

**FISCAL TOOLS FOR PLANNING OBJECTIVES: DEVELOPMENT CHARGES AND SENDING THE
RIGHT PRICE SIGNALS TO ACHIEVE POLICY OBJECTIVES**

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Ian Charles Clendening, BA, Simon Fraser University, 2008

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ABSTRACT

The Ontario Development Charges Act provides a uniform legal framework governing how municipalities may impose on development the costs associated with such growth. This paper challenges the manner in which municipalities go about calculating these charges. It is argued that municipal practices through omission or commission are resulting in a defacto policy of development that runs counter to the aims of Provincial and even their own municipal policy. This defacto policy is the result of a disconnect between planning and finance officials at the municipal, while constraints of the Development Charges Act further enforce these inefficiencies. To achieve policy goals finance and planning officials must work together to create pricing signals both reflect the costs of infrastructure and ties aligns developers' interests to those of the municipality.

Key words: Ontario; development charges; intensification; housing type; single detached; housing affordability; average cost

If you think free markets never work, you need to take an economics class. If you think free markets always work, you need to take another economics class.

— Yoram Bauman

For Maggie.

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Chapter 1: Introduction:

As the Greater Toronto Area (GTA) continues to both grow and intensify to accommodate more people, the questions of what gets built, where, and for who will remain among the perennial questions for urban planners. To accommodate this growth, many policy documents including the Growth Plan for the Greater Golden Horseshoe have been developed to constrain growth to certain areas while other documents such as the Provincial Policy Statement encourage the principles of intensification, efficient resource use, a mix of housing types, and ensuring for affordable housing. These policies have come at the heels of growth studies investigating the costs associated with pursuing different urban forms that have provided a general consensus that the traditional expansive growth pattern is more costly to develop and maintain (CMHC, 1997; IBI Group, 1990). For municipalities, achieving these policy goals has largely come through policy documents such as Official Plans, zoning ordinances while fiscal responses have largely been overlooked.

Accordingly, while the financial costs associated with different built forms were a driving force developing provincial policy, achieving these objectives at the municipal level has been addressed through policy initiatives that do not integrate the financial costs that underpinned the policy's logic in the first place. For municipalities, fiscal policy – the way in which municipalities send pricing signals to the market – as a means of influencing land development decisions in such a way that helps to achieve policy objectives has been eschewed in favour of simple revenue maximization to the peril of their longer term development. The manner in which municipalities calculate and levy development charges are one such example of this

disconnect between fiscal policy and broader policy goals. As this paper argues, the current system of Development Charges are calculated in such a way that the resulting effect on development comes at cross purposes to municipal planning policies: subsidizing development that places an excessive burden on municipal infrastructure at the cost of more efficient forms of intensified development while reducing affordable home ownership.

Development charges are municipally applied fees which are levied against the development of new buildings to pay for the infrastructure required to service them. As an infrastructure financing tool these charges have the potential to promote equity by having growth pay for growth, and to ensure current and prospective residents a level of service they have come to expect, or anticipate buying into, as well as to send the proper price signals on which the development community can respond through adjustments to their building decisions. For developers the charges can help ensure that infrastructure projects can be provided for by the municipality in a timely manner (Nelson and Moody, 2003) while residents can be assured that their tax bills will not increase or services cut for the municipality to pay for the growth related costs (Yinger, 1998). There is also merit in having structured development charges on which the development community can anticipate in the pre-development stage as opposed to negotiation based site-specific charges which developers can not properly anticipate. Formalized charges help to mitigate this risk of unknown costs in land development which Mohamed (2006) argues is one element of satisficing¹ amongst the development community leading to sprawled inefficient development.

¹ Satisficing is a problem recognized in the developers community in which firms are not traditional profit maximizers in the economic sense, but rather firms are willing to accept suboptimal returns that achieve pre-established targets.

Acting against this optimal situation is the fact that these charges remain primarily in the domain of municipal finance departments and are seldom linked to municipal planning objectives (Skaburskis and Tomalty, 2000). This may be explained in part by the fact that in Ontario, as elsewhere, development charges are paid by the developer and are thus “hidden” in so far as they are never explicitly revealed to the ultimate purchaser of the housing (or infrastructure services) making them a politically attractive revenue tool. Additionally development charges are politically attractive for municipalities because they provide a source of funding derived from a population that is not yet present and thus does not have the same voice as existing residents and, depending on the stance taken, politicians can either appease antigrowth constituents (Burge, Nelson and Matthews, 2007) or appear to be “pro-business.”

Ontario has had a long history with development charges, or what had previously been termed “lot levies.” Despite this it has only been since 1989 in Ontario that the rules governing their application have been codified in law, while major revisions to the legislation in 1997 made adjustments to the services covered and requirements for calculation. The genesis of the development charge legislation of 1989 came about in an era of senior levels of government abandonment of municipal issues and frozen infrastructure projects (McKellar and Amborski, 2009) foreshadowing the downloading of responsibilities for services and infrastructure at the provincial level in the 1990s. Accordingly the 1989 Development Charges Act gave cash starved municipalities an additional financing mechanism, and one which was soon criticized for allowing municipal “gold plating” of infrastructure projects, exacting from developers whatever the market would bare. Changes to the legislation in 1997 prevented the continuation of this egregious behaviour by requiring charges not exceed a ten year service level while revenue for

each category of service was earmarked for just those purposes. Despite this, development charges have managed to rise consistently over time to the point that in Toronto and the municipalities immediately surrounding it these charges now average \$34,000 for a single detached house.

Despite these vast sums of money that form a large portion of the cost of housing there is little effort to tailor the amount of the levy to the specific burden caused by differing types of development, or with an eye to urban form (Skaburskis and Tomalty, 1997). Rather, development *as a whole* is anticipated to pay for the services required to service it *as a whole*, effectively averaging out the more costly projects with the less costly, resulting in the same average cost of the infrastructure charge. Municipalities may, at their discretion, differentiate charges on the basis of area (with some limitations) and type of unit which is often the case as most municipalities charge differently for apartment units, townhouses, singles, and semi-detached housing while many municipalities further distinguish between large and small apartments. This differentiation is deceiving however as differences between these categories do not stem from any difference in the infrastructure costs of the different types of development; rather, they are based on different assumed average persons per unit (ppu), with each individual assumed to bare the same burden on municipal infrastructure regardless of where that person is located or the type of housing they reside in.

While much literature has been written about who bears the incidence of these charges, and how these charges affect the aggregate supply of housing, there is a relative void in terms of how these charges affect the built form. By charging a higher cost for development which places a greater burden on municipalities' infrastructure requirements, the effect could not

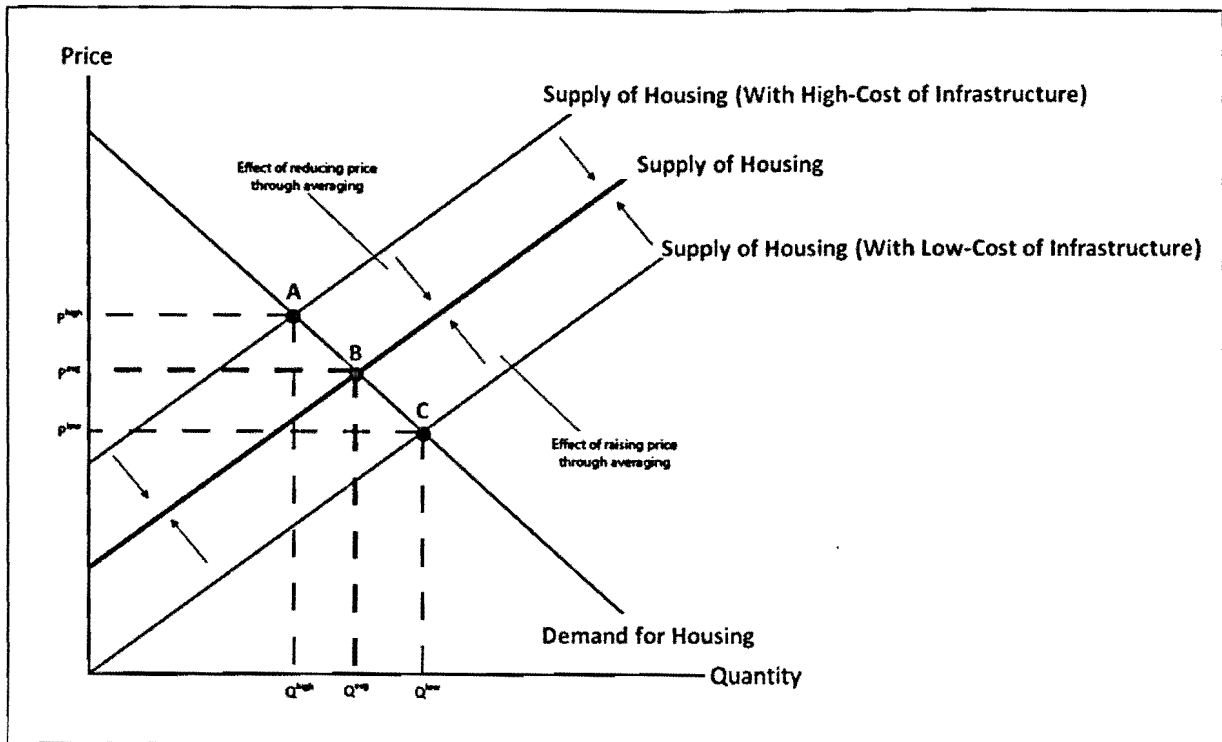
help but to reduce, to *some* degree, the amount of development which takes that form. The exact extent of this shifting would be a function of the sensitivities of developers and residents to these price changes. As development charges are just one cost which must factor into developers' decision of what type of unit to build in a decision process constrained by a multiplicity of other factors (minimum lot sizes, minimum unit sizes, height restrictions, etc.) the ultimate effect may be marginal.

However, the highly competitive nature of the building industry is suggestive that the homebuilding industry would be capable of responding to price signals. Ontario's homebuilding industry is marked by a large number of small firms and the dominance of few large firms which gain and lose this dominance over time (Buzzeli, 2000). Even if the monoliths of the industry did not see it in their interest to adapt to the change in prices that would result from re-calculated development charges, it would not take long for the large number of small firms to realize the changing game. The downturn in the condominium market in the 1990s led to the bankruptcy of many developers, but it also forced many others to diversify into other building types, an observation that suggests that the homebuilding industry is capable of responding to even severe changes in the market.

As much of the conversation of this paper revolves around how developers (or residents) would change the supply of (or demand for) housing as a result of price effects of development charges it is worth turning briefly to the fundamentals of economic theory. For the purposes of illustration Figure 1 shows the traditional supply and demand curve along with an additional curve above and below the "Supply of Housing" curve indicating the hypothetical supply of "High" and "Low" cost of infrastructure were they to be priced accordingly. For

simplicity we can assume there are only two types of housing in our municipality: “high cost of infrastructure” and “low cost of infrastructure.” By averaging the costs of all development the effect is to decrease the supply of “low cost to service” while simultaneously increasing its price, while the converse is also true: higher cost to service housing becomes cheaper and the amount supplied increases. Were prices to be reflective of the actual cost to service each development with infrastructure, the “high cost of infrastructure” housing would be at point “A” with a price of P^{high} and supplied at a quantity of Q^{high} . Averaging the costs of these units with the “low cost of infrastructure” housing serves to reduce the price of the “high cost of infrastructure” housing, moving the equilibrium price and quantity to “B.” Because the reduction in price of the “high cost of infrastructure” came as a direct result of averaging with the “low cost of infrastructure” units, this type of housing will necessarily increase in price which will lead to a reduction in quantity which is shown as a movement from point “C” to point “B.” Through averaging the “low cost of infrastructure” subsidizes the construction of “high cost of infrastructure” housing.

Figure 1 Effect of Averaging Development Charges on Supply & Demand

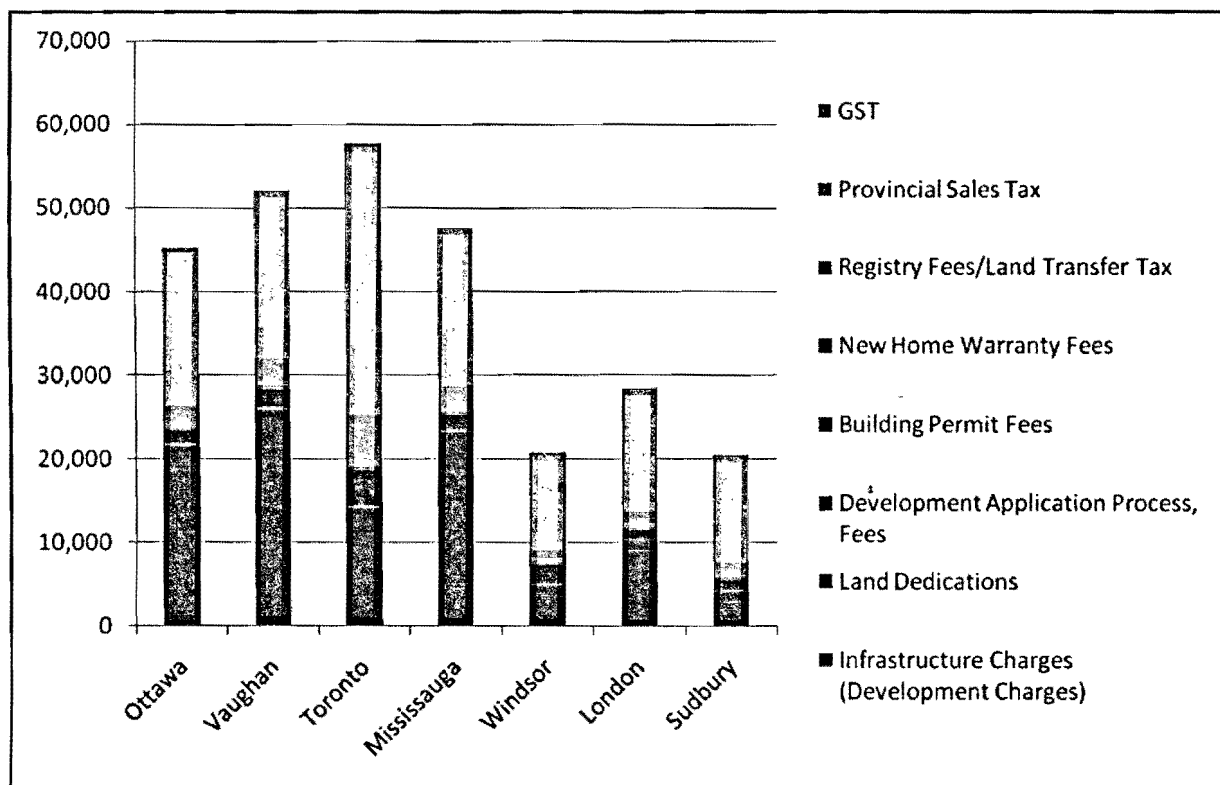


The world we live in is of course more complicated, and there are many different types of housing which will all be supplied in varying amounts and not just settle on one uniform price and quantity. Burge Nelson and Matthews (2007) also emphasize that there are both supply and demand responses to development charges, in part because of the possibility of increased supply of developable land, while Gyourko (1990) has developed a model that incorporates the supply of developable land when municipalities' can reduce exclusionary zoning as a result of development charges. Regardless of all the nuances that can be layered on top of this chart, the point is that increasing the price of an item will reduce its quantity: Averaging high and low cost items will reduce the supply of the low cost item relative to what is optimal, while increasing the supply of the high cost item to a point beyond what is optimal.

To what extent these charges play in how the built environment takes shape is important. It may be the case that the effect development charges have on influencing

development is small as the charges represent a relatively small portion of the building costs at approximately 2% of office projects, 5% of retail costs, and 8% of industrial costs while varying widely for residential development according to one study in the Region of York (C.N. Watson, 2004). Yet development charges are often the single largest component of government-imposed charges (Figure 2) accounting for an average of 28% of all such charges, and 63% of municipally imposed charges in the seven Ontario municipalities investigated by Tomalty and Skaburskis (2009).

Figure 2 Government-Imposed Charges in Ontario



Source: Tomalty and Skaburskis (2009)

Accordingly development charges are the single largest cost-influencing factor in the development decisions which is suggestive of their power as a policy enabling tool, akin to other government incentives of tax breaks etc. It is therefore important to recognize the extent and manner to which the market response to changes in these charges and whether this bares a benefit proportional to the amount of administrative resources for its execution. Recognizing this, Kitchen (2003) argues it is important to balance the concerns of equity, ease of administration, incidence, and fairness when negotiating development charges. Although there is every justification to make development charge calculations as reflective of the actual burden of the specific development on the equity grounds of "user-pay" alone; the administrative costs must be balanced with issues of fairness and the extent changes in charges have spin-off benefits on other municipal objectives such as intensification, affordable housing, a greener environment, reduced commuting times and greenhouse gas emissions, and encouraging transit oriented development. If developers are sensitive to price changes in development charges, there is a rational to calculate them in such a way as to achieve these spin off benefits while still making "growth pay for growth"

Chapter 2: Provincial Policy

Any method of calculating development charges will have an effect on the built form whether this represents a conscious choice by councils that actively commission the charges to reflect desired policy outcomes or whether it is through omission in which case the pieces will fall where they may. Yet under the framework of municipal government in Ontario, municipalities have strict guidelines that the policies and legislation they pass be consistent with provincial policy. With development charges calculated at an average cost, the de facto policies being advanced by development charge by-laws are not consistent with provincial dictates. Municipalities are subject to the *Planning Act* (1990), legislation which governs the obligations of municipalities and sets out as its purpose to, “provide for a land use planning system led by provincial policy” (§1(1)b) and, “to integrate matters of provincial interest in provincial and municipal planning decisions (§1(1)c). Under this regime all decisions of council must be “consistent with the policy statements” (§3(5)a) and “conform with the provincial plans that are in effect” (§3(5)b). The matters of provincial interest which must be integrated into the municipal planning decisions are listed within the act and are items which are intimately tied to the consequences of built form and the efficient operations of the city’s development:

- (a) the protection of ecological systems, including natural areas, features and functions;
- (b) the protection of the agricultural resources of the Province;
- (c) the conservation and management of natural resources and the mineral resource base;
- (d) the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest;
- (e) the supply, efficient use and conservation of energy and water;

- (f) the adequate provision and efficient use of communication, transportation, sewage and water services and waste management systems;
- (g) the minimization of waste;
- (h) the orderly development of safe and healthy communities;
- (h.1) the accessibility for persons with disabilities to all facilities, services and matters to which this Act applies;
- (i) the adequate provision and distribution of educational, health, social, cultural and recreational facilities;
- (j) the adequate provision of a full range of housing, including affordable housing;
- (k) the adequate provision of employment opportunities;
- (l) the protection of the financial and economic well-being of the Province and its municipalities;
- (m) the co-ordination of planning activities of public bodies;
- (n) the resolution of planning conflicts involving public and private interests;
- (o) the protection of public health and safety;
- (p) the appropriate location of growth and development;
- (q) the promotion of development that is designed to be sustainable, to support public transit and to be oriented to pedestrians. (emphasis added)

The pricing signals which Development Charges convey, based on an average cost per person calculation, place unfair financial costs on development which is more likely to conform to these matters of provincial interest. The *Provincial Policy Statement* (MMAH, 2005) elaborates on the Province's stance on many of these planning issues. In it, it sets out the vision for Ontario communities in which "land use patterns promote a mix of housing, employment, parks and open spaces" as well as having "transportation choices that facilitate pedestrian mobility and other modes of travel" (p.2). Not reflecting the efficiencies in infrastructure savings as a means of encouraging development that makes use of a mix of housing and employment so that people do not have to travel as far to their destinations, or development near transit so people can choose that as an alternative or walk to the businesses that are attracted to transit stations, discourages this type of development. It is in a perverse manner that, not only are the policies not being met, but the average cost calculation actively

discourages their achievement: for every unit built in efficient locations, more money goes to development which is inefficient.

The Province's *Places To Grow: Growth Plan for the Greater Golden Horseshoe* (Ministry of Infrastructure Renewal, 2006) was released soon after the Provincial Policy Statement and it outlines where growth is meant to take place and provides guidance on the way in which municipalities must accommodate this growth. But here again, by addressing the desires of built form at a policy level without dealing with the underlying economic motivations, development charges will do nothing but to increase pressure against these policies by perpetuating the same type of growth that is able to reap the benefit of an average cost approach to development charges.

The *Growth Plan's* guiding principles governing how land is developed and resources are managed states that municipalities shall, "optimize the use of existing and new infrastructure to support growth in a compact, efficient form," and "build compact, vibrant and complete communities" (§1.2.2) which provide convenient access to transit, a mix of jobs, local services and a range of housing. As pointed out by Blais (1995; 2011), the effect of development charges is to generate a subsidy to residents of lower density areas at the expense of those of higher density, mixed-use development. These subsidies in turn interfere with the market and act at cross-purposes with the policies of the *Growth Plan*, as it is less financially feasible to build at transit supportive densities than should be the case, while continuing the existing pattern of development remains economical. The result is that the low density that will continue to be built based on sound financial analysis at the developer's end will continue to

push growth towards the skirt of the urban boundaries imposed by the *Growth Plan* until such time as it creates its own imperative for boundary expansion.

Without pricing mechanisms to signal to the building community we run the risk of not being able to afford to build “Strong Communities” which the document recognizes as being dependant on “promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term” (§1(1.1a)). There is a two-fold effect of development that is more burdensome on infrastructure as municipalities must bare the up-front emplacement costs and the longer term operating and management costs. Recognizing the true costs of infrastructure and the strain low density single use development places on the long-term financial health of the province and municipalities prompts a policy-driven motive for assessing development charges in an efficient manner.

Chapter 3: The Development Charges Act

The manner in which development charges are calculated and restrictions on how these revenues are spent is outlined in the 1997 Development Charges Act. Tomalty and Skaburskis (1997) illustrate how today's act is a very specific product of the economic and political forces that led to its adoption. The authors trace the evolution of municipalities charging for hard services (roads, sewers, etc.) from a time when bankruptcies among developers, who would pay their levies after development, led to municipalities shouldering the burden of these failed undertakings, to the more recent battle to include "soft services" (libraries, police stations, etc.). During negotiations leading to the creation of the original 1989 Act, the province was under severe fiscal pressures and sought to devolve some of the Province's infrastructure responsibilities onto municipalities and thus did not want to "undermine municipal capacity to raise revenues" (ibid. pg.1995). Thus the 1989 version of the Act was very much a fiscally minded tool, a fact highlighted by officials with the Municipal Finance Branch, the branch of the Ministry of Municipal Affairs which led in the development of the Act, who commented that they had little interest in the land-use impact of the charges (ibid).

In the lead up to the 1997 revisions stakeholders with an interest in more compact urban form were noticeably absent from the negotiations leading up to the introduction of the act (Tomalty and Skaburskis, 1997). Not even the Land Use Branch of the Ministry of Municipal Affairs were present, but nor were environmental, transit, or agricultural groups at these negotiations. Meanwhile development interests had changed sharply with the downturn in the condominium market which had caused significant upheaval in that sector resulting in or the

diversification out right bankruptcies of those firms that would have an interest in reductions for higher density development (ibid). The Ministry of Housing was however present and was able to advocate for affordable housing and achieved mandatory exemptions for accessory units and the *optional* exemptions for affordable housing. Meanwhile the act held provisions that exempted any expansion of up to 50% for industrial buildings.

The changes in the 1997 legislation also differentiated hard and soft services with mandatory reductions for the latter (excepting police and fire services), and required municipalities to undertake background study justifying these charges which could not exceed the ten year historic average level of service. Were these municipalities to have a service level that exceeded this average level, then deductions for this “excess capacity” would have to be accounted for.

This restriction on the historic level of service makes accommodating changes in services requirements aimed at accommodating intensification much more difficult. In the case of transit service for example, municipalities that attempt to satisfy a more urban population with a higher level of public transit will find themselves with persistent “excess capacity” which must be reduced from the amount of charge for that service developers must pay. In similar form, parks which are developed in urban areas are anticipated to be developed in a capital intensive manner compared to the traditional parks and sports fields many of the suburban municipalities are familiar with. In this case, park land is not a component of development charges as these contributions are governed by section 51.1 of the *Planning Act*, rather only the capital improvements to the parks (fences, swings, etc) are prone to development charges and the ten year service level. Yet with intensification many municipalities are accepting parks

developed at a higher, more urban, standard as a form of cash-in-lieu of developers park *land* requirements which serves to increase the recent level of parks service to an amount greater than the ten year average. As intensification increases this will erode municipalities' ability to pay for the high quality urban parks demanded of a more urban lifestyle.

For municipalities that attempt to use development charges as a means of attracting investment or encouraging certain types of development, the *Development Charges Act* makes clear that development charges "may not provide for any resulting shortfall to be made up through higher development charges for other development" (§5(6)3). Any reduction must be made up through other means such as taxes. It is for this reason that municipalities which have chosen to create separate categories of development with differing quanta of charges for each have undertaken the studies necessary to provide a foundation to base these reductions. Without these studies there can be no reduction, only a tax subsidy.

At the opposite end of the historic service level, municipalities that plan for infrastructure are tied to a "use it or loose it" scenario. As the *Development Charges Act* allows for the maximum allowable charge based on the historic service level so long as the municipality has growth plans to spend such revenues, there is a built in incentive to plan to spend exactly as much as you take in. Further, because *the Act* does not allow for moving capital funds from one category to another, it makes it difficult for similar goods – such as with roads and transit for transportation – to be provided efficiently.

In most cases where municipalities have turned their attention to development charges, it is as a way of attracting businesses or residents through reductions. When it comes to other policies, there is little driving force to hold municipalities to account. In *Chartwell v. The*

Regional Municipality of Durham (2008) the region's calculation of development charges were brought before in the Ontario Municipal Board (OMB) with the appellant contesting that the charges did not conform to the PPS. In this case, the appellant argued that the municipality should create a separate category of "seniors' housing" in the region's development charge by-law to conform with the PPS requirement that,

1.4.3 Planning authorities shall provide for an appropriate range of housing types and densities to meet projected requirements of current and future residents of the *regional market area* by:

b. permitting and facilitating:

1. all forms of housing required to meet the social, health and well-being requirements of current and future residents, including *special needs*² requirements;

As seniors housing requires less infrastructure and has fewer persons per unit than many other structures the appellant argued that not including this as a category of residential was not meeting the requirement to permit and facilitate seniors housing. At the time the region's practice was to charge such units as "retail" leading to higher charges. Before the board had a issued their ruling, the city amended their position to charge special care facilities at the same rate as apartments but in the final ruling it was the board's opinion that development charge calculations represented "local decisions," (p.11) and that the PPS was not to be taken in a narrow interpretation, but rather "is intended to provide a broad policy approach for the entire province" (p.10) and that achieving the goals was instead a matter for local decision makers and could be reflected through Official Plans.

² Special Needs is a defined term which, "means any housing, including dedicated facilities, in whole or in part, that is used by people who have specific needs beyond economic needs, including but not limited to, needs such as mobility requirements or support functions required for daily living. Examples of special needs housing may include, but are not limited to, housing for persons with disabilities such as physical, sensory or mental health disabilities, and housing for the elderly."

During the hearing the appellant argued that existing situation increased the cost and thus decreased the supply of seniors' housing putting the policy at cross purposes with the PPS. Further, it was argued that "retirement housing generates less need for eligible services as a matter of fairness and equity" (p.3). In counter to David Amboski's opinion that charges should differ by use and density of development, Cam Watson commented that the situation would be "unworkable" to differentiate charges by each specific use, but rather, "charges are based on broad categories of development, differentiated in some cases by the discretionary exercise of local policy and that it would be inevitable that some components of each category would subsidize others" (p.7). With respect to reaching conformity Mr. Watson was of the opinion that because the charges were calculated with the participation of all departments, that it followed that the resulting by-law would be in conformity with municipal policy.

In similar fashion, the case of *Orangeville District Home Builders Association v. The Town of Orangeville* (2010) the appellants argued against the gross density calculation versus net density in the Town's development charges because the charges would result in higher housing prices discouraging housing affordability as required by the Growth Plan and PPS. The appellant argued that, were the gross density calculations used, infrastructure would be overbuilt and thus negatively affect the affordability of housing. However while accepting these matters as "good housekeeping" in policy development, the board shifted discussion away from matters of policy stating that in addressing these issues "one must examine . . . the Act and the focus should not stray or slip unduly into extraneous areas without a compelling reason" (p.21). The board followed this by opening the door to future cases, stating:

This is not to say that the housing affordability or optimisation of resources are "no-go" in development charges disputes - they may well be; but they require a

completely different framework set out by the parties and a re-calibrated baseline of evidence before the Board can seriously entertain them (p. 21)

The greatest source of leeway that Municipalities have been granted with regards to their calculation is from an OMB decision in the case of *Re Guelph (City) Development Charges By-law* (1999). In a ruling which has since been cited many times and is to a large degree the test to which council's choice in enacting development charges must pass, the board states that, "the board should not substitute its policy choices where the board finds, based upon evidence, that city Council has acted fairly, reasonably, within its powers and in accordance with the process set out in the act." (par. 98). This sets a standard that is quite different from the matters of good planning in the public interest that the board is traditionally held to.

Chapter 4: Municipal Approaches to Development Charges

Housing is not uniform in the burden it bears on municipal infrastructure whether this difference in burden is directly a result of built form characteristics, or from differences in socio-demographic characteristics of populations that gravitate to these differing unit types. The extent we go to differentiate these costs will ultimately determine the level of subsidies that travel between different housing types and the residents therein. For many municipalities which have gone to great lengths to calculate development charges in a policy driven manner the aim of this undertaking was for pure business development or residential growth purposes. Exceptions can be found as with Markham that has a separate charge for “mixed use,” or Ottawa that has a multitude of Area Specific Development charges that reflect cost savings for those areas. In other cases development that uses existing infrastructure and minimizes the impact on services akin to Provincial policies happen in spite of the development charges which only goes to illuminate the inequity of the existing situation.

This is very much the case in the development proposed at 426 University Avenue in Toronto. In this case the developers fought for, and eventually achieved, permission to build a 42 story, 312 unit, mixed-use condo in a downtown location along transit. The building catered to this fact and proposed an innovative plan to have only *nine* parking stalls. Auto-share cars were placed in the stalls while residents were given memberships. This prevented the developer from bearing the cost of providing expensive underground parking that can range between 30 and 80 thousand dollars per stall. Despite this, the development still contributed \$314,000 for the roads component of development charges alone while contributing nothing

extra to a transit system its residents will soon demand more from. Fortunately this trail-blazing development was still able to go ahead with what if felt was a successful business model despite the added cost of development charges for infrastructure it will likely never use. Another question however is how many developments are never built due to cost differentials induced by infrastructure costs the perspective development never intends to use.

While the University Avenue development is by no means the norm, the dramatic extent to which parking was reduced as a direct result of the locational factors of the site points to the extent that savings can be realized. At the opposite end of the spectrum, the City of Toronto is trying to find ways to fund the proposed Sheppard Line subway expansion in part through the use of city wide development charges similar to the funding to the Spadina extension. While many individuals along this line would no doubt benefit from this infrastructure, the added cost to development throughout the remainder of the city will put in jeopardy as the users of those units will have to pay for a piece of infrastructure they will likely hold little value for. Not only will this hurt the prospects of achieving growth targets in Etobicoke Centre and Downtown Toronto which are expected to accommodate 400 persons and jobs per hectare, up from their 2006 densities of 115 and 380 respectively (Ontario, 2008), but may also threaten the City's growth as a whole if the attraction of development along the proposed line does not counter the loss of all other residents who may choose to live in other municipalities entirely.

As the "roads" component often constitute as much as 50% of municipal development charges, savings that can be justified in this area through an efficient urban form and reflected in municipal development charges are a good candidate for inducing behavioural changes.

Unfortunately for most municipalities the use of detailed calculations to justify reductions has largely been in the non-residential sector as a means of encouraging economic development. In the case of York Region, the upper tier municipality uses different assumptions for the number of employees per square foot of building area in much the same way different assumed ppu's are given to each unit type (Figure 3). As a result of the varying intensities each of industry uses, as measured by employees per square foot, the category of "Industrial/Office/Institutional" is charged for all services at a rate less than the "Retail" category. The region further relies on the Transportation Tomorrow Survey to allocate the roads component of the development charges based on the respective trip generations for each category. As a result the non-retail category is charged a rate roughly one-third the amount of the "Retail" category or \$7.42 versus 23.13 per square foot with the roads accounting for 60% of the difference.

Figure 3 Employment Densities by Type in York Region

	Square Feet/Employee	Portion of Total Employment Growth	Weighted Sq.Ft./Employee
Retail	500	0.24	500
Total Non-Retail		0.76	555
Industrial	850	0.34	380
Office	250	0.34	112
Institutional	600	0.08	63

Source: York Region Development Charges Background Study 2010

The result of this is a difference of leading to a significant reduction in development charges for the non-retail commercial uses. roads component of its development charges which recognize the different demands imposed by retail and other non-residential uses that

have resulted in significant decreases in the latter. In York Region this difference amounts to industrial and commercial development on the regions' road infrastructure. Although exemptions and discounts on development charges are permissible any such discount, barring a reformatted methodology in the calculation, would have to be made up through other sources and not through increases in other development charges: effectively breaking the premise that growth should pay for growth. It is also worth noting in the York Region case that the low employees per square foot in the Industrial category are grouped together with the Office Category, which represents an averaging out that reduces the cost of office development at the cost savings that could otherwise materialize in the Industrial category.

In similar fashion to the transportation analysis conducted by York Region, the City of Burlington contracted iTrans Consulting to conduct detailed transportation analyzing the transportation requirements of retail versus non-retail use. Although the city does not use different assumed employees per square foot, the results of the transportation studies were enough to result in a difference of \$49 per square metre, a 58% reduction from the Retail charge. If the municipality had not differentiated the two charges, indexed to today's dollars, would be \$47.00 versus the \$35.84 and \$84.82 per square metre split that is currently the case.

It is perhaps unsurprising that efforts are undertaken to find discounts for office and industrial uses to the expense of retail use. While office and industrial businesses have a large amount of variety in their choice of location, the same is not true for retail which is comparatively more tied to the population it serves and must locate accordingly. To this end, development charges are being used more as an economic policy than a planning policy. As described in the York Region Development Charge Background Study,

Of the neighbouring municipalities, the City of Toronto does not currently impose development charges on industrial, office or institutional development and Durham Region partially exempts industrial development from the payment of development charges. These exemptions are made in order to encourage these types of development (2010, p.10).

There are however exceptions, which can be seen in manner in which the Town of Markham calculated their development charges to reflect cost savings associated with mixed-use development, specifically for the services of fire and public works. As a result of these differences in assumed service requirements, non-residential mixed-use development is charged \$5.70 per square meter of gross floor area for “soft services” compared to \$9.03 for other Retail and \$8.32 for office, institutional, and industrial use (there is a separate charge for “hard services” which are equal across categories and assessed per net hectare). The Town of Markham, as well as other municipalities in the York Region make extensive use of Area Specific Development Charges which charge for the infrastructure requirements of a finer-grain geography and are developed in consultation with area property owners and are charged at a per net hectare basis. The effect of this reduces any cross-subsidy of outside properties and allows developers to ensure the maximum efficiency of the infrastructure of their respective sites and potentially encourage more dense development.

In other circumstances, municipalities have tried to encourage desired types of development through development charge reductions such as for low-income housing, brownfield redevelopment, downtown revitalization, or to encourage the use of green roofs. Unfortunately however, these reductions come at a direct expense of tax revenue and does not fundamentally address that may already be present in these developments. In turn, the city takes in less revenue than if it had calculated the charges reflected of lower infrastructure

costs: instead of having the affordable housing unit or other such development subsidize less efficient forms the municipalities do so directly and call it a subsidy to the affordable housing. Correctly pricing development charges for these units, as is discussed below, would therefore allow for more funding available for other social programs.

Chapter 5: Infrastructure Cost and Built Form

The basis of justification for development charges is that there is a connection between new development and the additional cost of infrastructure necessary to service it. Development Charges attempt to finance the cost of infrastructure related to growth at an aggregate level which assumes each person (or person per unit) is responsible for the same share of the burden of this infrastructure. Despite this fundamental assumption on which the “pricing” of municipal development charges are based, many studies show that urban form has a large impact on the cost of municipal infrastructure with variation that “represents significant levels of costs” (Blais, 1995, p 18). For certain services the linear relationship between infrastructure cost and population serviced translates into cost savings for development at higher densities as municipalities can provide the same level of service at a lower cost. Similarly higher density units such as apartments do not have the same requirements as other housing forms, such as lawns to water, which reduces the impact these units have on the municipality’s infrastructure requirements. In other cases, development that takes advantage of a mix of uses facilitates additional choice for residents that results in lower infrastructure requirements providing the option of active transportation versus for daily trips.

Looking into the life-cycle costs of infrastructure, Blais (1995) argues that there are cost savings that accrue from a mix of housing and uses in development which reduce the need to accommodate the boom-and-bust cycles. Without a mix of housing types and other uses to accommodate the mix of residents, municipalities are stuck in a paradox of providing infrastructure that is at first under capacity, then over capacity, and finally, fallow capacity

infrastructure, such as with schools going through the life cycle of a homogenous development. As shown in Figure 4 the difference in public costs between different growth models can be extreme, and by Blais' calculations can amount to 40% over 25 years when including life cycle costs. For practical purposes however, accounting for life-cycle costs would be incredibly difficult, but this is an added infrastructure cost that is associated with a homogenous built form.

Figure 4 Public Cost of Three Development Options

	Central	Nodal	Spread
Residents per Ha.	152	98	66
Capital Costs (billion \$1995)	39.1	45.1	54.8
O&M Costs (billion \$1995)	10.1	11.8	14.3
Total Costs	49.2	56.9	69.1
Percent Savings over "spread"	40%	16%	NA

Source Blais (1995;) adopted from Litman (2011)

In one study done by the Canada Mortgage and Housing Corporation (1997) comparisons were made between the 75 year lifespan (the life of the longest lived piece of infrastructure) "Conventional" and "New Urbanist" development. the study revealed that emplacement costs (both public and private) constitute only 29% of total life-cycle costs. Of the life-cycle costs, the developer was only found to be responsible for 11% helping to illustrate the disconnect between the incentives facing developers and municipalities when planning for development. Comparing life-cycle costs, the study finds that despite being 64% more expensive in absolute terms, there is a per-unit savings of 7.5% when development takes advantage of New-Urbanist principles including a mix of higher density (p.22, *ibid*). It is important to recognize however that a part of the reason for the savings is a greater share of

commercial use on which to distribute the costs, that said, the commercial sector also realized cost savings on a per square foot basis over the conventional development.

In many respects density is a much easier item to take stock in, and there is a large body of literature that suggests there are significant cost savings that can accrue as a result of intensification. Research by Burchell et.al. (2005) suggests that if the United States followed a more compact development pattern that shifted 20% of development that is currently expected on undeveloped land towards a clustered style of development at double the traditional densities, and shifting 9% of growth to urban and suburban areas with a greater share of townhomes and multifamily housing more than \$100 billion in cost savings could be achieved in fifty years. The most significant savings from this proposed shift are in the form of reductions in linearly related infrastructure including roads, at 12% cost savings, and water sewer, at 11% cost savings. A similar study for the Greater Toronto Area compared the cost of growth following either of three typologies: spread, nodal, or central growth strategy (IBI, 1990). The study showed that between 1990 and 2021 the cost of additional infrastructure required to service the three typologies would be highest for the spread out growth plan form followed by nodal and central plans, although the study conceded that the margin of error was not enough to make the differences significant.

In contrast to this high level approach, the CMHC study into Conventional and new Urbanist built forms, compared a proposed 337.7 ha development in Barrhaven, Ontario providing a very micro level analysis. In the study, the conventional plan had primarily single detached homes with 184.2 ha of residential land providing 4,005 units (pop 13,045 at 3.3ppu), conversely the New Urbanist approach had, among other differences, 158.2 ha. of residential

land while providing for 6,857 units (pop 20,949; 3.1 ppu). The study looked at differences in on-site infrastructure requirements based on development-specific characteristics indicative of New Urbanist principles and analyzed the resulting emplacement, servicing and replacement costs associated with each form. The study found that in the residential sector, there is a \$5,151 savings per unit in emplacement costs when the development was of New Urbanist form (CMHC, 1997, p. 31). Of this 60% of the savings materialized to the private developer and 40% (\$2,110) were savings to the municipality, of which 25% is the result of savings in road infrastructure. Linearly related services of, roads, storm water management, sanitary sewers and water distribution made up 80% of emplacement cost-savings.

As mentioned above, this study only looked at the development-specific costs imposed on municipal infrastructure. In one CMHC study which looked at New Urbanist developments, the focus of the study was on user-specific characteristics finding that there existed large differences between the demands of the different residents. The study compared several conventional and New Urbanist suburban developments on several user traits, and while self-selection bias was one factor in the study's findings the overall trend revealed that residents of New Urbanist neighbourhoods were more than twice as likely (51% versus 19%) to walk or bike to local services and stores several times a week (CMHC, p.10, 2010). Further, the residents of New Urbanist neighbourhoods were more likely to report a reduction in their car use (39% versus 18%) and less likely to report an increase (29% versus 47%) while rates of car ownership had also witnessed a decline in New Urbanist residents 24% less likely than their conventional neighbourhood counterparts to own more than one car.

Yet even when there is not a direct relationship between the cost of service and the density of the built form it services, there are often indirect relationships or externalities present that may provide for similar savings (ie induced trip demand for library services when such libraries are spread out accommodating a low density population versus the shorter, often non-vehicle oriented, trips associated with libraries servicing higher densities). Total Vehicle Kilometres Travelled (VKT) are found in the CMHC study to be 24% higher in conventional neighbourhoods than those of New Urbanist. Regression analysis found this difference to be most associated with the presence of high-density housing, proximity to employment and housing mix. Interestingly dummy variable for single detached housing was not found to be statistically significant in reducing VKT, but rather the neighbourhood characteristics in which those single detached units were located were (p.14, *ibid*). In essence this would add credence to an area specific approach to calculating development charges based on neighbourhood factors. In contrast Skaburskis raises concerns on the actual benefit of broad application of New Urbanist principles justified by the “sustainability” argument which he sees as addressing a supply-side problem while the long-run determinant of urban form are the demand side pressures (2006, p233). Yet where opportunities exist to reduce the cost of this New Urbanist format to make charges reflective of the infrastructure savings it is possible to reduce its price and thereby address Skaburskis’ concerns over the demand-side.

The density advocated by supporters of New Urbanism on the “sustainability” argument believe that such development is the preferred option to conventional, dispersed, low density, car dependant, single use development is often pejoratively called, “sprawl,” and is a form of development Brueckner attributes to costs which the market fails to reflect in the price of

housing, which has given way to market failures (2001). The result, this “sprawled” development, leads to a decline in open space and farmland; the declining health of wetlands and streams due to an increase in impervious surfaces and runoff; deteriorating inner cities and commensurate need for subsidies and reinvestment to prevent such decline; increased air quality problems due to longer and more car dependant commutes; as well as the need provide greater subsidies to make public transit viable in low density neighbourhoods (Rosenberg, 2002).

The market failure, Brueckner points to is firstly a product of housing that does not pay the full costs of infrastructure associated with it. Other market failures leading to sprawling development and the commensurate problems include when the price of housing does not reflect the social value of open space near metropolitan areas which results in the loss of this land for individuals to enjoy. Finally, Brueckner points to the failure to recognize the full social costs of commuting individuals choose to locate housing further away from work and other destinations leading to an externality imposed on all other drivers sharing the roads. Reforming Development charges to reflect the infrastructure costs of sprawl helps correct one of the market failures identified by Brueckner while the existence of the other two points to an imperative that, where opportunity exists, efforts should be taken to mitigate “sprawl”.

While development charges attempt to deal with these infrastructure externalities at an aggregate level, insisting that growth – as a whole – pays for growth; idiosyncrasies associated with each development have been shown to lead to variation in burdens placed on municipal infrastructure and services with some greatly exceeding the average costs (leading to the receipt of subsidies), and others below average (leading to the provision of subsidies). The

result is that market inefficiencies are not necessarily addressed, and the problem of increasing infrastructure costs could in fact be exacerbated. This would be especially the case if typologies associated with lower infrastructure costs were more sensitive to price changes than building typologies that are more intensive on infrastructure and servicing requirements. In such instance the net effect would be an increase in the share of less desirable development at the direct expense of more desirable development. Current calculations with average assumed ppu's risk this as development charges are higher as a share of housing price for building types based on unfounded associations between ppu and infrastructure costs, and is discussed further below.

Blais also points to the existence of externalities which can not be conveyed in to the cost of infrastructure but are equally relevant from a policy perspective. These costs such as emissions, healthcare costs, and added accident policing are expected to be between \$700 million and \$1 billion over the thirty year study period. Comparing Greenfield versus brownfield development De Sousa (2002) finds the transportation-related external costs of development are 153% higher in Greenfield areas for residential development and 53% higher for industrial development than the alternative Brownfield development. Total net benefits to society by redeveloping all brownfields in the city of Toronto, preventing development in Greenfield areas would amount to between \$21.1 million to \$31.7 million for industrial application and between \$15.6 and \$23.3 million per year.

Because cost savings from intensification are not limited to the emplacement of infrastructure but extend also to savings in the operating and management costs, as well as traditional externalities such as reduced emissions, municipalities can take such factors as

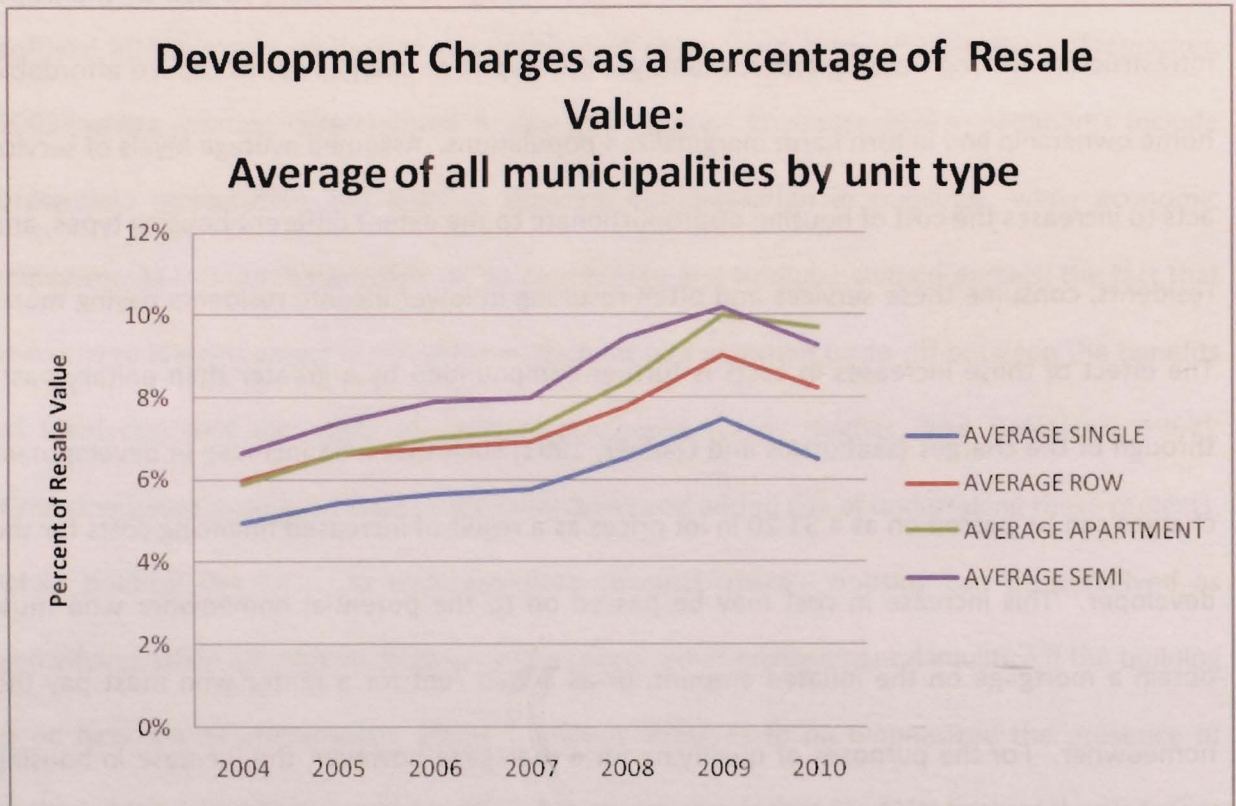
helping to drive the rationale for incentivising compact urban form. Providing such incentives, or correcting for existing price distortions, may be a necessary policy in achieving intensification which often means the redevelopment of existing built up or underutilized lands. These lands already face an array of hurdles which Greenfield development are not subject to which increase both cost and risk of redeveloping land. Economic, environmental, financing, and political impediments all reduce the viability of developing inner city locations (Steinacker, 2003) where existing infrastructure is already in place. Environmental impediments include brownfield remediation and lead or asbestos contamination in buildings, while economic impediments include the problem of lot assemblage and irregular shaped parcels; the fact that many large lots are previous industrial lands leads to a common trade-off between the benefits of ideal size and the costs of contaminated land (Lang, Hughes, and Danielsen, 1997). Financing issues arise as a result of the complexity and added risk of undertaking these projects, while political risk exists as redevelopment towards upscale housing can be perceived as gentrifying, while affordable housing can be perceived as environmental injustice if the building is on hazard lands (Steinacker, 2003). While it deserves to be emphasized the presence of these 'added costs are tangential to the infrastructure costs that form the basis of development charges, recognizing these burdens on the development industry adds credence to the argument for development charge reductions where they are merited.

Chapter 6 Housing Affordability

The way in which development charges are currently applied works to hurt individuals who are least able to pay additional sums of money for services they are less likely to use. By not reflecting opportunities for cost savings that recognize differences in use of municipal infrastructure among housing types, municipal development charges act to reduce affordable home ownership and in turn harm marginalized populations. Assumed average levels of service acts to increase the cost of housing disproportionate to the extent different housing types, and residents, consume these services and often resulting in lower income residents paying more. The effect of these increases in costs is further compounded by a greater than unitary pass-through of the charges (Skaburskis and Qadeer, 1991) such that a \$1 increase in development charges can be passed on as a \$1.20 in lot prices as a result of increased financing costs for the developer. This increase in cost may be passed on to the potential homeowner who must obtain a mortgage on the inflated amount, or as added rent for a renter who must pay the homeowner. For the purposes of qualifying for a mortgage however, the increase in housing cost as a result of development charges passed on must be matched by a threefold increase in the potential homeowner's income for them to qualify for a mortgage on the same housing unit. For livability and quality of life it is also important to properly price housing aimed at lower income residents, a Canadian study showed that renters were found to have \$294 less in accumulated assets for every \$1000 increase in housing costs (Englehardt, 1994). It is thus doubly important to "get the prices right" in the pricing of municipal infrastructure as getting it "wrong" has such draconian implications for those least able to bare the additional costs.

Because development charges represent a greater relative share of a house's value for apartment units versus other building types (Figure 5), reducing these charges (where justified) would result in a larger percent decrease in housing price than an equivalent decrease in another, more expensive, housing type. Assuming equal elasticities of demand³ among

Figure 5 Development Charges Between 2004 and 2010



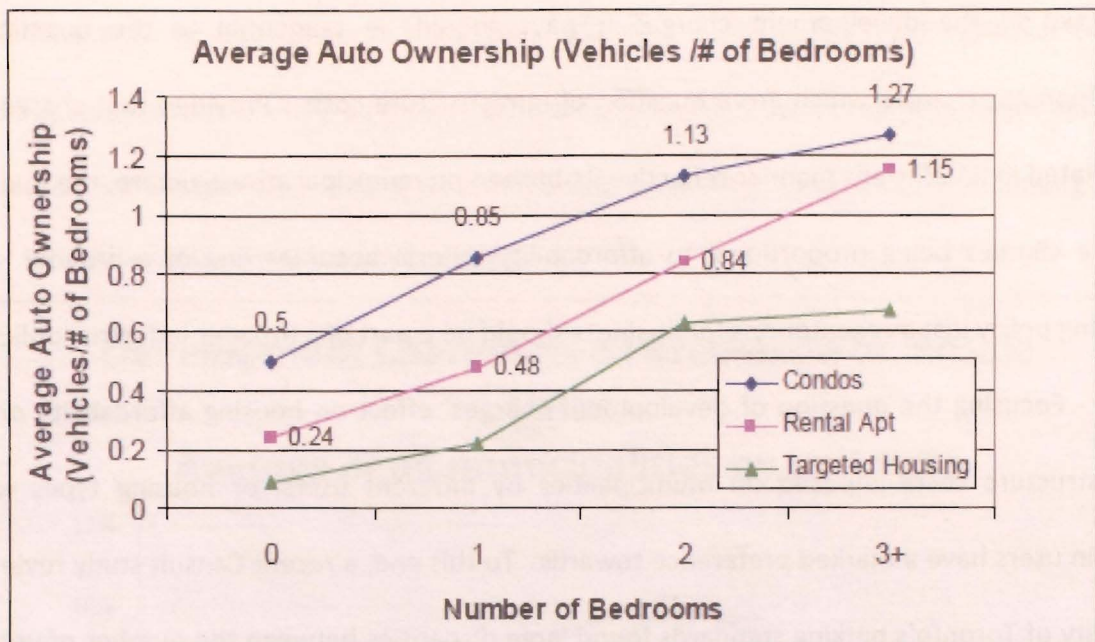
housing types, the effect of an equal price reduction would increase the demand for the less expensive housing versus the same decrease in a more expensive unit, as Baden and Coursey describ, this is “more likely to push moderate-income homebuyers out of the market than more affluent buyers” (2000,31) While this is merely a reflection of the fact that development charges represent a greater share of the cost of housing for less expensive units versus for

³ Elasticity of demand refers to the percent change in demand that results from a one percent change in price. If the elasticity of demand for a good is 1.0 then a 1% change in price will result in a one percent change in demand.

more expensive units; the question of fairness as to what share of different household's value is reflected in the development charges it pays should be tangential to the question of development charges which are a question of infrastructure costs. Provided that charges are calculated in an efficient manner reflective its burden on municipal infrastructure, the question of the charges being proportional to affordability criteria becomes one of a broader social housing policy just as exemptions for business should be a part of a broader industrial policy.

Focusing the question of development charges' effect on housing affordability on the infrastructure costs imposed on municipalities by different users, or housing types which certain users have a marked preference towards. To this end, a recent Cansult study reviewing the City of Toronto's parking standards found large disparities between the number of vehicles owned by residents of different locations in the city and housing types (2007). Importantly, their study showed a large difference in the number of cars per bedroom between Condominium units, Rental Apartments and Targeted Housing which included seniors housing, social housing, student housing, and alternative housing (Figure 6) with the latter housing type having an average car ownership one third that of Condominium units. Averaging the cost of service for roads unnecessarily increases the burden of these individuals. Fixing this issue could go a long way to encourage the development of rental apartments; something the development market has stepped away from as a result of provincial and federal governments removing previous incentive programs.

Figure 6 Average Automobile Ownership by Unit Type and Number of Bedrooms



Source Cansult (2007)

While it is not surprising that income has a large bearing on the type of housing people choose to live in, it is important to recognize that, when dealing with populations of people, if one housing type is systematically being over charged, then equally those residents are systematically being over charged. Figure 7 shows the extent to which housing is segregated amongst income groups in Ontario and at the very least would point towards a dual purpose of addressing built form and housing affordability by calculating charges to reveal the lower impact of apartment units.

If the current development charge regime under charges single detached units as a result of assuming all units have an “average” usage of the roads network, than the 81% of individuals in the top-most income decile who live in single-detached houses are being subsidized by other individuals whose choice in housing demands a less than average amount

of infrastructure. Conversely the same subsidy is true for only 28% of these in the bottom income decile. It is important to recognize that the root causes for differences in infrastructure demands, are the result of various forces. In some cases the infrastructure requirements are a direct result of building characteristics, while in other cases they are a product of different socio-demographic characteristics. Any attempt at a more efficient calculation of development charges would of course have to bare this in mind as it is neither desirable nor possible to derive development charges down to the level of each idiosyncratic resident. It is important nevertheless to remove the most egregious violations of the equity principle of user pay.

Figure 7 Housing Type by Income Decile

Structure Type	Total Households	Percent of Total	1st decile		2nd decile		3rd decile		4th decile		5th decile		6th decile		7th decile		8th decile		9th decile		10th decile	
			Households	Percent of Total	Households	Percent of Total	Households	Percent of Total	Households	Percent of Total	Households	Percent of Total	Households	Percent of Total	Households	Percent of Total	Households	Percent of Total	Households	Percent of Total	Households	Percent of Total
Single-detached house	2,456,925	58%	100,685	28%	140,385	39%	167,825	47%	184,740	49%	204,370	53%	233,280	58%	271,720	63%	313,325	68%	370,055	73%	470,550	81%
Semi-detached or double house	263,875	6%	16,340	5%	16,100	5%	18,525	5%	21,500	6%	24,495	6%	28,475	7%	32,090	7%	36,480	8%	37,320	7%	32,545	6%
Row house	307,665	7%	26,065	7%	23,330	7%	24,295	7%	27,830	7%	31,545	8%	34,435	9%	36,600	8%	37,770	8%	36,410	7%	29,395	5%
Other single-attached house	12,230	0%	1,870	1%	1,500	0%	1,540	0%	1,495	0%	1,260	0%	1,165	0%	970	0%	845	0%	810	0%	775	0%
Movable dwelling	12,245	0%	1,515	0%	1,685	0%	1,755	0%	1,765	0%	1,545	0%	1,230	0%	975	0%	890	0%	545	0%	345	0%
Apartment/flat in a detached duplex	88,430	2%	13,710	4%	10,690	3%	10,090	3%	10,615	3%	9,650	2%	8,360	2%	7,420	2%	6,685	1%	6,055	1%	5,150	1%
Apartment in a building that has fewer than five storeys	400,235	9%	79,240	22%	67,235	19%	52,050	15%	49,280	13%	42,770	11%	34,090	8%	27,105	6%	21,065	5%	15,865	3%	11,530	2%
Apartment in a building that has five or more storeys	677,800	16%	114,815	32%	96,730	27%	78,845	22%	81,595	22%	73,480	19%	63,745	16%	55,115	13%	45,630	10%	36,840	7%	31,000	5%
Total-structural type of dwelling	4,219,405	100%	354,240	100%	357,655	100%	354,925	100%	378,820	100%	389,115	100%	404,780	100%	431,995	100%	462,690	100%	503,900	100%	581,290	100%

Source Toronto Environmental Alliance (2006)

Chapter 7: Development Charges and Built Form

For development charges to be used as a planning tool it is necessary that the effect of the cost of these charges motivates developers to change the patterns of their development. Research has shown that this is possible, and that in some cases increasing charges may lead to smaller lot sizes which would reduce the amount of linear services required while in other cases fees led to a greater variety of housing. Accordingly the added benefit of achieving a desired built form can be combined to the fiscal efficiency and user equity argument for calculating charges on a manner that respects the true costs imposed on municipal infrastructure.

For Blais (1995) the use of optimally constructed fiscal tools are more preferential than simple municipal policy tools in achieving more efficient use of municipal infrastructure, as the former allows the market to respond in the appropriate manner. This would be backed up by the theoretical analysis done by Turnbull (2004) who compared the use of impact fees, urban growth boundaries, and an unregulated environment in a theoretical context. His findings pointed to the fact that a simple urban growth boundary designed to be efficient *in the long run* would produce inefficiently fast development in the short run. In contrast Turnbull's findings suggested that development charges optimally designed for the short run would also lead to efficient growth patterns in the long run.

Other research into the application, versus theoretical models, of development charges has also shed light on the subject. Although much has been written about Development Charges there remains a lack of consensus arising from these debate regarding aggregate effects on housing supply and overall economic impact which can partly be attributed to the

context specific nature of housing markets, and the self-selection bias of those municipalities that *choose* to implement development charges. Conversely there is mostly uniform agreement on the price effect of development charges which are seen as increasing the cost of both new and existing housing (Skaburskis and Qadeer, 1991; Singell and Lillydahl, 1990; Burge and Ihlanfeldt, 2006a, 2006b). Other questions such as the incidence of the fee is oft disputed and may be simply a product of local real estate markets (Ihlanfeldt and Shaughnessy, 2004; Skaburskis and Qadeer, 1991; Dresch and Sheffrin, 1997).

As developers may react to development charges by altering the timing of development as well as by substituting for other forms of housing, Skaburskis and Tomalty (2000) investigate the substitution, timing, and fiscalisation effects of development charges through interviews with Toronto and Ottawa developers, municipal planners and finance officers. It is assumed that increasing fees could lead denser development and that the higher charges could push developers to postpone what would otherwise be less dense development to a later time when greater densities can be justified. Their survey revealed that developers felt that development charges affect their decisions on building type and lot size in 14 of 19 responses. However, as revenue potential is mostly determined by the lot frontage, rather than encouraging higher density, development charges were stated as potentially discouraging increasing the number of units in a subdivision as doing so would increase the costs faster than net revenue. In respect to the difference in quanta of charges between single and semi-detached housing Toronto developers, in contrast to Ottawa developers, predominantly stated that the difference between multiple and single family housing was not enough to make up for the decrease in lot

size. In contrast Ottawa developers believed the differentials were significant enough to affect their decisions to build multiples.

While theory would imply that development charges could postpone the development of land until such time as the housing market can sustain the added cost of the levy, developers questioned in the survey stated the effect development charges have on the timing of development is a product of whether the charges were collected at time of subdivision approval or building permit stage. Because development charges impose a very large financing cost on developers, the fees can encourage phasing of development until such point developers are sure a market exists for the units.

In some respect development charges can represent an alternative form of exclusionary zoning by increasing the cost of housing and thus keeping out less desirable residents and maintaining high property taxes. This fact emphasizes the context specific nature of development charges, especially when drawing comparisons between cities or drawing conclusions about their effect. Research by Burge and Ihlanfeldt investigated how development charges affect the supply of single family housing at various distances from the city core (2006a). The authors tested the theory that the adoption of impact fees expand housing construction in suburban areas by reducing the incentive for other exclusionary regulations, and increasing the chances projects meet approval as a result of guaranteed infrastructure funding. While price effects of impact fees would serve to reduce supply of housing, Burge and Ihlanfeldt see counteracting forces including “reducing project approval costs and . . . relaxing implicit limits on the percentage of permit applications that receive local government approval” (p. 285) on the supply (developers’) side, as well as “reduc[ing]

homebuyers' expected future property tax liabilities" on the demand (homebuyers') side. To this end, the authors accepted that the value of services and reduced future tax liability are capitalized into the cost of existing housing.

Their study was unique in that it separated the effect of impact fees that support services funded by property taxes (ie. roads, and libraries) and those that are covered by user fees (ie. water and sewer impact fees). Further distinction was made between small, medium and large sized homes built in the central city, inner suburbs, outer suburbs, and rural areas. The authors note the fundamental differences between the two types of impact fees: water/sewer impact fees are liabilities that would otherwise be covered by utility levies and therefore represent an equal burden on all ratepayers through higher base rates; and non-water/sewer impact fees which are liabilities that would otherwise be covered by taxes, an *ad valorem* tax which disproportionately affect more affluent homeowners who are believed to hold more political clout.

Their results find that increases in the water/sewer impact fees did not affect the construction of new housing, while the non-water/sewer impact fees increased the construction of all sized homes within the inner suburbs. The increases in non-water/sewer impact fees also served to increase the construction of medium and large sized homes in the outer suburbs but not smaller homes. Explaining the difference in effect between inner and outer suburbs, the authors suggest that beyond fiscal motives, other prejudices exist in the outer suburbs that enforce a more homogenous population and that helps to continue excluding lower income residents from entry.

Another study by the same authors looked at the same communities in Florida but the authors turned their attention to the effect of impact fees on the construction of multi-family housing (Burge and Ihlanfeldt, 2006b). The authors continued their method of separating sewer/water from non-sewer/water impact fees as well as differentiating based on central city, inner suburbs, and outer suburbs. Similar to their findings with single detached housing, the study showed that increases in non-sewer/water fees result in an increase in the stock of multifamily residential in the inner suburbs. Their findings were not statistically significant in the central cities, a fact which would be consistent with the authors' expectation that these areas are already less prone to having exclusionary fiscal policies. Because these barriers do not exist in the inner suburbs, cost savings opportunities in the project approval stage are less likely to exist. The study's findings showed that water/sewer related fees in all cases reduced development. While the author's reasoning for the changes is important it is especially noteworthy that changes in development charges were seen to have an impact on development that varied across regions and across building type. In this case the author posited that the observed changes in developer behaviour were in part a response to a non-perceived change in approval costs. Just as the variation within the Florida municipalities selected was attributed as evidence that the assumptions were correct, variations in behavioural (and built form) assumptions will vary even more widely across countries giving us warning to take with a grain of salt the results of one area as we attempt to transfer a "cure" for what may very well be a different "ailment."

It should be noted however that in both studies, there was no analysis of changes in project approval costs which both studies viewed as the mechanism through which increased

non-water/sewer impact fees led to the counterintuitive results of an increase in development. This is an important point, especially when Skaburskis and Tomalty (2002) found that, Toronto area developers stated they did not believe development charges have made the approval process easier or ensured the timely delivery of services. However in regards to the exclusionary effect, Tomalty and Skaburskis (1997) observed a prevalent view within municipal planning staff in suburban Toronto municipalities that suggests the possibility of exclusionary zoning in the Canadian context. Through interviews Tomalty and Skaburskis found that among municipal officials there is little interest in attracting higher density development, especially that which is tailored to lower income residents. It is wholly possible then that the development charge regime that Toronto area developers in the Skaburskis and Tomalty (2002) study found as favouring large subdivisions is one manifestation of this implicit policy.

In another study that points to the density effect of development charges, Singell and Lillydahl (1989) used hedonic modeling in order to isolate the causes of the change in housing prices. The study found that with increases in development charges, the result was a decline in lot size. While not in agreement with the outcome *stated* of developers in the Skaburskis and Tomalty study, it both emphasizes that development charges can have an effect, and that in order to see charges reduced they may have a hidden agenda when saying that increased charges lead them to build at lower density.

Chapter 8: The Direction From Here

Sound policy development can not take place in isolation from the world around it. As planners it is necessary to recognize that there is an economic world out there to which we seek to intervene in in the purpose of sound planning and the public interest. In doing so it behoves us to understand and learn to address the root causes we seek to have an effect on. In the case of infrastructure costs, it is not enough that we develop policy documents that outline in which ways private developers should develop their land and make use of the infrastructure. Rather the planning profession must build bridges with other departments and specifically the finance department in order that price signals to developers can send the same signals as the policy documents.

As development charges have evolved out of a financial planning rather than a planning finance mindset, it is important to step into this arena and correct the defacto planning policies which go at cross purposes to other municipal and provincial documents. Not only does the *Development Charges Act* need to be reformed, but the existing legislation needs to be used to its fullest which would send the message to the Province that, given the opportunity, these charges will be used not only as a financing tool, but also as a planning tool. As with the built environment in legislation too, form follows function. Just as the Region of York and other municipalities have differentiated the allocation of roads amongst type of non-residential development, the same distinction should be made amongst residential uses. It is incumbent on municipalities to incorporate transportation and other studies into the calculation of development charges, using information on different usage by housing type and location.

Where studies do not yet exist, there is an opportunity to perform them in the future with a specific intent in answering questions about the costs of different forms of development. In the case of *Re Guelph (City) Development Charges By-law* (1999) the OMB was asked by the appellant to alter the distribution of the road project costs, allocating a lesser share to the city's area entitled "Older Built Up Area," as studies show a lesser use of roads by such areas in other cities. Ultimately it was the Board's ruling that, because such studies do not now exist in Guelph, that the evidence presented on other cities "might be a 'starting point' for convincing City Council to perhaps do such surveys or studies as part of its next major Guelph Transportation Study" (par.105). The OMB has given municipalities more leeway than they may be used to in the calculation of development charges, and so long as reductions in the allocation of growth for certain types of development can be justified through planning or engineering documents such as parking studies or otherwise, the reduced charges can be defended in front of the OMB. It is also necessary that municipalities make better use of their right to enact area specific development charges which would help align developers interests in land development, at a local level, to the municipalities interest in efficient use of infrastructure.

Future work then is required into the infrastructure usage amongst different types of buildings. While in similar form, those municipalities which are using fiscal tools to encourage development are well advised to track the success of how these "programs" are being used. But it should be noted that development charges are but one of many price signals that municipalities send out to the development community. While it is certainly one of the largest, examples of poor fiscal incentives exist elsewhere including how municipalities collect parkland-

dedication costs which often penalizes higher density development. While some municipalities such as Richmond Hill and Hamilton are coming to realize that assessments that call for a land area based on a unit count can encumber the very same high unit count/low land area you are seeking. In the end, planners need to work together to ensure that it is with a unified voice with clarity of purpose that municipalities speak.

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