalities than in Ontario municipalities, even though the legislation in Ontario permits municipalities to use marginal cost or average cost pricing. One of the reasons for the difference may be that B.C. municipalities are restricted to levying charges for water, sewers, parks, drainage and roads. Municipalities in Ontario can levy for any growth-related capital cost. Increasing the number of services may provide a disincentive for estimating growth-related costs on a development-by-development basis.

[35] While the plant capital would probably be the same regardless of whether the development were dense or not, the cost of the trunks and the collectors would vary with density.

Impact on Housing Consumption

To the extent that development charges result in an increase in the price of housing, as most authors on this subject agree (e.g., Slack and Bird, 1991), the consumption of housing will be reduced. Nonetheless, to the extent that new home-owners are faced by housing prices that reflect the true cost of housing (private construction costs and public infrastructure costs), this may be more efficient. The failure to tailor development charges to the costs of providing services to particular housing types in particular locations weakens the potential for beneficial effects of these charges.

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CHAPTER 5
OTHER FORMS OF TAXATION:
SITE VALUE AND LAND VALUE CAPTURE

Pure site value taxation and land value capture taxation are not currently being used in Canada, although variants of site value can be found in some of the western provinces. While these two types of taxation are similar in that they both tax only the land portion of the property, there are some differences between them. While site value taxation has often been proposed as a replacement for the property tax, land value capture taxation is proposed as a way to raise funds to finance major infrastructure. It would not be sufficient to replace the property tax.

5.1 SITE VALUE TAXES

Site value taxation is the taxation of the "land only" portion of the property; the assessment base excludes any capital improvements to the land. It was first proposed by Henry George in 1879 and gave rise to the single-tax movement in the United States in the 1890s. Some Canadian jurisdictions have also used site value taxation. For example, the western provinces taxed site value in the early 1900s. Some western provinces today still tax land at a higher percentage of market value than they tax improvements.

Site value, in principle, taxes the location rents (the returns from a particular location regardless of the improvements to the site). Assuming land is in fixed supply (the supply of land offered for development is unresponsive to price changes), the tax falls on landowners and cannot be shifted to others.[36] Increased site value taxes will be capitalized into lower property values. Assuming the land is in its most profitable use, the site value tax will be neutral with respect to the landowner's decisions: there is no possible use of the land that will reduce the tax. A move from a property tax (which discourages investment in building and improvements) to a site value tax (which is neutral) will result in increased investment.

Site value taxes are also neutral with respect to the intensity of land uses. Although the land use will not affect the tax liability, heavier taxation of land values will increase the opportunity cost of holding land vacant and encourage more intensive uses. While this behaviour will not reduce the tax liability, it will make the tax a smaller proportion of the income from the property. Thus, moving from a property tax, which discourages investment in property, to a site value tax will encourage building and improvements. More intensive use of land includes reducing the speculative holding of vacant land and the replacement of derelict buildings with more profitable uses (see Netzer, 1965 who supports site value taxation).

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[36] The analysis is the same as outlined above for the land portion of the property tax.

In summary, the replacement of a property tax with a site value tax is expected to:

- increase investment in improvements to existing structures and investment in new structures
- increase the intensity of land use, including reducing the holding of land for speculative purposes and replacing dilapidated buildings with more productive uses.

In terms of some of the planning objectives set out in Section 3 above, a move to site value taxation may be desirable in some cases but not in others. For example, the higher taxation of land in central areas would increase the density of development; a site value tax is more consistent with a policy of residential intensification than is a property tax. On the other hand, a site value tax may make it much more difficult to preserve open space and farmland on the urban fringe because, other things being equal, it will speed up development on the urban fringe. To be able to preserve farmland and open space under a regime of site value taxes, it would be necessary to have zoing regulations that could not easily be altered.

Finally, even though many economists like site value taxes because of their impact on the nature and timing of development, it is important to recognize that there are many administrative problems with trying to implement them. Probably the most difficult problem is to separate the land portion of a property's value from the improvements portion. Further, a move from a property tax system to a site value system will result in a shift in taxes from those properties in suburban areas where land values are lower to those properties in the downtown area where land values are higher. Such a move would have similar consequences as a move to market value assessment in Metro Toronto and may be doomed to failure.

5.2 LAND VALUE CAPTURE TAXES[37]

Land value capture taxes are used to capture the increase in commercial value created as a result of a major public investment in infrastructure. This form of taxation has generally been proposed in situations where a municipality is contemplating a major infrastructure investment such as a new subway. A large investment of this nature requires an immediate capital outlay of billions of dollars; the benefits will not be enjoyed for several years in the future. The future benefits to the local government would consist largely of property tax revenues. For the private sector, there are also potential benefits:

- increased demand for development along the subway line would permit

[37] Land value capture taxes are also known as land value increment taxes, betterment levies and valorization taxes.

property owners to increase rents

- increased densities along the subway line may be permitted, which will result in increased land values.[38]

Important issues are how the immediate costs can be shared amongst those who may expect to receive future benefits, and how those future benefits can be valued today.

The decision of the public sector to construct a subway results in a windfall gain to owners of nearby property. The subway increases demand for housing and offices on properties located near it. Given normal demand and supply conditions, the increased demand results in higher prices being charged for these properties. Through no efforts on the part of the property owners, the value of their property increases. Indeed, it is through the efforts of the local government that these values have increased. A land value capture tax has been proposed as a way for the public sector to tax some or all of the windfall gain that it has created. It has been suggested (e.g., Metro, 1991) that the tax revenues could be used to finance subway construction.

To some extent, the increased densities and increased land values will be reflected in property tax revenues, if market value assessment is the base of the tax. The available evidence suggests that property values do increase in response to subway expansion. Some of the increase will occur as early as the time that the subway line is anticipated. Property values increase throughout the period from the anticipation to the completion of the project. In other words, the construction of the subway line is capitalized into property values at various stages in the project. However, it is difficult to isolate the portion of the increase in property values that is attributable to the capital investment.

Land value capture taxes and site value taxes both tax "location rents". In the case of land value capture taxes, only the portion of the increased value that is a direct result of the public investment is taxed. Site value taxes, on the other hand, also tax increases in private site values that may arise for other reasons such as unique locational advantages. As Netzer (1965) notes, a land value capture tax would create fewer problems for equity than a site value tax because it does not tax past increases in land values that may have been paid for by new owners prior to the move to site value taxes.

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[38] The realization of this benefit assumes that zoning changes will accompany the investment in infrastructure. Otherwise, owners have no certainty that they will recover the added value or be able to pay the tax.

Bird (1992: 165), in his review of "valorization" taxes in Colombia, suggests that a number of elements are required for the implementation of this tax to be successful. An important element is the linking of taxes to benefits: "the valorization tax over the long run must have approached a benefit basis in fact as well as belief." More so than a site value tax, the land value capture tax is linked to service benefits. In the case of the subway example, the tax is levied to pay for a subway line.

The land value capture tax, like site value taxes but unlike property taxes, does not penalize the development of unimproved land. It will tend to encourage more intensive uses of land by making it less profitable for landowners to withhold land for speculative purposes. The landowner will either realize the opportunity cost of holding the land vacant by putting it to more profitable use or sell it to someone who will. It is likely to be more effective in increasing the intensity of land use than site value taxes because it is a large tax assessed over a short period of time.

As with site value taxes, one of the main problems with land value capture taxes is estimating the change in property values that arise from the public investment in infrastructure. In particular, it would be necessary to isolate the impact of the public expenditure from other market forces that affect land prices.

CHAPTER 6
SUMMARY AND CONCLUSIONS

This concluding section of the paper covers three topics:

- it reviews the findings on the impact of taxes on development
- it addresses whether tax policy should be used as an instrument of land use policy, and
- it suggests some topics for further research.

6.1 SUMMARY OF FINDINGS

This paper has reviewed the impact on land use of three revenue sources currently used by Canadian municipalities (user charges, property taxes and development charges) and two taxes that have been proposed at various times but are not currently being used in Canada (site value taxes and land value capture taxes). The findings of this review are briefly summarized:

- Where local public services are financed by user fees based on marginal cost pricing, there will be no impact on development decisions.

- Where the marginal cost of services is not equated to the marginal benefits, there will be an impact on land prices, land uses and location decisions.

- Other things being equal, property taxes not matched by service benefits of equal value will discourage investment in improvements and new buildings and will result in a reduction in the density of development.

- Development charges that are based on marginal cost pricing (where charges vary by development) will result in efficient land use decisions.

- Replacing the property tax with a site value tax (or a land value capture tax) will speed up development, and result in more intensive uses of land.

6.2 TAX POLICY AND LAND USE POLICY

The findings on property taxes indicate that, other things being equal, property taxes do affect development decisions. While economists generally believe that distortions are inefficient, there are circumstances where altering development decisions may be efficiency-enhancing. One example is where there are externalities associated with particular uses, such as open space. Society may value some open space more than the developer. In economics

terms, the marginal social benefit is greater than the marginal private benefit. If these positive societal benefits (externalities) are not considered by the developer, the land may be developed too quickly from the public's perspective.

One way to alter the timing of development is to provide a subsidy to the developer that would increase the value of the land in its current use and provide an incentive to keep it in that use for a longer time. The subsidy could be in the form of lower rates of taxation or lower assessed values for open space relative to other uses (Anderson, 1993). Higher taxes on residential development, for example, will discourage the developer from converting open space into a residential development.[39]

More generally, tax policy could be used as an instrument of land use policy. As Nowlan (1993) suggests, in locations where a municipality wants to discourage development, it should increase property taxes; where it wants to encourage development, it should reduce property taxes.

On the other hand, Netzer (1965: 207) has argued that fiscal measures should not be used to achieve non-fiscal objectives. With respect to the preservation of open space, for example, he recommends that open space be reserved by "... actual public acquisition of property rights in the desired land — rather than by manipulating major general taxes for this purpose, with attendant administrative difficulties," not to mention unanticipated toxic side-effects.

While it may be appropriate in theory to use tax policy to equate marginal social costs to marginal social benefits, it may be difficult in practice. In the open space example, setting the tax would require knowledge of the value of the open space to society. Even if this value could be determined, however, it may be so large that reducing the tax to zero would still not provide a sufficient incentive to preserve the open space.

Another problem with using tax policy to implement land use policy is that land use objectives have changed significantly over the last thirty years from a desire to develop the urban fringe to a desire for residential intensification and the preservation of open space. Throughout this period, however, it has been extremely difficult to change tax policy. For example, efforts to reform the property tax in some parts of Ontario have not succeeded even after thirty years. Tax policy is a blunt instrument for achieving land use objectives and

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[39] Converting from open space to a residential use could increase the tax liability in two ways: first, in some provinces, the rate of tax is higher on residential uses than on open space. Second, the move to a residential use will increase the market value of the property and thereby increase the tax base. One of the problems with using tax policy this way, however, is that scattered development may occur. Developers will have an incentive to develop single parcels of land because of the tax consequences of developing a whole subdivision at once.

it may have unintended side effects (e.g., with respect to equity considerations).

It was noted in Section III that provincial funding of municipalities has been declining and provincial interest in planning policy has been increasing. Local flexibility in tax policy (such as permitting municipalities to levy different tax rates on different types of property) may not solve the planning problems that are more regional or provincial in scope. Thus, to use tax instruments to implement land use objectives may simply not be effective.

Given all of these constraints, it would seem that tax policy should probably be designed to be at least neutral with respect to development decisions. This means greater use of user fees, where possible, less reliance on the property tax (especially the non-residential property tax), and development charges that are levied on a development-by-development basis. For major capital projects, the land value capture tax has some merits but requires a fair bit of work to determine the base of the tax. With all of these suggestions, the emphasis is on linking taxes to service benefits so that efficient choices can be made.

6.3 SUGGESTIONS FOR FURTHER RESEARCH

While there is a significant literature on the impact on development of property and other taxes, there is much less on the service benefits that are financed by these taxes. Some suggestions for further research along these lines include studies that would:

- compare the property taxes paid relative to the benefits received for residential, commercial and industrial properties
- determine how the costs of the "soft" services (education, health and social services) vary with density of development
- analyze the impact on land values, location decisions and the density of development of differentials in net fiscal benefits (the difference between taxes and service benefits).

With respect to development charges, there is now experience in three provinces with charges based on both marginal cost pricing and average cost pricing. Further research on development charges could include studies that compare the impact on land use development patterns of alternative development charge pricing techniques.

Finally, much work needs to be done before a land value capture tax can be implemented to pay for major public infrastructure. In particular, a methodology is required which will determine the increase in land values that can be attributed to a major public investment.

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Intergovernmental Committee on
Urban and Regional Research
150 Eglinton Avenue East, Suite 301
Toronto, Ontario
M4P 1E8

Tel.: (416) 973-5629
Fax: (416) 973-1375

Comité intergouvernemental de
recherches urbaines et régionales
150, av. Eglinton est, bureau 301
Toronto (Ontario)
M4P 1E8

Tél.: (416) 973-5629
Télécopieur: (416) 973-1375