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# Fiscal Impact Analysis: Applications and Usage in Ontario Municipalities

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University of Western Ontario

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Major Research Report

Fiscal Impact Analysis:  
Applications and Usage  
in Ontario Municipalities

Submitted to: Prof. A. Sancton

Submitted by: J.J. Celentano

Submitted on: August 4, 1992

## Table of Contents

	<u>Page No.</u>
<u>Acknowledgements</u>	i
<u>Abstract</u>	ii
<b>1.0 <u>Background and Literature Review</u></b>	
1.1 Background	1
1.2 Literature Review	5
<b>2.0 <u>Fiscal Impact Analysis Defined</u></b>	
2.1 Definitions	8
2.2 Rationale	9
2.3 Contrast with Cost-Benefit Analysis	10
<b>3.0 <u>F.I.A. Methodologies and Applications</u></b>	
3.1 The Basic Process	15
3.2 Average Costing Techniques	18
3.3 Marginal Costing Techniques	21
3.4 Typical Applications	23
3.5 Consultant Interviews re: Applications	24
<b>4.0 <u>Field Research in Selected Ontario Municipalities</u></b>	
4.1 Introduction to the Problem	28
4.2 The Hypothesis (and Subproblems)	28
4.3 Some Delimitations	29
4.4 Data Required	30
4.5 Sampling Method and Sample Population	30
4.6 Questions and Questionnaires	31
4.7 Data Preparation and Management	33
4.8 Measurement of the Data	34
4.9 Survey Results	35
4.10 Analysis	40
4.11 Possible Flaws in the Methodology	42

	<u>Page No.</u>
<b>5.0</b> <u>Outstanding Issues</u>	
5.1 Popularity	43
5.2 Make or Buy	44
5.3 As a Decision-Making Tool?	45
5.4 F.I.A. and Growth Management	46
5.5 Connection to Impact Fees (and Development Charges)	47
<b>6.0</b> <u>Conclusions</u>	50
<u>Footnotes</u>	54
<u>References</u>	55
<u>Appendices</u>	61

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Jeff Celentano  
North Bay, Ontario  
July, 1992.

## Abstract

On a regular basis, municipal governments are invariably faced with the task of having to weigh the benefits and costs of new development and community planning policies. The financial impacts of community planning policies or development proposals are generally not well understood by either municipal administrative professionals or local elected officials.

Set against a contemporary background of economic constraints, restricted revenue sources and an overall concern for local government expenditure growth, municipal decision-makers are turning to evaluative methods such as fiscal impact analysis (also known by the acronym F.I.A. or by the equivalent term "financial impact analysis") to assist in their deliberations.

In this paper, utilization of F.I.A. in selected Ontario municipalities will be examined and overall effectiveness of the approach will be assessed. Background trends and literature, definitions, and the major types of F.I.A. processes will be described and categorized.

Survey research in approximately 50 selected Ontario municipalities will be discussed and the findings presented with basic analyses. The last two sections of the paper will go over a series of outstanding issues with regard to F.I.A. and in the summary section, connections between this type of administrative

evaluation and local government decision making will be explored.

## 1.0 Background and Literature Review

### 1.1 Background

Two important trends have influenced the development of fiscal impact analysis as an evaluative method in community development decisions.

The first trend has its roots in the socio-economic and political issues experienced by major American cities in the time period following the end of the 1960s. It appears that urban issues in the U.S. generally precede those of their Canadian counterparts by 10-15 years, whether it is inner-city housing, urban crime, mass transit concerns or growth issues. In this circumstance, the issue that has preoccupied U.S. urban affairs specialists has been loosely referred to as "fiscal stress".

In brief, fiscal stress is the outcome of an investment strategy required by municipal governments to replace aging (or worn-out) public infrastructure in times of financial restraint. Peterson (cited in Bahl, 1978) has written about the diminishing proportionate share of public investment in costly capital facilities; while in a related vein, Netzer (cited in Beaton, 1974) has outlined the relatively rapid increase of public expenditure for suburban areas, particularly in the field of education expenditures. At the same time, Muller (cited in Burchell and Listokin, 1981) noted changes in municipal

demographics in large urban centres through the 1970s that showed fewer and relatively poorer taxpayers would be available to pay (through property taxes) for these capital infrastructure replacements.

Local elected officials were often caught attempting to juggle costly project priorities with a shrinking tax base and diminishing funding support from senior levels of government. Fiscal "stress" occurred as the result of conflict between growing capital expenditure requests versus the costs of service delivery.

The Canadian municipal scene shares a number of similarities with her U.S. counterparts. Bird and Slack (1983) have noted the substantial growth in public sector spending in the years following the Second World War. They note that by 1977, local governments accounted for 34 percent of total government expenditure on goods and services, a figure totalling some \$17.2 billion (including school board expenditures). Because of the distinctive nature of intergovernmental relations in Canada (particularly in the area of fiscal transfer payments), Bird and Slack intimate that the Canadian taxpayer has become increasingly concerned about how public expenditure decisions are being (or have been) made:

"To improve information about government, public agencies at all levels should be forced to publicize in detail the reasoning underlying the various actions they take, or do not take.

To have good government, it must operate in a fishbowl." (p.55)

This missive obviously creates some conditions that will make elected officials and administrators alike want to tear out their hair on occasion!

The second major background trend to the use of F.I.A. has been the use of similar impact or analysis mechanisms in fields such as community land-use planning.

Much of the literature on land-use planning theory spends considerable effort on methods of evaluation for community planning policies. The planning professional assists the elected decision-makers by providing means by which the relative merits of plans can be evaluated. Evaluations or "impact assessments" have traditionally focused on social, environmental, or "cost-benefit" methods. McLaughlin (1969) notes that this method derives from the theory of the firm and has the simple aim of finding the most efficient among several solutions, i.e., that which minimizes the cost/benefit ratio. It therefore relies heavily on quantifiable elements in the analysis. Similar accounts of the cost-benefit method can also be found in Hall (1975) and Ratcliffe (1974). More recently, Hodge's (1986) text on land-use planning in Canada points out the complexities that can be associated with this type of evaluative method:

"It is not difficult to imagine that as the array of factors that the planner tries to take into a cost-benefit reckoning expands to

include intangible... items, the more difficult the summation of costs and benefits becomes... ". (p.195)

These two trends - a growing body of U.S. and Canadian urban affairs literature dealing with the financial issues associated with municipal growth management and a body of several professional practices (land-use planning and economics to name but two) where some form of evaluative methods for the impacts associated with community development decisions - helped give rise to the development of fiscal impact analysis.

A third trend influencing local government consideration of F.I.A. lies under the general trend of "downloading" program responsibilities by senior levels of government. In its current Ontario jargon, F.I.A. may fit nicely under the umbrella of "disentanglement".

Disentanglement refers to a recent initiative by the provincial government to "explore options for the provincial-municipal financial relationship." In 1991, the Minister's Advisory Committee tabled its report suggests "realigned roles" for the provision of the wide variety of government programs and services. In fact, the Committee saw a clear direction for municipalities in this context:

"The nature of the realigned roles makes it appropriate for municipalities to follow much more closely a user pay philosophy... that the scope for user fees at the municipal level would increase significantly... that there be greater municipal autonomy in the choice and level of these user fees." (p.4)

In a later section of the report, the Committee documented the scale and duration of funding required to meet municipal hard and soft infrastructure needs. Moving into the next century,, it is represented that spending requirements in Ontario municipalities will be more or less split evenly between rehabilitation and new infrastructure development. The Committee recognized the usefulness of Development Charges to meet new infrastructure needs:

"Development charges, combined with... other recommendations for financing infrastructure requirements would give municipalities the flexibility and tools necessary..." (p.112)

The connection to Fiscal Impact Analysis in this discussion is two-fold: calculation of direct revenues and expenditures (to determine appropriateness of proposals) and accountability (a process that is known, defensible and replicable for elected officials and the general public).

## 1.2 Literature Review

In general, the publications on the topic (with the sole exception of the Burchell and Listokin 1979 monograph) were quite readable. The comparisons of approaches were well constructed, and the methodologies were clear. It is fortunate that Walisser's (1978) case study represented a sample of an average cost approach, whereas the City of Edmonton (1987) used the marginal-cost model. It allowed for a useful observation by this municipal administrator as to the complexities and effort

involved in terms of data collection and presentation under the two different approaches. The Ontario Municipal Affairs publication of similar vintage (1985) espouses the Comparable City method (a variation on the marginal costing approach). Although useful, this method implies a weight given to other decisions in other communities that is not entirely appropriate for local decisions. American publications reviewed were rich in their "how-to" detail. In doing so, their authors attempted to communicate the reasons for the approach(es) to be used, rather than focusing on results.

Before leaving the actual review of literature, it should be noted that a total of ten (10) actual Canadian Fiscal Impact Analysis reports were obtained and read. Spanning a time period from 1978 to 1991, these "case studies" of actual F.I.A. reports were taken from communities in provinces across Canada (from Nova Scotia to British Columbia). Applications have ranged from municipal annexation to planned communities; from "greenfield development" to oilpatch driven infrastructure growth. Also, a total of three (3) U.S. case studies of a similar vintage were examined. These actual cases, combined with two F.I.A. studies produced by the Ontario Ministry of Municipal Affairs, have proved to be very useful.

There is, however, one overriding concern that comes to mind after reading a number of these technical publications and case studies. The concern stems from a professional background as a

public administrator in a medium-sized urban community. Despite the merits of conducting the F.I.A. process, the literature reviewed has not clearly shown its day-to-day applicability for moderately-sized, mature urban communities. Perhaps, like other management or evaluative tools, periodic or special purpose rather than continual application will yield the best benefits, showing the decision-makers or administrators that they are "in touch with the customer". Having stated this concern, it is nevertheless acknowledged that different communities will have different "trigger" mechanisms for conducting an F.I.A., and that community size and complexity of the municipal organization may encourage this type of evaluation mechanism.

## 2.0 Fiscal Impact Analysis Defined

It is now appropriate to examine the definition provided in the literature for fiscal impact analysis as well as a brief rationale for the application of F.I.A. In addition, a portion of the discussion will attempt to distinguish and contrast F.I.A. from its often mistaken relative known as cost-benefit analysis.

### 2.1 Definitions

Two prevailing definitions of fiscal impact analysis are proposed in the literature reviewed.

In a growth-oriented environment, Burchell, Listokin and Dolphin (1985) refer to fiscal impact analysis as follows:

"A projection of the direct, current, public costs and revenues associated with residential or non-residential growth to the local jurisdiction(s) in which this growth is taking place." (p.3)

However, the more generic definition (and the one which this writer prefers) is typically stated by the Ontario Ministry of Municipal Affairs (1985) in their handbook, wherein it is suggested that:

"...(F.I.A.) attempts to identify the costs and revenues of a change in the level and number of (municipal) services... and to compare... in some meaningful way... if the change has a positive or negative impact." (p.5)

While the former definition is no less complete, this writer's

preference for the latter is based upon the notion that F.I.A. can (and does) deal with policy changes. Such changes do not always have to be growth related. Indeed, there can be a valid argument and need for conducting F.I.A. processes in maturing or declining communities.

## 2.2 Rationale

It would also be helpful at this juncture to clarify the rationale for fiscal impact analysis. Walisser (1978) notes a distinction between economic impact and fiscal impact analyses, even though both methods of evaluation are carried out strictly in "dollars and cents" terms. He argues that fiscal impact analysis has a more confined focus:

"Fiscal analysis is concerned only with immediate, direct consequences. Action X brings direct response Y. Fiscal analysis is not concerned that Y may itself be an action which brings about secondary response Z. This is the territory of economic analysis." (p.94)

This rationale (and implied time horizon) is probably preferred by local elected decision-makers, since it may coincide with their own public agendas. Public administrators would be apt to show a preference for this type of analysis because it attempts to quantify the impacts of change in a way that can be explained (and defended) to elected decision-makers.

Where does the pressure for the more "immediate, direct consequence" come from? A compelling argument comes from the longstanding furor over taxation and the ability to provide

services.

Canaran (1990) noted in an article on municipal finance that well over 50% of the tax increases Canadians have experienced in the past 30 years comes from the property tax and other less visible taxes. At the same time, there is empirical evidence to suggest that residential development in a municipality represents a net tax liability. As noted by Niblett (1989), even where this type of information is presented to a local elected body, they may well choose to ignore it.

Yet, few municipalities understand the fiscal implications of new development. Steen (1987) suggests that overdependence on the operating budget for site specific cost information and lack of understanding of econometric methods of analysis are among the major reasons. The attraction of Fiscal Impact Analysis, then, is "to provide information to Council about how new development would affect the city's tax base" (p.1). F.I.A. achieves this objective where other forms of longer-term economic analysis (notably cost-benefit analysis) do not.

### 2.3 Contrast with Cost-Benefit Analysis

It may be appropriate at this juncture to highlight just what cost-benefit analysis is and illustrate some of its key assumptions.

The federal Treasury Board document (1976) notes that cost-

benefit analysis is a useful evaluative tool, comparing the estimated stream of benefits with the estimated stream of costs over the expected economic life of the investment. The subsequent steps of the analysis, however, are noteworthy:

"... the streams of benefits and costs occurring over time are compared by discounting them at some selected interest rate to arrive at the present value of benefits and costs." (p.3)

There are several important aspects differentiating cost-benefit and strictly financial analyses. First, cost-benefit analysis takes a "macro" economic approach where financial analyses tend to focus on "micro" level items. Second, cost-benefit analyses for public-sector projects imputes dollar benefit values to the service or project provided (whether there are user fees, charges, or licence revenues or not). Third, where the inputs (or costs) for public sector projects do not have market prices, the dollar values are estimated. Also, it should be noted that values for social cost and benefits are often factored into the analysis. Even here, the Treasury Board acknowledges that "there are limits... within which social objectives can be measured in money terms" (p.4).

Priest and Turvey (cited in Layard, 1972) note that cost-benefit analyses differ from "commercial" financial analysis studies because (i) costs and benefits to all members of society are included, not just the responsible agency, and (ii) the social discount rate (ie., the social opportunity cost of capital) may

differ from the private discount rate (p.13).

Finally, Roemer and Stern (1975) make reference to calculation of secondary costs and benefits in any public sector analysis of projects; there appears to be an emphasis on "linkage" or "external" effects (p.17).

A more general form of analysis (while still under the umbrella of "cost-benefit" analysis) could be termed "economic" analysis. Quite often, a simplified cash-flow model will be used to calculate revenues and expenditures attributable to a given project. A multiplier is derived in order to determine the impact of the project on the local economy in order to calculate short-run economic impact on a given market (Sarlo, 1992).

From this review, it can be seen that Fiscal Impact Analysis tends to be "micro" level and allocative in its approach. It clearly does not put social values on public capital expended, nor does it employ "social discount rates" in determining project values (when they are used, it is private discount rates that apply to debentured capital). Certainly, neither secondary nor linkage costs or benefits are attributed to projects under F.I.A. That task is left to the realm of the economists.

### 3.0 F.I.A. Methodologies and Applications

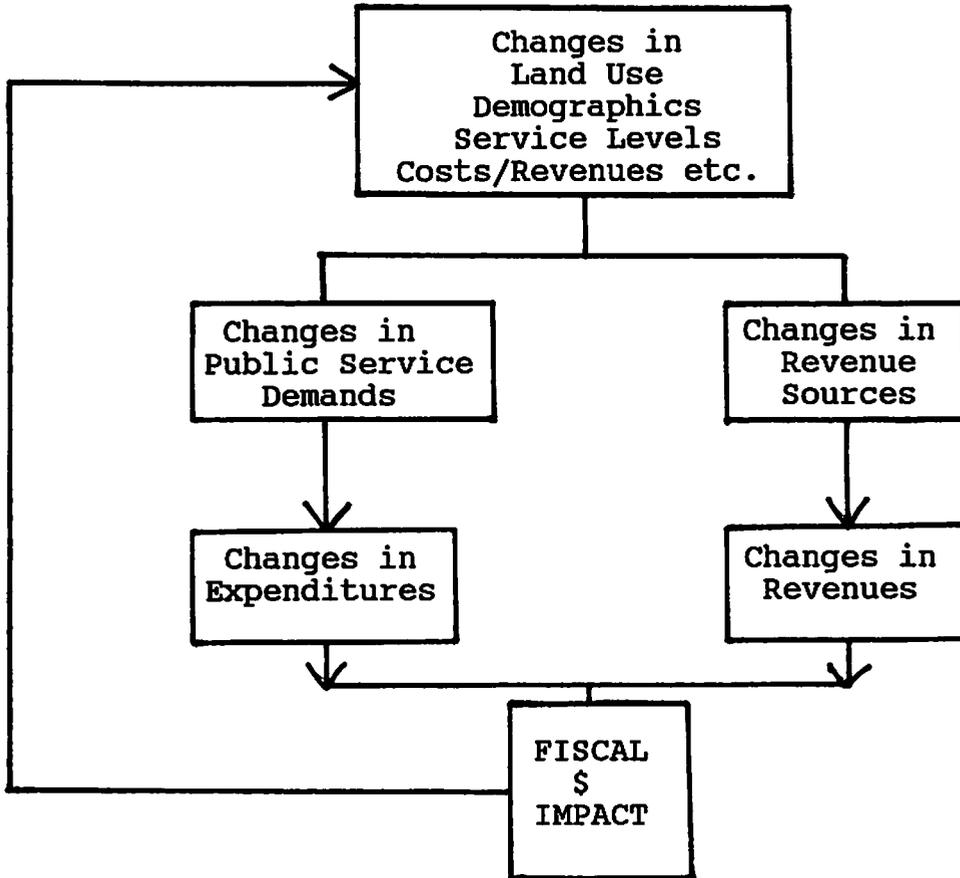
Weber and Goldman (1982) suggest that there is no one method of fiscal impact analysis appropriate for all situations. The method used will depend upon the objectives of the analysis, the local situation, and the quality of the information available to the analyst.

Burchell and Listokin (1979) note six (6) different fiscal impact methods: Per Capita Multiplier, Case Study, Service Standard, Comparable City, Proportional Valuation and Employment Anticipation. Each is recommended as most applicable for specific tasks and contexts (see Appendix "I" for a tabular presentation of these).

Two primary sorting procedures are recommended by several of the authors to assist the analyst in employing the appropriate technique. Burchell, Listokin and Dolphin (1985) suggest that average costing methods (Per Capita Multiplier, Service Standard, Proportional Valuation) be used if the municipal services supplied are reasonably close to the level of demand that is being experienced. By implication, it is assumed that in such cases, future costs will be a reflection of current costs. On the other side, if it can be readily determined that excess or deficient service capacity exists, the authors suggest that marginal cost strategies (Case Study, Comparable City, Employment Anticipation) be used. Appendix "II" is a tabular summary of the

FIGURE 1

The dynamics of fiscal impact.



Source: Tischler & Associates, Inc. (1988)

various approaches or methods, and primary advantages and disadvantages of the method.

### 3.1 The Basic Process

In all of the approaches used, there is a commonality of process in conducting Fiscal Impact Analysis. Tischler (1988) refers to these as "the dynamics of F.I.A.", and is shown in Figure 1.

First, the local government must define a standard or acceptable level of service for all relevant services.

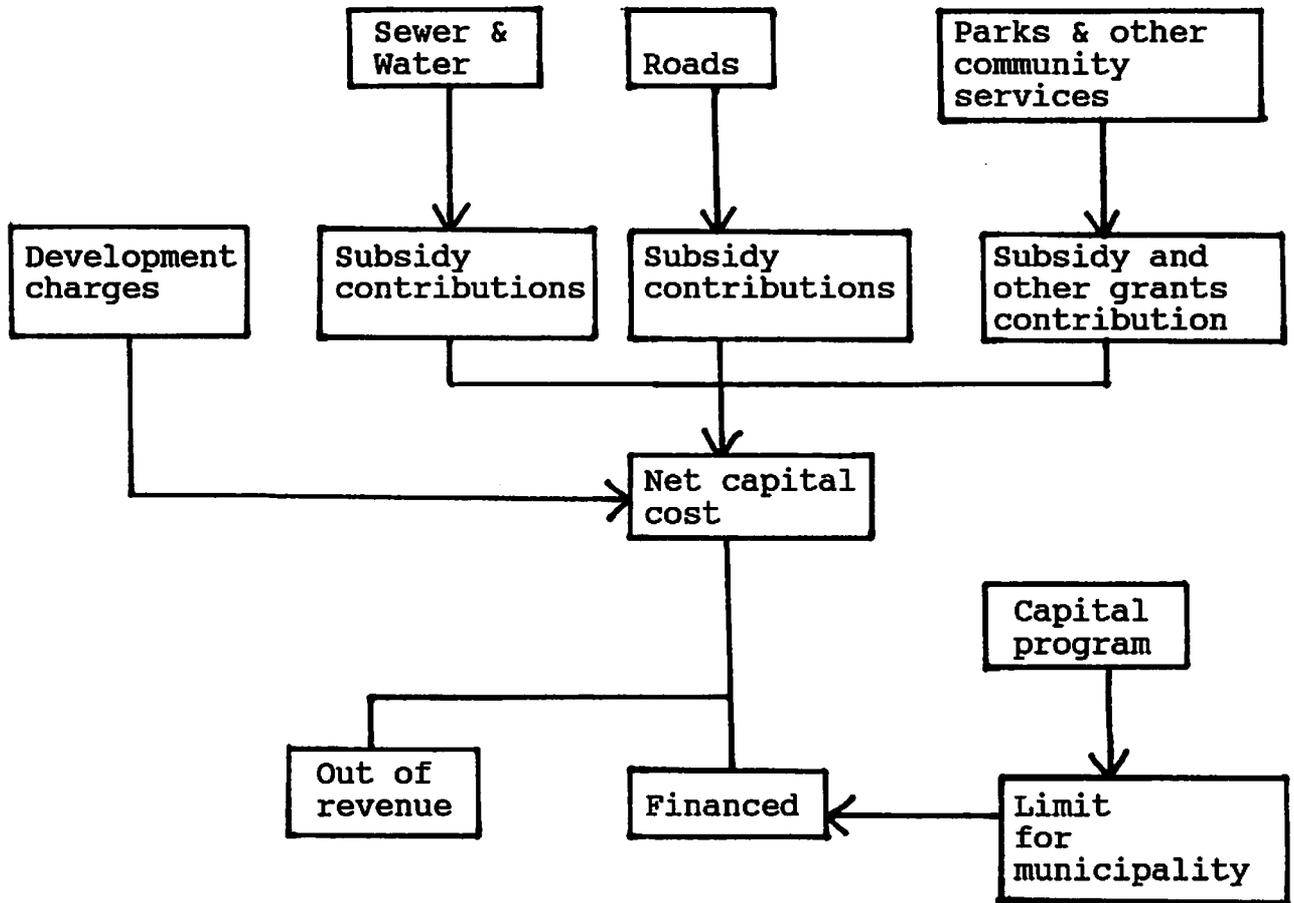
Tischler suggests that at this stage, "it is important to consider existing unused capacities of services and programs, particularly capital facilities" (p.1). The new demand will be expressed in terms of changes to such indicators as population, employment or land use.

The second step is for the local government to estimate future capital and operating costs, and special and general revenues that will result from responding to the new demand. During this stage, comparisons of regional or national average costs for providing similar services may be undertaken.

The final step, after costs and revenues have been allocated is to calculate the net surplus or deficit the new demand may create. Tischler notes that this information "can help estimate a new development's specific impact on tax rates, borrowing capacity or debt margins" (p.2).

FIGURE 2

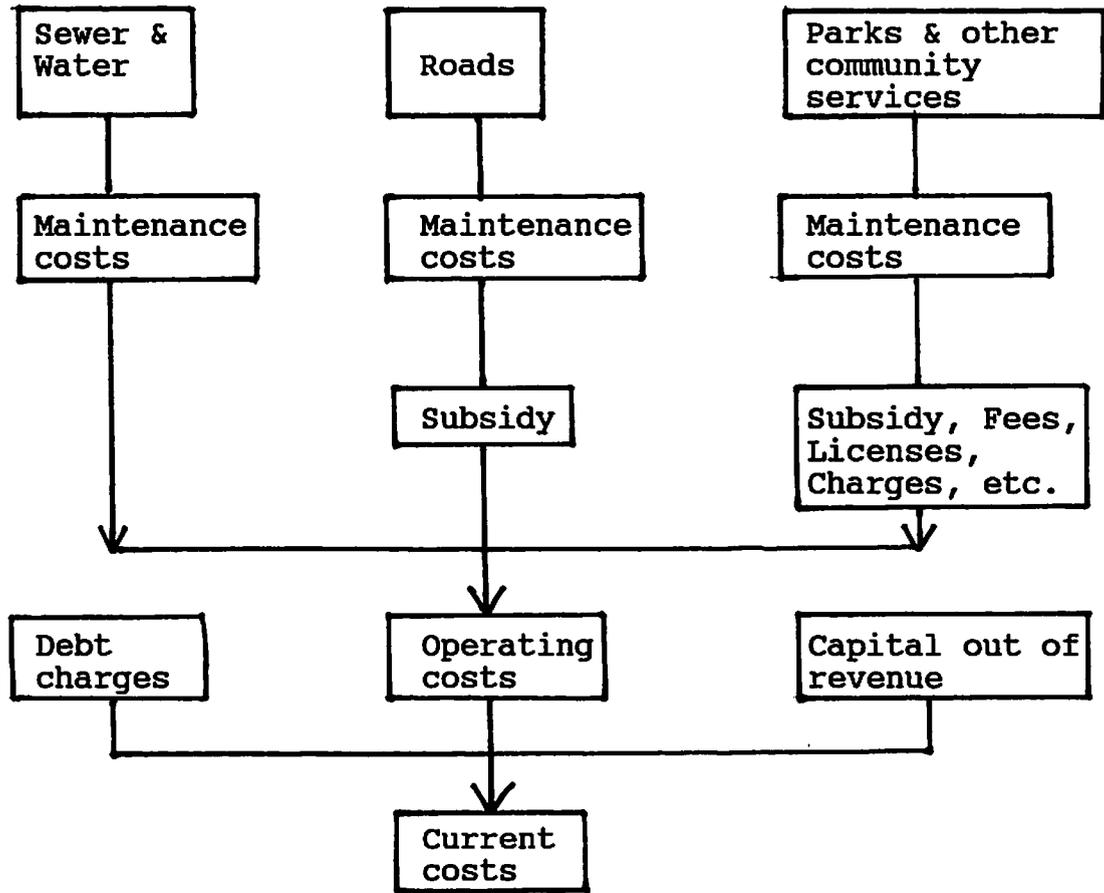
Typical Financial Impacts - Capital



(adapted from: Peat Marwick Stevenson & Kellogg, 1991)

FIGURE 3

Typical Financial Impacts - Current



(adapted from: Peat Marwick Stevenson & Kellogg, 1991)

More detailed illustrations of the capital and operating components to a F.I.A. process are illustrated in Figures 2 and 3. The subsequent determination of impact on rates is further illustrated in Figure 4.

Fiscal impact methods are applied to fiscal impact tasks based on: (i) fiscal conditions at the site of the analysis and (2) the type of problem with which the analyst is faced.

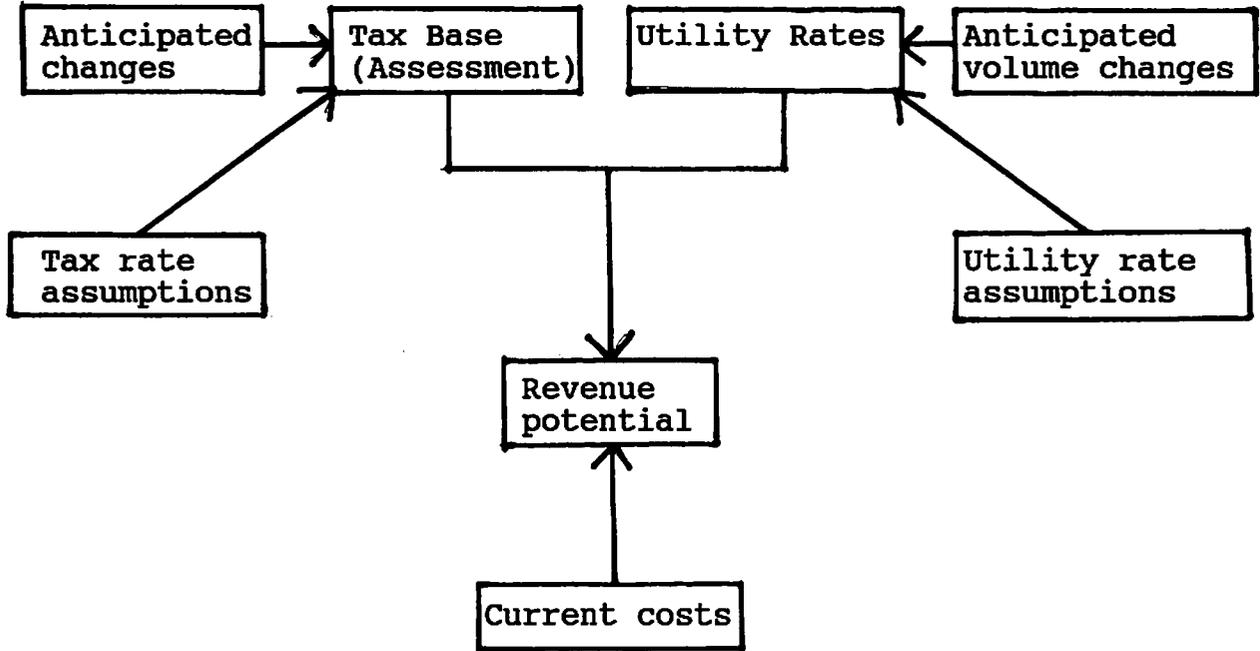
### 3.2 Average Costing Techniques

Burchell, Listokin and Dolphin (1985) suggest that average costing is "by far the more common field application." Costs are attributed to a new development according to the average cost per unit of local government services times the number of units the development is estimated to require. Per Capita Multiplier, Service Standard and Proportional Valuation represent average costing approaches.

The Per Capita Multiplier method uses detailed demographic information and averages all local government service costs. Following an allocation to non-residential uses, per capita and per pupil costs are generated. These figures, multiplied by the estimated population shift from the proposed development, are the incremental costs assigned to the specific growth generator. This method's key advantages are centred on its low cost and ease of implementation, along with acceptability of the analysis. The primary disadvantage lies in the richness of detail generated.

FIGURE 4

Typical Financial Impact - Rates



(adapted from: Peat Marwick Stevenson & Kellogg, 1991)

The Service Standard method uses averages of manpower and capital facility service levels (from federal government census information) for similarly-sized local government operations. The additional manpower and capital and operating costs for the new development are allocated. A total assignable cost to the growth increment is calculated for all local government services.

In addition to the advantage of richness of detail, Burchell, Listokin and Dolphin also note its simplicity and low cost (p.23). However, the disadvantage to the Service Standard approach is that to the extent that actual local performance differs from the average, projections will either over-estimate or under-estimate true local expenditures.

The Proportional Valuation method is used to calculate impacts of non-residential (industrial and commercial) development on local costs and revenues. Once shares of all local government operating expenditures are allocated to non-residential uses, a portion of these costs is assigned to the incoming non-residential facility. The resulting total costs are then partitioned into various local government service categories.

Time and cost are among the principal advantages of this approach. However, the refinement coefficients used in the calculations are initial approximations which must be significantly expanded in future year analyses.

Key assumptions for these three techniques are outlined in

## Appendix II.

### 3.3 Marginal Costing Techniques

One of the drawbacks to average costing techniques is that excess or deficient capacity in local government services is not considered. Burchell, Listokin and Dolphin, along with others, note that marginal costing methods take both of these potential deficiencies into account (p.6). Marginal costing relies heavily on careful analysis of existing demand/supply relationships for local government services.

The Case Study method is the classic marginal cost approach, and employs intensive site-specific investigations to determine excess or deficient capacity. The excess or deficient service capacities are subtracted from or added to estimates posed by growth for each category of service. The result of the growth-related need, offset or multiplied by excess or deficient capacity, is projected future public response for each category.

The richness of detail in this approach is offset by the complexity, time and cost associated with its execution.

The Comparable City method relies on expenditure multipliers that vary by size and growth rate of municipality or school board. The method projects increases or decreases in future gross expenditures for local government services by comparing the products of a community's expenditure ratios, per capita costs,

and service populations before and after a projected growth increment.

While this method is relatively inexpensive and timely, there are concerns about the validity of the expenditure multipliers over the long run.

The sixth and final technique the Employment Anticipation method, is a marginal costing approach for non-residential growth. The method relies on relationships between commercial and industrial employment levels and per capita local government costs. Service coefficients are used under analysis to predict the change in local government expenditures and revenues related to local employment variation.

The Employment Anticipation method is inexpensive and relatively simple to use. Also, its operational utility is seen as a direct advantage. However, reliance on coefficients, group multipliers and differences between cities within population groups are noted as offsetting features.

Appendix II also charts the key assumptions behind these marginal cost approaches.

Several authors suggest using more than one method on the same project, while others (notably Tischler) advocate the benefits of a Case Study approach. Burchell and Listokin (1979) suggest that the more appropriate relationship is in fact between context and

task of the fiscal impact analysis being undertaken (see Appendix I). They indicate that "both techniques can be applied with similar results... and accuracy is not significantly improved" (p.21).

### 3.4 Typical Applications

Many of the studies illustrated a variety of "triggers" which determine when a fiscal impact analysis should be undertaken. The Ontario Municipal Affairs handbook (1985) cites factors such as size of the development proposal relative to size of the municipality, significance of the policy change, cumulative effects of several smaller proposals or policy changes, or the need for "significant" capital expenditure. The City of Edmonton (1987) document confines itself to new suburban residential development of a minimum size. In a similar vein, Walisser (1978) confines the methodology to examine impacts on new residential growth.

The Sackville analysis (1987) was driven by a description of various models of municipal organization for the community. The East and West Hants analysis, conducted seven years earlier, enabled two communities to explore different levels of joint development services. The Fort McMurray F.I.A. was also commissioned in 1980 for the purpose of analysing the impact of oil sands development on local government services. The third study of this vintage (for the City of Nanticoke) was also driven

by growth in services - this time by an adjacent planned community and industrial growth. The Thunder Bay analysis (1979) was in support of secondary plans for a new suburban growth area. The Queensville F.I.A. Study (1990) was for a large-scale comprehensively planned "greenfield" development in a small municipality, while the 1988 Study for the Village of Elora focused on the impacts projected for a moderately sized residential subdivision on village local government services. The final case study reviewed revealed another classic application: the Queenston Square F.I.A. (1990) was an evaluation of a large-scale mixed-use (ie., commercial, residential, office and recreational) complex in the City of Etobicoke.

### 3.5 Consultant Interviews re: Applications

Over the years, private sector expertise has developed in the conduct of Fiscal impact Analysis for individual or public clients. A common practice in Ontario over the past 3 years will have analysts on staff in a real estate services wing to a larger financial management or investment counselling service such as Price Waterhouse or as a specific service offered by a market research or economic analysis consultancy (for example, Clayton Research or C.N. Watson and Assocs. Ltd.).

Senior consultants who undertake F.I.A. studies from these three Toronto-based three firms were contacted and interviews were held with two of them (namely Jeanette Gillezeau of Clayton Research

Associates and Gary Scandlan of C.N. Watson Associates). The third consultant was unavoidably committed on two separate occasions. Both sessions were face-to-face hour-long interviews held in Toronto during the months of March and June, 1992. The questions posed during the interviews are attached as Appendix IV. Their overall responses to the questions are as follows:

Common "triggers" can include any of the proposals listed. For Clayton Research, a more common application involves development applications that propose changing industrial lands to some commercial or residential use. "Triggers" for F.I.A. studies may be included in community official Plan policy, may arise from community controversy over an application or may be conducted on a totally ad hoc basis (where some sort of anomaly raises a concern on the part of Council or the municipal staff).

Both consultants were candid when asked about range of costs for these studies. For Clayton Research, a basic-level "Average Cost" analysis (based on Financial Information Returns from the municipality) can be completed for approximately \$5,000; a "Case Study" approach for a Metro area municipality would cost in the \$10-12,000 range; and a detailed "Case Study" approach outside of Metro would generate a fee in the area of \$20,000. C.N. Watson uses a slightly different costing schedule, dependent upon consultant travel and whether or not Development Charges are in place. However, smaller analysis projects are in the \$8-10,000 range, while more complex analyses will cost between \$10-15,000.

On the question of recommended technique, Clayton Research suggests that the detailed "Case Study" method yields the greatest benefit to the client. Where there is no municipal cooperation in providing information, average cost approaches will work (but lack precision in estimates).

One of the more illuminating questions was focused on the frequency of municipal use of F.I.A.. C.N. Watson indicated that F.I.A. is becoming popular with small municipalities receiving new commercial or industrial development. Many (if not all) of the municipalities in the Greater Toronto Area regularly utilize F.I.A. techniques, along with other Ontario municipalities undertaking Official Plan reviews or Development Charges studies. Clayton Research suggests that despite growing usage, "threshold knowledge" about F.I.A. is basic. F.I.A. reports should use easy-to-understand terminology, presentation and analysis for both elected and appointed officials.

Both consultants acknowledge private client usage of F.I.A. techniques, not just as a piece of information for a local Councillor satisfy ratepayer concerns, but ultimately as a parcel of evidence to be used if an application is appealed to the Ontario Municipal Board.

In response to the final question regarding staff assessment of F.I.A. reports, both consultants noted variation in the functional departments who critique the reports. Most often, it

will be staff from any of the Financial Services, Corporate Management or Planning and Development areas of a municipal organization.

From these interviews, the similarities between the requirements of developers and public review agencies regarding the information presented in F.I.A. reports becomes readily apparent. In a similar way, it appears that prior recognition of these similarities presents opportunities to save time, effort and money to be spent on consulting services.

## 4.0 Field Research in Selected Ontario Municipalities

### 4.1 Introduction to the Problem

Despite the inherent logic and benefits to conducting F.I.A.s in local government, despite numerous diverse applications in both urban and rural settings, usage of Fiscal Impact Analysis does not appear to be widespread or uniform. To date, it does not appear to have become a current management icon or "buzzword".

In Ontario, one rather recent provincial publication on F.I.A. touts its "wide use" while acknowledging that F.I.A. is generally "not well understood" by certain local government administrators. The questionnaire described in this section of research proposes to estimate the popularity of Fiscal Impact Analysis as an evaluation tool for community development decisions in selected Ontario municipalities.

### 4.2 The Hypothesis (and Subproblems)

The first subproblem (or hypothesis) is to determine whether the F.I.A. concept is popular (ie., in use) in the municipalities sampled. For the purposes of this research, the first hypothesis is if more than 33% of the municipalities respond positively to usage of F.I.A., then the method is "popular". The 33% has been chosen rather arbitrarily, but reflects the fact that F.I.A. is not a legislated process from a senior government nor is it a condition for most forms of funding. It also reflects the great

variation in resources and expertise from municipality to municipality.

The second subproblem is to determine whether there is a relationship between size of municipality and usage of F.I.A., implying that larger municipalities (with larger professional and technical resources) are more likely to use F.I.A. than smaller municipalities (with smaller staff complements and fewer resources). The second hypothesis in this research is if the municipal population is greater than 100,000, then F.I.A. is more likely to be used as an evaluation mechanism. The use of the 100,000 figure is rather appropriate when one considers that of 838 Ontario municipalities, Census Canada figures indicate that only 30 municipalities are "large" enough to meet or exceed the 50,000 population figure.

The third and final subproblem relates to the use of Fiscal Impact Analysis solely as a "growth management" evaluation mechanism. For this research, the third hypothesis is if municipal population growth is greater than 20% during the past decade (1980-1990), then F.I.A. is more likely to be used as an evaluation mechanism for community development decisions.

#### 4.3 Some Delimitations

This study did not attempt to measure the "success rates" of F.I.A. as an analytical tool in the municipalities studied.

Also, for reasons to be indicated in the next section, only a select sample of the total number of Ontario municipalities surveyed.

Finally, "community development decisions" shall be limited to decisions on either land-use proposals or policies which will have an impact on municipal capital and operating budget allocations. Although F.I.A. analysis has many other corporate-type applications, these two are by far the most frequent applications noted in the literature.

#### 4.4 Data Required

Primary data required for this research does not exist in any organized, published form at present, to the best of my knowledge. The responses to the questionnaire administered in April 1992 will comprise the desired primary data.

Published studies and texts and the unpublished theses and dissertations dealing with Fiscal Impact Analysis are a secondary type of data, although limited in usefulness on the issue of popularity of application. Similarly, actual F.I.A. reports themselves, although useful in a descriptive sense, are only a secondary type of data because they are case specific.

#### 4.5 Sampling Method and Sample Population

For the purpose of this research, purposive sampling designs will be employed. The sample population (of total Ontario

municipalities) was selectively called to derive a sample of municipalities with populations greater than 25,000. In the judgement of the researcher, this lower population limit will generate a group of municipalities with general similarities in terms of organization structure, staffing specialization land-use issues, and observable growth rates.

Sample size is also acknowledged as a function of the accuracy and confidence level desired (Leady, 1989). However, the selection of Ontario municipalities (versus a nationally sized sample population) reduced survey administration costs, enabled reasonably priced survey follow-up and allows for convenient analysis of the responses.

Before leaving the topic of sampling, some mention should be made regarding the matter of bias and nonsampling errors. Bias refers to a systematic difference between the sample statistic and the population parameter (O'Sullivan, 1989). The most likely element of bias in this sample is that use of F.I.A. by municipalities is not population or issue-specific. This may colour the accuracy of the sample statistics being truly representative of the entire population of Ontario municipalities. Other nonsampling errors may occur simply from the collection and coding of the data received.

#### 4.6 Questions and Questionnaires

A relatively brief (ie., less than 25 questions) written

questionnaire was drafted for the sample population to be surveyed. The questionnaire is attached as Appendix III. Prior to the drafting of the questions, it was important to identify the variables to be measured, the type of questions that measured the variables and the number of question needed to assure reliability and operational validity (O'Sullivan, 1989).

For this research, independent variables included size (population) of the municipality, ten-year growth rates, and type of F.I.A. method used. Dependent variables included items such as use of F.I.A. by the municipality, frequency of F.I.A. use, type of F.I.A. application. A combination of factual, knowledge and opinion questions will be used to elicit information on the above noted variables. All questions on this survey were close-ended, that is, the respondent was asked to choose from a list of responses. Most of the questions are designed to be "forced choice" questions. The rationale for forced-choice responses being used in many questions is the familiarity of the researcher with the general operating environment for local government administrators who are the respondents. If this feature were not known or if the population sample was more general in nature, forced-choice questions would not adopted so readily.

One short comment about pretesting is in order at this juncture. Pretesting rehearses the research plan, including the analysis (O'Sullivan, 1989). A pretest of this questionnaire was

undertaken by the researcher at a conference of the Ontario Municipal Administrators Association held in May 1991 in North Bay. Of the 65 questionnaires administered, there were a total of 15 responses. The purpose of the pretest was to determine if there are flaws in the questionnaire design or layout and to get a quick indication if the responses were as expected.

Questionnaires were mailed (with pre-addressed stamped envelopes) in April of 1992 to the chief Planning Official in the selected municipalities. The rationale for the use of a Chief Planning Official as the organization's prime contact is the predominance of planning related case studies in the literature researched and reviewed so far. Also, since the researcher is also a community planner by discipline, it was hoped that there was additional incentive to respond to a request from a "professional colleague" rather than an "unknown" researcher.

One follow-up letter (with an additional questionnaire) was sent after 30 days had elapsed. In total, 48 questionnaires were returned, for an overall sample response rate of 64%.

#### 4.7 Data Preparation and Management

Once the questionnaires were completed and returned, the next major task was preparing them for analysis. Information can be more easily managed - summarized, condensed, corrected, and analyzed - if it is coded and placed on forms specifically designed for data (O'Sullivan, 1989). The data derived from each

question had to be coded, stored (either in a codebook and on paperforms or in a computer file) so that it can be manipulated and analyzed. For the purposes of this research, the relatively small population sample lent itself to manual coding, organizing and manipulation. However, it would be prudent to allow for the purchase of computer services to deal with data collection and statistical analysis.

#### 4.8 Measurement of the Data

Statistical measures and types of analysis of data can be grouped in several ways (O'Sullivan, 1989). Descriptions of the distribution of one variable is termed univariate analysis. In a similar view, descriptions of the relationship of two or more variables is referred to as bivariate or multivariate analysis (Leady, 1989).

The first statistical measure which obtained from the data was frequency distribution. A frequency distribution lists the variable values or categories along with the number of cases possessing that value or category (Hickey, 1986). For some of the questions with large spreads in the data values, it may be necessary to group the values into a smaller set of class intervals (O'Sullivan, 1989).

A second area of statistical measures for some of the variables generated are those of central tendency. In particular, finding median and mean values will involve ordinal and interval levels

of measurement respectively (O'Sullivan, 1989). The mode can be used to determine the most "popular" value and is particularly useful for qualitative variables (Hickey, 1986).

An additional area of study will be to generate a statistical measure illustrating the strength of association between two variables.

Contingency tables will be prepared for the variables referred to in the three major subproblem areas in order to observe the strength of the relationships.

#### 4.9 Survey Results

The following represents a preliminary analysis of the survey data. Due to the small sample size (ie., 48 out of 75 possible respondents), there cannot be a high level of confidence in any of the multivariate statistics generated. It is however, a useful "snapshot" of local government experience in Ontario municipalities. It is also interesting to note the comparison to the pretest sample collected a year earlier.

Perhaps the first key question is the response to Question 3 (relating to F.I.A. usage). 29% of the respondents (14 of 48) indicated F.I.A. is used; however a rather large (32 of 48) or (67%) proportion of the respondents indicated that it is not used. This compares with 28.5% and 71.4% respectively in the pretest sample from 1991.

For the respondents who answered "yes" to Question 3, the next question was important in that it asked about frequency of use. The distribution of responses is indicated below:

Table I

Responses re: Frequency of F.I.A. use

<u>Response Label</u>	<u>Number</u>
a) used once	3
b) used rarely	3
c) used several times each year	6
d) used frequently	1
e) used all the time	2
	total n = 15

6 of the 15 responses have used Fiscal Impact Analysis "once" or "rarely" in their communities; only 2 of the 15 indicated "use all the time". Even within this sub group then, there is evidence of a wide spread in frequency of use.

Question 6 explored responses to the question of "triggers" or the types of proposals that precipitate the Fiscal Impact Analysis study. As indicate in Table II, the distribution of responses was widespread:

Table II

Responses re: Type of Application triggers F.I.A.?

<u>Response Label</u>	<u>Number</u>
a) all dev't proposals	2
b) large-scale residential proposals	3
c) commercial/industrial proposals	2
d) major policy changes	1
e) case-by-case use	3
f) other municipal uses	6
	total n = 17

With regard to Question No.7 (type of F.I.A. method used), it is interesting to note that 7 of 17 respondents (or 41% of this subgroup) had utilized a service standard analysis (an average cost technique) while another 4 respondents (or 23.5%) used case study analysis, which is a marginal cost method. Average cost methods were the preferred techniques in 10 of the 17 responses.

Within the local government organization, there were a variety of functional departments responsible for conducting or evaluating a Fiscal Impact Analysis study. As Table III indicates, the predominant staff expertise or responsibility lies in the Treasury/Finance function of the local government organization:

Table III

Responses re: Who Undertakes F.I.A.?

<u>Response Label</u>	<u>Number</u>
a) Planning Function	3
b) Treasury/Finance Function	7
c) Engineering Function	2
d) CAO/corporate management Function	3
e) other inside	0
f) other outside	7
	total n = 22

Planning and Corporate Management comprise the next largest of the internal groups (totalling 6 of 22 responses or 27% of the subgroup). The other response worthy of note is the use of outside consultants - 7 of 22 responses (31%) - to "undertake" F.I.A. studies. The survey did not pursue a related question such as who assesses the consultant's work.

Finally, 11 of 14 respondents (a very strong 78%) indicated that they would use F.I.A. again as an evaluative tool (in Question 11).

The questionnaire also attempted to find out information from the 67% of the sample who do not use F.I.A..

Question 13 attempted to determine "threshold knowledge" of the F.I.A. concept itself, and the results as shown in Table IV are quite enlightening:

Table IV

Responses re: Acquaintance with F.I.A.?

<u>Response Label</u>	<u>Number</u>
a) never heard of it	7
b) occasional article/seminar	19
c) discussed by staff/colleagues	14
d) undertaken research or consultation	2
e) presented F.I.A. material to Council -not accepted	0
f) presented to Council but under study	1
g) no response	7
	total n = 50

38% of these respondents (19 out of 50) had read the occasional article or perhaps attended a seminar on the topic. Another 28% (14/50) had been involved in staff or professional discussions or presentations on F.I.A.. Only 14% of the respondents in this group had "never heard" of Fiscal Impact Analysis.

Questions 14 and 15 of the survey asked respondents to indicate what they perceived to be the respective benefits and costs associated with this type of analysis. Far and away the greatest

perceived benefit (37% of the respondents) of F.I.A. was that of "quantifying aspects of change" (Response 14(a)). Another major benefit perceived by 17% of the respondents was the promotion of "calculating capital and operating costs" of proposals (Response 14(e)).

On the other hand, F.I.A. also bears the burden of perceived costs. Clearly, time and resources to complete the study was the major perceived cost (17 out of 52 responses or 37%). Of similar concern was the accuracy of the estimates or multipliers (Response 15(d)), indicated by 23% of the respondents. Also noteworthy as a perceived cost was the matter of developing expertise/training (9.6% of the respondents).

In Question 16, this group of respondents were asked if they would nevertheless recommend F.I.A. as an evaluative tool. The responses, as shown in Table V, illustrate a public administrator's basic caution if nothing else (looking at response 16(b)):

Table V

Responses re: Recommend use of F.I.A.?

<u>Response Label</u>	<u>Number</u>
a) Yes	10
b) Need to Study First	29
c) No	0
d) No response perceived	7
	total n = 46

#### 4.10 Analysis

In returning to the three subproblems, the survey data can and does say something definitive about the hypotheses.

First, the survey responses clearly indicated that Fiscal Impact Analysis is not popular from the perspective of usage in the selected Ontario municipalities. In my view, it is reasonable to speculate that since such analysis is not legislatively mandated, it is undertaken only by local interest and preference. Both pretest and final survey samples (although small and stratified samples) were within 0.55% and 4% on the distributions for usage and non-usage.

The second subproblem hypotheticalized a relationship between community size and usage of F.I.A.. The next table illustrates the statistical findings when such a relationship is tested:

Table VI

		POPULATION		TOTALS
		SMALLER (L.T.100K)	LARGER (M.T.100K)	
F.I.A. USAGE	YES	4	11	15
	NO	22	11	33
TOTALS		26	22	48

On first examination, it may appear that there is a positive relationship between population size and F.I.A. usage - 11 out of 22 "large" municipalities indicate usage (versus 4 out of 26 "small" municipalities). However, using the formula to generate Yule's Q for the nominal and interval data available (on a 2X2

contingency table), a value of  $-.69$  is obtained. This value indicates a moderately strong negative relationship between the two variables.

The third subproblem posited a relationship between 10 year community population growth and usage of F.I.A.. Table VII illustrates the statistical distribution of findings when F.I.A. usage is tabulated across growth rates from the respondents:

Table VII

		GROWTH (1980-1990)		TOTALS
		LOWER(20%orless)	HIGHER(21%ormore)	
F.I.A. USAGE	YES	7	8	15
	NO	27	4	31
TOTALS		34	12	46

Again, first examination may lead to an assumption that there is a positive relationship between population growth rates and F.I.A. usage (7 of 34 "lower" growth municipalities versus 8 of 12 "higher" growth municipalities). Using a 2X2 contingency table and calculating for Yule's  $Q$ , a value of  $-.75$  was generated. This implies a second moderately negative relationship between the variables.

Certainly these are not the only measures and statistics that could be drawn from the data; time and resources available have merely set a limit on how far one can analyze the information gathered. If, in future, a more rigorous analysis is called for, then the survey information can be easily coded and manipulated using SPSS statistics packages. As noted earlier,

the small sample size does not encourage high levels of confidence in the statistics generated.

#### 4.11 Possible Flaws in the Methodology

One major area of concern in the methodology is the selectiveness of the sample. There may be a number smaller municipalities using F.I.A. that were simply missed by the survey. This would lead to the erroneous confirmation that F.I.A. is a management tool for "larger" urban municipalities.

An additional area of concern is the errors in collating and coding the data. Errors at the early stage of the methodology can be compounded by statistical calculations. Spot checks on the accuracy of data transfer are advised to reduce this type of error.

A third area of concern relates to the calculation of information statistics themselves. Care should be taken to avoid placing too much value on relationships inferred by a particular statistic. The responses could have been shaped (or even forced) by wording of the questions or the choices of responses. Further, researcher error in the calculations may derive totally false values (hence conclusions) for the particular measure.

## 5.0 Outstanding Issues

For the most part, the American and Canadian documents reviewed were uniform in extolling the benefits of F.I.A. processes. As a passing observation, it is interesting that one Canadian writer (Walisser) noted the "limited" use of the technique, where another Canadian document (Ontario Municipal Affairs) noted that F.I.A. has been "widely used", although it is generally "not well understood" by land-use planning professionals (and probably by local government public administrators).

### 5.1 Popularity

Perhaps one of the most important (yet unresolved) issues associated with F.I.A. is: why hasn't the concept caught on? Although the literature reviewed is understandably silent on this the limited survey data for Ontario municipalities speaks volumes. There may be several reasons for the sporadic adoption of F.I.A. in Ontario (and Canadian) municipal settings.

The first reason has to do with the Canadian concentration of population in urban centres. Canada simply does not have a large number of "Big" cities in each and every province to create an awareness of metropolitan-scale growth issues.<sup>1</sup> Most Canadian urban centres are smaller and are spatially dispersed (perhaps with the exception of the Toronto to Windsor corridor in Ontario). Second, population change in Canadian communities of

small to mid-size is quite often driven by expansion (or contraction) of a key employer, rather than regional or national trends. Third, F.I.A. processes imply a level of analytical sophistication that many Canadian municipalities may feel is not applicable.

## 5.2 Make or Buy

A second issue not resolved in the literature and cases reviewed would fall into the category of "make or buy". While the literature refers to "the analyst" in all cases, there is a recurring caveat expressed along the lines of "getting someone who knows what they're doing" or "accuracy for estimates is next to Godliness". For many small and medium-sized municipal organizations in Canada, the expertise of the administrative staff varies widely. The literature reviewed implies that staff with backgrounds in areas such as finance and administration, economics or land-use planning would be ideal candidates for doing this type of analysis. Some case studies make further implications that experience in computer modelling and data analysis will allow for quicker and more diverse analyses. All of this implies that municipalities have the qualified staff on hand, willing (!) and available to do the work. For many Canadian municipal organizations, this may simply be a "luxury" they cannot afford; whereas the private (consulting sector) would be the likely alternative for a purchased service. The consultant interviews referenced in Section 3.0 made candid

assessments that many communities will have staff on hand who could "crank the numbers". The key question to be asked is whether or not there are administrators available to conduct the critical evaluation of the analysis or evaluation of the work done by consultants for their respective clients.

Tischler (1988) suggests that local governments should give one department (within the organization) overall responsibility for the analysis. Planning, Finance and the Chief Administrator's office "are the most likely choices for leading the analysis, but a number of other actors' cooperation... will be needed" (p.16). Tischler even identifies a role for the elected official or committee in terms of review of the analysis itself or implementation of its findings.

### 5.3 As a Decision-Making Tool?

A third area left unresolved in the literature and the cases reviewed (although several authors acknowledge it) is the reality of local government decision-making. Fiscal impact analysis is a form of "scientific" or "rational" analysis injected into local policy-making, where, as Yates (cited in Tindal and Tindal, 1984) observes:

The real world of policy making is not (that) simple. The policy maker cannot carefully select his problem and then analyze it with great thoroughness and detachment. He faces a constant barrage of new and changing problems and service demands. (p.193)

Local elected officials (many of whom are part-time volunteers with no particular expertise) are forced to grapple with an incredible array of complex issues. They are usually besieged on the one side by distraught ratepayers, and on the other by a full-time administrative staff who may (or may not) have given clear, concise objective information to them. Politicians have a time horizon, agenda and motives quite different at times from their administrative staff. "Rational" analysis may go out the window in the face of other priorities facing a local elected decision-maker. A reliance on "gut feel" over "numbers" often dictates the nature of local government decision-making for many smaller and mid-sized municipal organizations.

#### 5.4 F.I.A. and Growth Management

There is an ongoing tension in many communities that pits anti-growth against growth forces. Growth management is touted by Vogel and Swanson (1989) as a rational planning process to arrive at community decisions regarding growth rates, land-use mix, provision of public services and protection of the environment. Others, such as Chinitz (1990) caution against those who "worship unquestioningly at the altar of local growth management" (p.7). Although growth management is a topic in and of itself, it is important to recognize the potential contribution of Fiscal Impact Analysis as an evaluation technique to growth management issues. Indeed the Fort McMurray Alta. and Surrey, B.C. case studies, along with the Queensville, Ont. analysis were oriented

towards this topic. However, the problems facing decision-makers in the City of Winnipeg regarding changes to the Urban Limit Line (the defined limit for the provision of local infrastructure services) was compounded by the "lack of comprehensiveness" in Financial Impact Analysis along with "conflicting figures" provided by proponents and municipal staff (I.U.S., 1991, pps. 30 and 39).

### 5.5 Connection to Impact Fees (and Development Charges)

In the United States a significant body of local government financial tools have been devised in order to mitigate the consequences of development. Ayres and Thorpe (1991), Schelette (1989), Callies and Grant (1991) among others have written on the usage of Development Impact Fees. These fees are used by local governments in many states in the U.S. in order to "defray the proportionate share of the infrastructure costs caused by and of benefit to the new development" (Ayres and Thorpe, p.51). While in use since the early 1970's for mainly sewer and water extensions, these fees financed a wide variety of local government services by the mid-1980s, including fire and police facilities, water and sewer drainage, school libraries, museums and even government offices (Frank and Rhoades, cited in Nelson, 1988). Nelson also observed that five political objectives are met by use of impact fees: shifting the capital financing burden to new development, synchronizing new development with capital facilities installation, limiting urban sprawl, mollifying anti-

or slow-growth groups within the community and, in some instances, improving the quality of community life where facilities are deficit.

In Ontario, local governments are just starting their experience with the equivalent of impact fees, known locally as Development Charges. Lot levies, or impost fees, are amounts that municipalities charged to a land developer to recover the costs of the off-site capital works required to service new development.

In general, Development Charges legislation allows municipalities to set local fees for contributions to "growth-related capital facilities" following the large listing of local government services noted by Frank and Rhoades.

The relative youth of this legislation (1989), the absence of a significant body of case law and the complexity of the topic suggests that a full review of Development Charges and Impact Fees will be left for another day. However, it is not only important to highlight them, but it is equally apparent that a strong causal connection to F.I.A. exists.

Tischler (1988) suggests that Fiscal Impact Analysis, conducted by a community, can assist local officials translate land-use changes into service costs, revenues and net cash flow to the public sector (p.3). He also suggests that one of the by-products of a good fiscal analysis is the forecast of

infrastructure needs to meet anticipated changes in a community, depending upon alternate levels of service or development.

Depending on whether or not a community has surplus or deficient capacity in its existing infrastructure, these types of analyses could be integral to financially prudent decisions by elected officials.

## 6.0 Conclusions

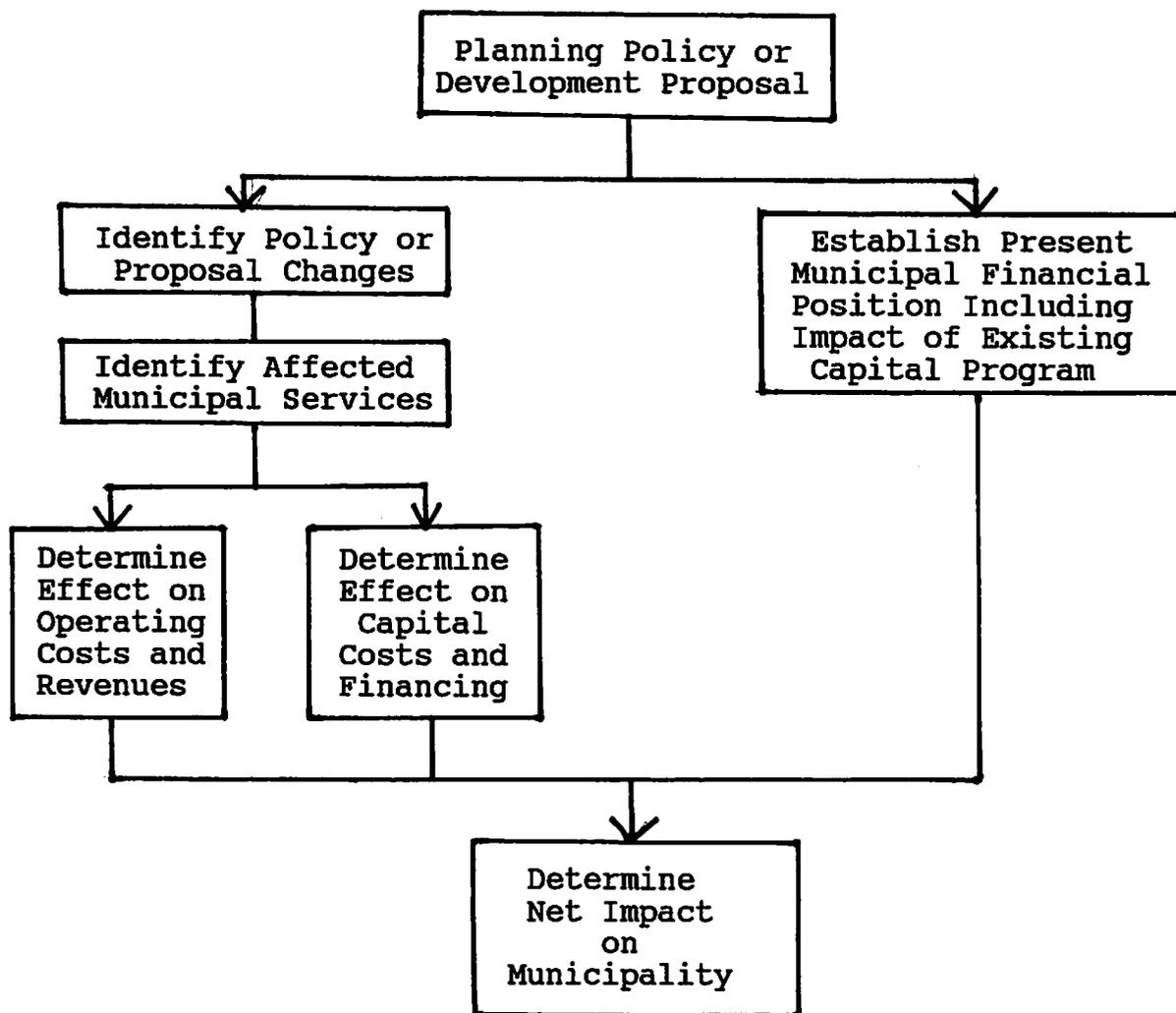
Siegler and Meyer (1980) note that growth or development affects a community in three separate but interrelated areas: private, social and public sectors. Social impacts affect the community structure as well as individuals within the community. Private impacts are economic "shocks" to the businesses and citizens of the community. The public sector is impacted by development because elected officials are ultimately responsible for coping with changes in the community.

Fiscal impact analysis is the study of the effect(s) of development proposals, or certain policy alternatives, on local government expenditures and revenues. The interest of local decision-makers is usually to determine the effect of such changes on local government expenditures and revenues, and ultimately on the taxes levied by their municipal jurisdiction (see Figure 5).

Steen (1987) suggests that conducting a Fiscal Impact Analysis for a municipality is a complex exercise, due to the information involved and the broad range of municipal services to be considered. Despite the complexity, F.I.A. becomes both a framework for analyzing financial impacts and a common standard by which costs and benefits can be measured. The results can be valuable in identifying the implications of new development approvals. Thus, Steen posits, there are qualitative

FIGURE 5

Fiscal Impact Analysis - A Basic Model



(adapted from: Ontario Ministry of Municipal Affairs, 1985)

improvements in both administrative recommendations and Council decisions on new development or levels of service.

There are no set methods of analysis for specific applications. Although Burchell and Listokin (1979) have developed a Context/Task relationship for the various techniques (illustrated in Appendix I), combining methods or multiple methods of analysis can be used. In order to evaluate fiscal impact studies, Weber and Goldman (1982) suggest that it is imperative that any study clearly specify its objectives, methods and assumptions.

These authors indicate that community leaders can critically evaluate such studies by asking the analyst about:

- how expenditures and nonproperty tax revenues are estimated;
- how tax bills as well as tax rates would be affected;
- what assumptions were made about time lags in expenditures and revenues;
- what assumptions were made about the "no development" situation (p.5).

Community leaders can use these types of questions to insure that the analysis they receive is useful to them.

For the Ontario scene, the body of data collected, though relatively small, indicates that F.I.A. is still not popular as an evaluation tool for local government administrator despite its usefulness. Given current fiscal constraints on municipal operations and projections for future expenditures, perhaps more Ontario communities will "discover" this evaluative technique.

In a similar vein, perhaps there is a larger role for the Provincial government to play in educating councillors and administrators in the use of this type of analysis.

Development of the in-house expertise in F.I.A. techniques, assembling the information and conducting the process will no doubt further limit both the number of communities who will use F.I.A. on a regular basis as well as the types of application "triggers" for which it will be used.

In the end, each one of the "triggers" before a community has, in addition to a financial impact, other impacts, many of which are intangible, and often difficult to measure. Perhaps the last words should be left to Jardine (1986), who brings the wisdom of the public administrator to local policy-making:

"Ultimately, the responsibility for weighing the relative importance of financial and non-financial considerations in arriving at a decision rests solely with the elected municipal officials whose roles are to make such decisions" (p.1).

For those communities and officials who choose to use it, Fiscal Impact Analysis will provide additional evaluative information to support decision-making. This paper has, to a limited degree, proved that however useful, much more remains to be done in Ontario municipalities to encourage usage of Fiscal Impact Analysis.

Footnotes

- (1) The 1990 Canada Year Book notes that there are only 68 incorporated cities or towns across Canada with populations of 50,000 and over. If one elevates the figure 100,000 population, the list would drop to 28 for "big" cities. Elevating the population figure to 500,000 or more would make the grouping rather exclusive; it would shrink to 6 and would exclude 9 of 12 provincial and territorial capital cities, as well our national capital.

Applying the 50,000 population standard to Ontario's 838 municipal corporations, only 30 municipalities would qualify as "large".

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APPENDIX I

CONTENT/TASK RELATIONSHIP CHART

(Adapted from Burchell and Listokin (1979))

**EXHIBIT 1-1**  
**RELATING METHODS TO CONTEXTS AND TASKS OF FISCAL IMPACT ANALYSIS**

<i>Status of R Community's O Existing W Service Capacity</i>	<i>Community Most Typifying Service Capacity</i>	<i>Development Proposals (Residential)</i>	<i>Development Proposals (Nonresidential)</i>	<i>Land Use Alternatives</i>	<i>Rezoning/ Variances</i>	<i>Annexations/ Boundary Changes</i>	<i>EIS's</i>	<i>Urban Renewal/ Community/ Redevelopment</i>
1. Significant excess capacity <sup>a</sup>	Central city—declining moderately or slightly	CS	CS	CS/CC	CS/CC	CS	CS	CS
2. At capacity, slight excess capacity <sup>b</sup>	Second order city—stable growth or declining slightly	CS/CC	CS/EA	CS/CC	CS/CC	CS	CS/CC	CS
3. At capacity	Suburb—stable growth or slightly increasing	M/SS	PV/EA	M/SS	M/SS	M/SS	M/SS	CS
4. At capacity, slight deficient capacity <sup>c</sup>	Suburb—moderately increasing growth	M/SS	PV/EA	M/SS	M/SS	M/SS	M/SS	
5. Moderate deficient capacity	Exurban—moderately increasing growth	CS/CC	CS	CS/CC	CS/CC	M/SS	CS/CC	
6. Significant deficient capacity	Exurban—rapidly increasing growth	CS/CC	CS	CS	CS/CC	CS	CS	

Applicable Methods: M = Per Capita Multiplier  
 CS = Case Study  
 SS = Service Standard  
 CC = Comparable City  
 PV = Proportional Valuation  
 EA = Employment Anticipation

Notes: a. Excess Capacity — The service system is underutilized and exhibits room for service expansion without significant additional operational or capital expenditures.  
 b. At Capacity — The service system is operating at its most efficient level; most service categories exhibit neither over nor underutilization.  
 c. Deficient Capacity — The service system is overutilized; the slightest form of additional service demand will occasion significant operational or capital expenditures.

APPENDIX III

A Sample of the F.I.A. Survey  
administered to 75 Ontario  
Municipalities - April 1992.



# The Corporation of the City of North Bay

200 MCINTYRE STREET EAST, P.O. BOX 360, NORTH BAY, ONTARIO P1B 8H8 (705) 474-0400

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March 1992

Dear Colleague:

Re: Fiscal Impact Analysis Survey

The City of North Bay is considering the use of Fiscal Impact Analysis in its evaluation of community development proposals or policy changes.

As part of the research, we are interested in determining the usage of Fiscal Impact Analysis in selected Ontario municipalities. This data may also be used as part of my M.P.A. thesis underway at present at the University of Western Ontario.

PLEASE TAKE A FEW MINUTES TO COMPLETE THE ATTACHED SURVEY, AND DEPOSIT IT IN THE SELF-ADDRESSED STAMPED RETURN ENVELOPE PROVIDED. It would be appreciated if you would complete the survey and return it to me ON OR BEFORE APRIL 28, 1992 if possible. For your convenience, my FAX number is indicated below.

Thank you for your time and assistance in this matter.

Yours truly,

Jeffrey J. Celentano, M.C.I.P.  
City Planner  
(705) 474-0400, Ext. 315  
(705) 495-0936 (FAX)

MUNICIPAL SURVEY ON  
FISCAL IMPACT ANALYSIS

Your co-operation and time in completing this fairly brief questionnaire is appreciated.

Please use an "X" or a checkmark (✓) beside the appropriate response(s).

ALL ANSWERS WILL REMAIN CONFIDENTIAL. They will be grouped in larger units for the final report.

For the purposes of this survey, Fiscal Impact Analysis (also known as Financial Impact Analysis or F.I.A) will be defined as follows:

"...the identification of the costs and revenues of a change in the level and number of municipal services, and the meaningful comparison of the change to determine positive or negative impact..."

(adapted from Ontario Ministry of  
Municipal Affairs, 1985)

QUESTIONS

- 1) Please indicate a few items about your present position and municipal organization:
  - a) Position title: \_\_\_\_\_
  - b) Is your position that of a Planning Director or its equivalent? Yes \_\_\_\_\_ No \_\_\_\_\_
  - c) Reports to: \_\_\_\_\_
  - d) Number of years (present position): \_\_\_\_\_
  - e) Number of years (with present employer): \_\_\_\_\_
  - f) Number of employees in your department: \_\_\_\_\_
  - g) Number of employees in your municipal organization: \_\_\_\_\_
  
- 2) What is the approximate population of your municipality at present (please check one)?
  - a) 25,000-49,999 \_\_\_\_\_
  - b) 50,000-99,999 \_\_\_\_\_
  - c) 100,000-199,999 \_\_\_\_\_
  - d) 200,000-499,999 \_\_\_\_\_
  - e) 500,000+ \_\_\_\_\_

3) Is Fiscal Impact Analysis used in your municipality?  
Yes \_\_\_\_\_ No \_\_\_\_\_

IF the response to question 3 is YES, please go to the NEXT question (ques. #4).

IF the response to question 3 is NO, please go to QUESTION #13.

4) What is the frequency of F.I.A. use in your municipality?

- a) used once \_\_\_\_\_
- b) used rarely \_\_\_\_\_
- c) used several times each year \_\_\_\_\_
- d) used frequently \_\_\_\_\_
- e) used all the time \_\_\_\_\_

5) How are the guidelines for the use of F.I.A. established for your municipality?

- a) policy in community's official plan \_\_\_\_\_
- b) administrative policy of Council \_\_\_\_\_
- c) department policy \_\_\_\_\_
- d) used by other municipal departments in their assessment of proposals \_\_\_\_\_
- e) requirement by outside agency \_\_\_\_\_

6) What type of application "triggers" the use of Fiscal Impact Analysis for your municipality? (please check as many as apply)

- a) all development proposals over a minimum size/number of dwelling units \_\_\_\_\_
- b) large-scale residential proposals \_\_\_\_\_
- c) commercial/industrial proposals \_\_\_\_\_
- d) major policy changes \_\_\_\_\_
- e) case-by-case use \_\_\_\_\_
- f) other municipal uses (please specify) \_\_\_\_\_

7) What type of F.I.A. method is used by your municipality?

- a) per capita multiplier \_\_\_\_\_
- b) proportional valuation \_\_\_\_\_
- c) service standard \_\_\_\_\_
- d) case study \_\_\_\_\_
- e) comparable city \_\_\_\_\_
- f) employment anticipation \_\_\_\_\_

8) Within your municipal organization, who undertakes Fiscal Impact Analysis?

- a) planning function \_\_\_\_\_
- b) treasury/finance function \_\_\_\_\_
- c) engineering function \_\_\_\_\_
- d) C.A.O./corporate management function \_\_\_\_\_
- e) other inside (please name) \_\_\_\_\_
- f) other outside (please name) \_\_\_\_\_

9) What is your perception of the major benefit of using Fiscal Impact Analysis? (please check first choice only)

- a) quantifies aspects of change \_\_\_\_\_
- b) helps define feasible levels of service \_\_\_\_\_
- c) helps project capital facility needs \_\_\_\_\_
- d) prepares a variety of future scenarios \_\_\_\_\_
- e) helps calculate capital and operating costs \_\_\_\_\_
- f) helps develop revenue strategies \_\_\_\_\_
- g) other (please indicate) \_\_\_\_\_

10) What is your perception of the major cost of using Fiscal Impact Analysis? (please check first choice only)

- a) overabundance of detail \_\_\_\_\_
- b) time to complete study \_\_\_\_\_
- c) cost of study \_\_\_\_\_
- d) accuracy of estimates/multipliers \_\_\_\_\_
- e) matching technique with objectives of Council \_\_\_\_\_
- f) applicability to particular municipality is questionable \_\_\_\_\_
- g) developing expertise/training \_\_\_\_\_

11) Will your municipality continue to use F.I.A. for the foreseeable future?

- a) yes \_\_\_\_\_
- b) under review \_\_\_\_\_
- c) no \_\_\_\_\_

12) If answer to question 11 was NO, why not? (please check as many that apply)

- a) time \_\_\_\_\_
- b) cost/resources to conduct study \_\_\_\_\_
- c) accuracy \_\_\_\_\_
- d) effectiveness \_\_\_\_\_
- e) expertise/training \_\_\_\_\_

PLEASE GO TO QUESTION #18

13) What is your acquaintance with the concept of Fiscal Impact Analysis?

- a) never heard of it \_\_\_\_\_
- b) occasional article/seminar \_\_\_\_\_
- c) discussed by staff/colleagues \_\_\_\_\_
- d) undertaken research or consultation \_\_\_\_\_
- e) presented F.I.A. material to Council but not accepted \_\_\_\_\_
- f) presented to Council but under study \_\_\_\_\_

14) Based on your acquaintance with the concept, what are your perceptions of the major benefits of Fiscal Impact Analysis? (please check one only)

- a) quantifies aspects of change \_\_\_\_\_
- b) helps define feasible levels of service \_\_\_\_\_
- c) helps project capital facility needs \_\_\_\_\_
- d) prepares a variety of future scenarios \_\_\_\_\_
- e) helps calculate capital and operational costs \_\_\_\_\_
- f) helps develop revenue strategies \_\_\_\_\_
- g) other (please indicate) \_\_\_\_\_

15) Based on your acquaintance with the concept, what are your perceptions of the major cost of Fiscal Impact Analysis? (please check one only)

- a) overabundance of detail \_\_\_\_\_
- b) time/resources to complete study \_\_\_\_\_
- c) cost of study \_\_\_\_\_
- d) accuracy of estimates/multipliers \_\_\_\_\_
- e) matching technique with objectives of Council \_\_\_\_\_
- f) developing expertise/training \_\_\_\_\_

16) If you were in a position to do so, would you recommend Fiscal Impact Analysis to your Council as an evaluative/management tool?

- a) yes \_\_\_\_\_
- b) need to study first \_\_\_\_\_
- c) no \_\_\_\_\_

17) IF your answer to question 16 was NO, what is (are) your reason(s)? (please check as many as required)

- a) time to complete study \_\_\_\_\_
- b) cost/resources to complete study \_\_\_\_\_
- c) accuracy of estimates/multipliers \_\_\_\_\_
- d) effectiveness \_\_\_\_\_
- e) expertise/training needed \_\_\_\_\_
- f) other (please indicate) \_\_\_\_\_

18) What has been the approximate rate of population growth in your municipality over the past 10 years (ie., 1981-1991)?

- a) less than 0% \_\_\_\_\_
- b) 0% to 10% \_\_\_\_\_
- c) 11% to 20% \_\_\_\_\_
- d) 21% to 30% \_\_\_\_\_
- e) 31% to 40% \_\_\_\_\_
- f) 41% to 50% \_\_\_\_\_
- g) greater than 50% \_\_\_\_\_

19) Is your municipality part of a Regional, District or County government?

- a) yes \_\_\_\_\_
- b) no \_\_\_\_\_

20) IF the answer to question 19 is YES, does the upper tier municipal government use F.I.A. as an evaluative tool?

- a) yes \_\_\_\_\_
- b) don't know \_\_\_\_\_
- c) no \_\_\_\_\_

21) Have you ever read a complete Fiscal Impact Analysis report?

- a) yes \_\_\_\_\_
- b) no \_\_\_\_\_

THANK YOU VERY MUCH FOR YOUR TIME AND ASSISTANCE IN COMPLETING THIS QUESTIONNAIRE.

APPENDIX IV

Consultant Interview Questions

(Interviews with Staff from Clayton  
Research Associates on March 18,  
1992 and C.N. Watson Associates on  
June 12, 1992)

QUESTIONS FOR CONSULTANT

- 1) What are the most common types of proposals which "trigger" the use of Fiscal Impact Analysis (eg., large-scale subdivisions, neighbourhood or district plans, "greenfield" developments, justify commercial/industrial development to O.M.B.)
- 2) What is the approximate range of costs to conduct an F.I.A. study?
- 3) Is there a recommended approach or technique used to conduct a Fiscal Impact Analysis?
- 4) Are municipalities using F.I.A. on a regular basis?
- 5) Are private sector clients using F.I.A. on a regular basis?
- 6) Who (on municipal staffs) usually assesses F.I.A. studies?