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Development Charges: The Price is Right? An Evaluation of the Patterns, Processes and Outcomes of Development Charge By-laws in Ontario Regional Municipalities

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Executive Summary

In Ontario, Development Charges (DCs) are a revenue tool designed to assist municipalities with paying for growth-related capital costs arising from the expanded infrastructure required to accommodate new development. The Development Charges Act, 1997 grants municipalities the authority to levy DCs through adopting By-laws of Council and defines the rules and structure they must follow when implementation and revision of charge systems occurs. Where implemented, DCs are meant to ensure that existing municipal ratepayers (property owners) are not required to pay the capital costs associated with new services and facilities that are needed to accommodate new development. The revenue collected from DCs can be used to fund the growth-related capital costs of a broad range of municipal infrastructure from roads, sewage treatment and water supply systems to parks, public transit and library services. The development, implementation and administration of DCs is therefore an important feature of local government in Ontario that can affect how municipalities grow and where they grow in the future.

This research paper assesses the implementation and impacts of Development Charges among lower tier local governments in three (3) of Ontario's eight (8) regional municipalities in an attempt to answer the question: Do changes in development charge levels generally lag or lead growth in a given municipality based on Building Permit (development) activity?

By identifying, quantifying and assessing patterns in the data from the selected municipalities, the research seeks to establish how the level or magnitude to which Development Charges are set comes to impact development activity within a given local government setting when other factors are held constant. Recommendations are made from the analyzed data as well as thoughts concerning opportunities for future research.

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CHAPTER 1: Introduction & Research Questions

1.1 Introduction

Regardless of the national, regional or local context, the collection of taxes and charges by all levels of government has historically remained one of the most widely scrutinized and studied set of actions and processes available to the public sector in the provision of public services. Whether referred to as a tax, a charge, a fee, a surcharge or any other number of interchangeable terms, the ability for government bodies to collect funds through legislated permissions enshrined in law remains of the most fundamental powers available to them by which to ensure the necessary fiscal resources are available to execute public service functions.

When it comes to the services needed to support and bring into being new urban development, the common principle that has emerged in North America and even further afield has been that the private actors who initiate and are the proponents of new growth and development should also be the ones expected to help fund and pay for the associated public infrastructure services required to support new growth. This common principle, encapsulated by the widely applied slogan of “growth should pay for growth”, has become as Canadian local government scholar Andrew Sancton writes, “a rarely-challenged justification within the contemporary world of municipal government where jurisdictions require development-related fees as a prerequisite for new construction.” (Sancton, 2021).

In Ontario, Development Charges (DCs) are a local revenue tool that municipalities leverage and use to assist with paying for growth-related capital costs primarily associated with new urban development. The Development Charges Act, 1997 grants municipalities the legal authority to levy DCs and details the rules they must follow if they choose to implement them. Where implemented, DCs are meant to ensure that existing municipal ratepayers (property owners) are not burdened with helping pay for the capital costs associated with new infrastructure

and facilities required to accommodate new development but rather, that these costs are directly borne by the creators, initiators and immediate owners of new development. Revenue collected from DCs can be used by municipalities to fund the growth-related capital costs of a broad range of municipal infrastructure from roads, sewage treatment and water supply systems to parks, public transit and library services. In the majority of municipal settings, DC rates are prescribed through a related Development Charges By-law passed by Council that is directly informed by a professionally developed development charges background study. These DC background studies take into account the past, present and projected future growth of the municipality and the cost of providing new municipal services to accommodate future growth. DCs are calibrated through these studies with the intention that they absorb new growth-related costs so that these costs do not directly impact the tax rates of existing property owners from across the municipality who may or may not benefit from the new services covered by the DCs.

The development, implementation, management and adjustment of DCs over time is therefore an important feature of modern municipal governance that can affect the rate at which municipalities grow and where they may be incentivized to grow in the future. DCs can impact a wide array of municipal services that residents depend on. In 2013, the Ministry of Municipal Affairs and Housing reported that 200 of Ontario's 444 municipalities (45 percent of all municipalities) levied DCs on new development (OMMA, 2013) and in 2018, municipalities collected $2.23 billion in revenue from these sources (Ontario, 2021). Within the Ontario legislative context, in the absence of formal DCs, developers could essentially initiate and build projects "as of right" without the community having any ability to leverage payments to support public services beyond what is available through the existing property tax base and in the case of new plans of subdivision, what may otherwise be prescribed through a site specific legal agreement that concerns the particular development at hand (Altshuler and Gomez-Ibanez, 1993). Given their prevalence and attractive characteristics as a source of capital funding to

support municipal service delivery using a fiscally conscious approach intended to avoid impacts to the existing property tax base, further practical analysis of their relationship to municipal urban growth and development, relying and building upon the work of professional scholars in the field, is both timely and relevant.

1.2 Research Questions

Pursuing a more fulsome analysis of DCs and their effects in the Ontario local government context, this paper seeks to provide background and investigative insights into the following three research questions:

1) What are the municipal governance processes used to develop and/or update development charge by-laws and local regulatory regimes?

2) What are the data and metrics that Ontario municipalities use to help determine appropriate development charge levels?

3) Do changes in development charge levels generally lag or lead growth in a given municipality based on Building Permit (development) activity?

Given the substantial role that development charges play in supporting and sustaining the growth and future direction of municipalities in terms of infrastructure funding and financial incentives, the identified research questions serve as important points of investigation to inform the processes, effects and outcomes of land development in local contexts. Each question has been formulated to provide the necessary focus concerning important aspects of development charges while not being overly specific such that broader applicability of the research to jurisdictions of varying geographic and population scales can be maintained. To understand the relative importance and nature of development charges in municipal contexts, it is important to have a clear understanding of the processes and background data that guide their creation and implementation. The impacts and effects that DCs may have on local development activity is also critical for gauging whether in fact the ‘price is right’ when it comes to the values established by municipalities through their implementing DC by-laws.

This research report is structured as a series of chapters that begins with a historical summary of the origins and evolution of development charges in Ontario from the mid-twentieth century up to the present (Chapter 2). The report then provides a summary of the referenced data sources and analytical approaches used (Chapter 3) before proceeding with a comprehensive summary and review of the primary data. Inferences are drawn based on the trends and patterns observed in the primary data (Chapters 4 and 5) along with a summary discussion to analyze and interpret the results. Lastly, opportunities for possible future research and expansion upon the findings of the report are summarized in the concluding section (Chapter 6).

CHAPTER 2: The Evolution of Development Charges in Ontario

2.1 Introduction

The following chapter provides a historical overview of the precursors to and evolution of development charges in the Province of Ontario and traces the legislative story associated with their inception and refinement over the past number of decades. Expanding on this historical roadmap, this chapter also provides an integrated review and discussion of the academic literature that has sought to analyze the topic of development charges more broadly in both the Ontario and Canadian context.

2.2 A Brief History of Development Charges in Ontario

Conceived as a way for local governments to responsibly manage the fiscal requirements associated with new urban growth and development, a form of development charges have been applied to new development in Ontario as far back as the 1950s when they were called ‘lot levies’ during this period. In the 1950s and 60s, Ontario experienced a period of rapid urbanization whereby fundamental services such as roads, water supply networks and sewage treatment systems were built and paid for by local governments via a combination of municipal debentures (unsecured loans), property taxes and other charges applied to benefitting developers and property owners. Financing for infrastructure during this period began to shift to the private sector as developers were increasingly compelled by municipalities to guarantee the provision of public services in their developments in exchange for the fundamental permission to build. Beginning in 1961, Ontario municipalities were granted authority by the provincial government to request cash contributions from developers as conditions of approval for new plans of subdivision but only in regard to sewage treatment systems, water treatment and water distribution networks and public roads at that time (Slack, 1991).

This early system of requiring developers to enter into legal agreements with municipalities to guarantee provision of necessary infrastructure services often led to situations where developers in some cases secured planning approvals through cash payments. While this ad-hoc approach provided the desired benefit to both sides, it also had the potential to generate uncertainty in many situations and lead to accusations of impartial treatment toward some developers on the part of different municipalities thereby creating a perception of unfair play. Given the risks that this tenuous cash payment approach posed to facilitating and maintaining a transparent and consistent development approvals process among the various parties within the development space, the need for a new way forward was eventually realized and implemented (Sancton, 2021).

During the 1970s and 80s, lot levies continued to rise in prominence as a source of local revenue to fund services related to urban growth where some municipalities chose to extend the application of levies to commercial as well as residential property (Slack, 1991). The growing use of lot levies during this period and the emerging recognition that municipalities needed these revenue tools to facilitate and sustain population growth later prompted the Ontario provincial government to enact the first Development Charges Act in 1989. This Act granted local municipalities the authority to pass By-laws to impose charges on all forms of land development as a means to recover the net capital costs associated with required services (Mahadevan, 2015).

The 1989 legislation was later updated and amended with the passage of the 1997 Development Charges Act which notably reduced the scope of services that could be funded by DCs. One of the major changes of the updated Act was the elimination of services not considered to be essential for site-specific physical development or put another way, those having a broader community-focused impact. While the updated 1997 legislation did not include an explicit definition for “development charge” it did implicitly describe a development charge as a “charge against land to pay for increased capital costs required because of increased needs for services

arising from development." The new legislation was therefore based on the principle of ensuring that *growth pays for growth*. This common tagline mentioned previously in the introduction is often referenced in the Ontario and the broader Canadian context when one is speaking to the widely accepted governance rationale for why development charges should exist at the local government level in the first place (Mahadevan, 2015).

On June 6, 2019 updates and revisions to the Development Charges Act, 1997 were announced through the passing of Bill 108, the More Homes, More Choice Act 2019, which later led to prescribed operational changes for municipalities enacted under associated provincial regulations. These changes further refined and clarified the scope of DC implementation for Ontario municipalities and provided new incentives for residential intensification and attainable housing through DC charge exemptions for prescribed accessory dwelling unit types. These legislative changes also created options for more lenient DC payment terms for new non-profit housing developments (Cassels, 2019). In response to these recent legislative changes, a wide range of municipal planning departments across Ontario have been or are currently in the process of updating their associated Official Plans, Zoning By-laws and Site Plan Control policies to implement the changes directed by Bill 108 that affect the Development Charges Act as well as the Planning Act (City of London, 2020).

The preceding has been a summary of the legislative story concerning the inception, growth and evolution of the DC system in Ontario. More detail and investigation is provided in the following sections of this report to assist with addressing, answering and providing additional background concerning the three research questions.

2.3 Literature Review: A Brief Review of Development Charges

2.3.1: Academic Literature prior to the Development Charges Act, 1997

Although development charges as they are now known in Ontario have existed for the better part of three decades, the academic literature that speaks to them certainly extends farther back in time owing to the noted history of their operational precursors. In their article from 1991, authors Enid Slack and Richard Bird trace the early history of development charges in Ontario and their predecessors known as 'lot levies' up until the early 1990s providing a comparative analysis of the Ontario system with that of British Columbia at the time. The authors conclude at the time of writing that while development charges were an important source of revenue for some municipalities, they were not necessarily a large source. Further, the authors conclude that it is generally new home buyers who ultimately absorb the cost of these charges and not the developer. A shift in reliance by municipalities to fund new growth through DCs rather than general revenues means that existing residents (i.e., ratepayers) stand to be more positively impacted as they can enjoy the benefits that may emerge from new growth and development while being well shielded from bearing the direct financial cost of new services. Slack and Bird also suggest that DCs can be made more equitable by being calculated on a development-specific or 'marginal cost' basis rather than on a gross fee or average cost blanket approach across a municipality as is very often, but not always the case in the Canadian local government context (Slack, 1991).

2.3.2: Academic Literature following the Development Charges Act, 1997

Leading into and placed very close in time to the passing of the Development Charges Act in 1997, scholars Ray Tomalty and Andrejs Skaburskis (1997) provide detailed analysis concerning why municipalities almost universally at the time opted to apply their development charges using an average cost or blanket approach rather than via a marginal cost or

development-specific treatment. Utilizing personal interviews, government documents, stakeholder documents, academic sources and newspaper articles, the authors conclude that stakeholders with power to steer the DC formulation process generally exhibit a bias toward the average cost approach while those parties possessing an interest in pursuing a marginal cost approach are more often excluded from the policy formulation process. Tomalty and Skaburskis (1997) postulate that municipalities often ignore the potential of spatial geographic variables in regard to how development charges could be calibrated differently dependent upon these variables as a means of maintaining administrative efficiency (Tomalty and Skaburskis, 1997).

Writing from the perspective of an experienced and practiced urban planner in the greater Toronto area, University of Toronto graduate Mia Baumeister (2012) explores how municipalities use development charges and whether they are utilized effectively to achieve policy planning goals aimed at producing more compact development in urban settings. In exploring the issue, Baumeister conducted semi-structured interviews across Canadian jurisdictions having well-established development charge programs as well as conducting a content analysis of existing literature to review the broader context of development charges in Canada. Baumeister (2012) indicates through literature review that if designed appropriately, development charges can play a role in growth management and be supportive of more compact forms of urban development thus simultaneously achieving both fiscal and planning goals for municipalities. A key finding of Baumeister's work is that the way development charges are structured affects how available development lands are consumed and how developments are designed in that whether they take the form of more compact high-density development or low-density sprawl.

In a more recent article, Adam Found (2019) writes that since growth occurs incrementally and is only subject to taxation after it arrives, there continually exists the challenge of how to fund upfront growth-related sunk capital costs without impacting existing ratepayers through higher user fees and property taxes. Found (2019) refers to this fiscal distortion as a "non-concurrence

externality” that is the result of a timing inconsistency between growth and growth-related capital works. The one-time and point-in-time nature of DCs are offered as a way to solve this timing inconsistency. Although it is the intent of the Ontario Development Charges Act (DCA) and associated regulations to ensure that growth pays for growth, Found (2019) argues that due to a variety of existing exemptions, discounts, loopholes, omissions and restrictions, this is not truly the case. In reality, the author postulates that the Act burdens existing ratepayers with subsidizing growth, thereby undermining the principles of efficiency, equity and accountability the legislation is intended to uphold and suggests that the DCA be repealed and replaced with consolidated municipal finance legislation under the Municipal Act and City of Toronto Act in consultation with municipalities.

CHAPTER 3: Data Sources & Analysis

3.1 Introduction

In pursuing answers to the research questions and notably for question number three, extraction of numerical data from public sources was required. As this study involved academic literature review and retrieval of publicly available data through federal and municipal sources, no ethics permissions or review were required with respect to the scope of the report. Sources of data therefore included public data and academic journal articles. All of the primary data present in the tables to this report have been referenced for validation and future retrieval.

3.2 Data Sources

This report draws its primary research data from the following key public sources of information:

- Statistics Canada 2016 and 2021 Canadian population census.
- Local municipal Development Charge By-laws.
- Local municipal Building Activity and Building Permit Reports.

The comparative Canadian Census data from 2016 and 2021 forms the basis for determining relative rates of growth across the select local and regional municipalities reviewed in this study and also provides additional background to the observed building permit activity and changes in development charge rates over time. Local municipal DC By-laws provide some of the core data upon which the analysis and observational findings are derived from as well as the local building activity and building permit reports.

To provide reasonable scope to the study, population growth rates across all eight regional municipalities in Ontario were determined using the comparative 2016 and 2021 population census data. Population data for a total of 57 local municipalities was extracted from both census reports to provide relative growth details across all eight regional municipalities (Table 3.1).

Table 3.1: List of Eight Regional Municipalities in Ontario with comparative population

Regional Municipality	Population (2016 Census)	Population (2021 Census)
Durham Region	645,862	696,992
Halton Region	548,435	596,637
District of Muskoka	60,614	66,674
Niagara Region	447,888	477,941
Oxford County	110,846	121,781
Peel Region	1,381,739	1,451,022
Waterloo Region	535,154	587,165
York Region	1,109,909	1,173,334

Out of these data sets, a total of three regional municipalities, being Durham, Peel and Waterloo were selected for further analysis based on comparative high (Waterloo), mid (Durham) and low (Peel) growth scenarios with respect to the background provincial population growth average. Selection of the three regional municipalities made for a total of 18 local development charge By-laws and building permit activity reports referenced to inform the analysis.

3.3 Data Analysis & Interpretation

The combination of DC rates quoted from the 18 selected local By-laws and development activity data extracted from local permit reports form the basis for subsequent analysis in this report using a binary Likert scale. In attempting to answer research question number three concerning whether changes in DC rates lead or lag growth in a given municipality, this binary Likert scale proves useful in summarizing the large amount of data extracted from the referenced municipalities.

CHAPTER 4: Policy Processes & Local Municipal Characteristics

4.1 Introduction

Before expanding into the patterns, trends and analysis emerging out of the primary data captured in this report, the following chapter provides an overview of the legislative policy process that guide and inform the creation and implementation of development charges at the local government level in Ontario. The primary data captured from local municipal sources (DC rates) and national census data (population data) are represented in this chapter through a series of tables with accompanying commentary on the observed patterns and trends in the data. Derived data and inferences of the primary data are subsequently covered under Chapter 5.

This chapter addresses research questions one and two and firstly provides answer about what the municipal governance processes are used to develop and/or update development charge by-laws and local regulatory regimes. Secondly, this chapter provides answer to the research question of what the data and metrics are that Ontario municipalities use to help determine appropriate development charge levels.

4.2 Factors Influencing Development Charges

What price is the *right* price? A question representative of the appropriate rate at which development charges should be set involves consideration of a number of factors which cannot be understood along a simple market supply and demand dynamic. Since development charges are set by the public sector and are not directly exposed to the whim of free market forces, the potential answer to this question is not entirely so straight-forward. As William Fischel (2001) writes, resultant development charge rates are not an entirely free-market concept but are rather, locally determined through a bargaining process among developers or groups of current property owners and the municipalities themselves. Fischel (2001) theorizes that if development charges are set at too high a level, then developers either would not build or would seek to build in other

jurisdictions that either do not levy development charges or levy them at a lower rate for a competitive advantage. Controversy surrounding whether the price is right relates more to whether the rate is perceived to be set at too high a level versus what the development seems to add to the financial obligations of the municipality instead of the absolute value of the charge itself (Fischel, 2001).

Fischel's theory of bargaining aside, base background factors that can be generally agreed upon as having some influence over development charge rates include local population growth rates (both past and forecast), historic development trends and municipal levels of service determined by local and state or provincial level legislated standards.

4.2.1: Local Governance Process

In terms of official process, the Development Charges Act, 1997 (DCA) provides municipalities with the rules and authority to levy development charges on new development through an implementing By-law of Council (Found, 2019). In order to determine appropriate local DC rates, municipalities are required by the DCA to first complete a development charge background study that provides the following information: 1) a detailed analysis of the municipality's forecast growth (both residential and non-residential); 2) the services needed to meet the demands of that growth; and 3) a detailed account of the capital costs for each infrastructure project needed to support the forecast growth. The DCA also specifies that for the purposes of calculating its development charges, the municipality must base the rates and amounts to be collected on the average level of service for the preceding 10 years for which the municipality has available data (Province of Ontario, 2021).

Additionally, the Act requires that background studies also include an Asset Management Plan (AMP) which captures all municipal assets whose capital costs are proposed to be funded through the DC By-law and demonstrates that all assets will be financially stable over their

forecast life cycle. Other legislative requirements include that the DC background study must be made available to the public at least sixty (60) days prior to the passing of a DC By-law and that the By-law must be passed within one (1) year of the completion of the DC background study. At least one public meeting must be held prior to passing a DC By-law with a minimum of twenty (20) days public notice provided for the meeting (Province of Ontario, 2021).

In the majority of cases, the required background studies that municipalities must publish to inform and guide their DC By-laws are researched and presented by private consulting firms in order to provide an unbiased, independent professionally produced report that Council can rely on for decision-making. While the municipality is the source of the data and under this common situation, has delegated authorship of the study to an outside source, the process still affords municipal staff the opportunity to internally peer-review the results and recommendations of the study prior to Council and public consideration. This results in a process whereby DC By-laws and the research that informs them follow a collaborative approach that maintains both public transparency and ensures that the resulting development charge rates are informed by practical analysis that scales them to market costs and the projected needs of the municipality.

In relation to development charges, the detailed analysis of the municipality's forecast growth (both residential and non-residential) is often derived from municipal planning documents such as regional or local Official Plans. These documents are required to be consistent with the Provincial Policy Statement (PPS) issued by the Planning Act, R.S.O. 1990 for Ontario which prescribes that municipalities designate sufficient land to accommodate an appropriate range and mix of land uses to meet projected growth needs along a 25-year time horizon. The PPS also states that municipalities are not limited to this 25-year time horizon in regard to infrastructure, public service facilities and employment areas (Ontario, 2020). As Ontario municipalities typically pass new Development Charge By-laws valid for a 5-year term to ensure in part that review and revision is offset from the statutory 4-year local election cycle, this frequency also allows for DC

rate adjustments to take place within the planning horizons that guide and direct the amount of land designated for future greenfield and infill development. Depending upon the timing of services available to meet growth and allocations in local capital budgets, if services do not prove timely in their arrival or insufficient funds are allocated to capital, these factors can have impacts that affect the gap between current and future DCs in the case where anticipated growth is delayed to the next review cycle.

Working parallel with the PPS as it relates to planning horizons for growth in Ontario municipalities is the Growth Plan for the Greater Golden Horseshoe (GGH) which stipulates minimum density targets that are to be achieved by the year 2031 within identified urban growth centres in the province. Six out of the eight regional municipalities found in Ontario contain local municipalities with urban growth centres that are subject to the GGH Plan; these are Durham Region, Halton, Niagara Region, Peel Region, Waterloo Region and York Region. Of these six, five contain urban growth centres required by the GGH Plan to achieve a minimum density of 200 jobs and residents per hectare by 2031 (Durham, Halton, Peel, Waterloo and York) while two of the regional municipalities (Niagara and Waterloo) contain urban growth centres required to achieve a minimum density of 150 residents and jobs per hectare by this date (Ontario, 2020). In these instances, both local and accompanying regional municipalities have had to update their applicable planning policy documents as well as their Development Charge By-laws to account for these targets, sometimes invoking secondary official plans and area specific DCs in response to the direction provided by the GGH Plan. Of the eight regional municipalities in Ontario, those of Muskoka and Oxford are not subject to the GGH Plan and therefore do not contain urban growth centres having associated population and employment targets.

4.3 Development Charges & Growth

As Found (2019) notes, the primary fiscal challenge associated with extending municipal services to new developments relates to the initial capital investments needed to expand service capacity or restore existing surplus service capacity. Infrastructure spending is “lumpy” and is often executed as large point-in-time fiscal outlays by municipalities because big municipal projects and facilities cannot be built incrementally and are instead, built at an expanded scale from the very beginning to accommodate projected and anticipated future urban growth (Found, 2019). As noted earlier, the Development Charges Act (DCA) requires that municipalities must base their development charge rates on costs associated with provision of the average level of service provided in the preceding ten years.

If growth-related capital costs are not specifically allocated to new residents and enterprises but are instead pooled along with other municipal costs, this raises an equity argument concerning why existing ratepayers should absorb the cost of new development (Tomalty and Skaburskis, 1997). The pooled approach for recovering growth-related costs that the municipality must absorb is also challenging to justify as while urban growth occurs incrementally over time and at varying rates, growth-related capital works are installed and become physically operational at acute points in time generally well in advance of the anticipated urban growth they are intended to accommodate - the lumpy approach that Found refers to. Given this context, Found (2019) argues that in order to avoid fiscal equity distortions for residents and capital-related revenue shortfalls, municipalities must collect development contributions in the form of DCs as the one-time nature of DCs makes them immune to timing inconsistencies between growth and growth-related capital outlays as well as buffering or avoiding the need for increasing user fees and property taxes to compensate for required service growth. The approach that Found (2019)

outlines and the rationale for it is what has led a large number of Ontario municipalities to adopt DC By-laws into their governance framework for managing new urban development.

In terms of land economics, when a DC or other point-in-time charge is levied on a developer, the developer can do one of three things: 1) increase the selling price for the developed land (on-passing); or, 2) offer a lower purchase price for the raw, undeveloped land (back-passing); or, 3) reduce the amount of profit-taking on each lot sold (price making). The application of a DC will have the effect of shifting the approach or timing by which profit is maximized and how the DC is absorbed during the development process (Watkins, 1999). As demonstrated through the research of Yinger (1998), the owners of the land having tenure at the point in time that DCs are applied are the ones who bear the burden and therefore have incentive to pass on this cost to new homeowners. The magnitude of the impact of this cost to new homeowners can be mitigated in growing markets where strong land appreciation is occurring such as is the case in many of the local municipalities captured in this study however in slower growth or stagnate, negative growth areas, the mitigating effect of growth in relation to DCs is greatly reduced which can lead to instances where local Councils are hesitant to even invoke DCs at all for fear they could stifle what growth may be occurring (Yinger, 1998).

Of the 57 local jurisdictions referenced in this report, 39 municipalities or 68 percent of the total posted population growth rates between the most recent census periods (2016 to 2021) that exceeded the provincial rate of 5.8 percent. Of the remaining 18 municipalities, 15 achieved positive growth however below the provincial rate while the remaining three posted negative growth. Out of the 57 jurisdictions noted here, all but one (City of Port Colborne) apply development charges across all forms of residential development. Given our general sample of 57 local municipalities out of the 444 that exist in Ontario (sample being 13% of total), it would appear that there is a general inclination to apply development charges to new residential development regardless of the local population growth scenario to assist with achieving planning

and infrastructure goals. A key to note here as well is that the reported development charge rates for the 57 local municipalities predates the release of the 2021 population data by up to one year as the 2021 census data was not released until February 2022. In this sense, updates to local DC By-laws were taken pre-emptively and not in response to reported population growth. This disconnects in timing among local DC rates and census population data reporting could represent an opportunity for further research and also an opportunity for refinements to existing forecasting to guide and direct planning goals.

In their research examining the Ontario development charge system from the early 2000s, Tomalty and Skaburskis (2003) note that a well-designed DC system can reinforce planning goals by steering development away from higher cost sites to more efficient locations, essentially encouraging intensification and compact form on existing or upgraded services while discouraging low-density sprawl on higher cost new services. The authors theorize that a well-designed DC system would differentiate the fee charged according to the characteristics and infrastructure demands of the proposed development that directly affects the net external costs generated to the municipality for supplying needed services (Tomalty and Skaburskis, 2003). To a large extent since the writing of their article, many municipalities across Ontario have implemented and continue to use a graduated scale of DCs calibrated according to development type or density based on the estimated future servicing costs but charge this on an average cost rather than on a marginal cost basis that accounts for acute, point-in-time adjustments. It is also becoming increasingly commonplace for municipalities to approve new Development Charge By-laws that provide a multi-year schedule based on the legally required background studies. This approach has the effect of providing greater long-term assurance to the development industry concerning present and future costs and can more effectively assist the municipality with longer-term land-use and infrastructure planning knowing that the development industry has general assurance of

their own costs. At the same time however, if the term of the multi-year schedule is too long, it provides limited ability to pivot in response to rapid local population and economic fluctuations.

Another potential pitfall of the average-cost approach is that it ignores area-specific physical servicing factors within a municipality and does not account for potential cost differentials that can emerge among comparative greenfield and infill developments. As Baumeister (2012) notes in her review of development charges as a growth management tool, municipalities that use area-specific charges should lead to lower charges in already-developed areas, thus encouraging greater degrees of intensification and redevelopment, and lead to higher charges in greenfield areas, thereby discouraging increased sprawl and lower-density development in fringe areas due to higher site-specific servicing costs that are passed on to the end user (Baumeister, 2012). Among the 57 local governments initially referenced among the 8 regional government bodies, 21 of these municipalities (37 percent) do apply area-specific development charges within their jurisdictions that represent targeted areas where a more nuanced charge is warranted on account of local growth and development factors. Area-specific charges can also have the effect of helping fulfill and implement long term Official Plan policy goals that seek to achieve density and employment targets for existing built-up areas, thus lessening the potential need for future settlement boundary adjustments into fringe greenfield areas to accommodate future urban population and job growth (Tomalty and Skaburskis, 2003).

As development charges can be applied within a wide variety of local geographic and socioeconomic contexts, local circumstances can certainly influence the extent to which DCs are applied to development or if they are even applied at all. At one end of the spectrum are predominately rural and smaller slow-growth jurisdictions containing villages, towns and small cities existing outside of larger urban centres where local officials and residents are anxious to attract growth and willing to absorb the cost of accompanying infrastructure costs outside of a DC By-law. Not possessing the levels of growth perhaps necessary to justify a Development Charge

By-law, municipalities in these cases arrange for cost provision of new services in a more classical fashion through private development agreements among the builder and municipality on a case-by-case basis. These private agreements are often customized to the local circumstances and echo how servicing costs were historically handled by Ontario municipalities in the more distant past (Sancton, 2021). Some possible forms these development-specific agreements can take may include Consent servicing agreements where the severance process under Section 53 of the Planning Act, R.S.O. 1990 is utilized or as a parallel legal agreement or addendum to a required Plan of Subdivision agreement as per Section 51(26) of the Planning Act.

Contrasting with site-specific development cost-capture processes sometimes implemented in slow growth areas are the more widely applied DC By-law driven processes for fast-growing and larger suburban municipalities having strategically located industrial-commercial business parks and an ample supply of vacant serviceable land located within designated urban boundaries. As Sancton (2021) notes, developers in higher growth areas are reliably anxious to build but existing residents are often reluctant to pay for the additional infrastructure that is needed to accommodate new growth through direct impact to their property tax levies. Where robust and comprehensive DC By-laws exist, existing residents can be buffered from any financial outlays the municipal must make to provide services for new development and be assured the peace of mind that their own household costs will not start to severely escalate in response to growth.

In the context of these jurisdictional extremes also exists coordinated regional municipal governments where member municipalities having varying degrees of distributed rural and concentrated urban development that are each able to levy their own independent DC charges albeit within the context of managed and coordinated regional growth strategies and regional Official Plans. Notable examples of regional municipal governance models in Ontario include Waterloo Region and Niagara Region each having seven (7) and twelve (12) distinct member municipalities, respectively (Sancton, 2011).

In total, Ontario is home to eight (8) regional governments, namely Durham Region, Halton, Muskoka District, Niagara Region, Oxford County, Peel Region, Waterloo Region and York Region. Geographically, these regional governments are all located, with the exception of Muskoka, within the south and southwestern areas of the province (AMO, 2022). Among these regionals governments, the jurisdictions of Halton, Peel, Waterloo and York can each be said to possess a significant urban character while also encompassing notable rural areas and rural enclaves, including the presence of large areas of prime agricultural land existing outside of designated urban settlement areas. The jurisdictions of Durham, Niagara and Oxford possess a more balanced rural-urban mix of development and in the case of Niagara and Oxford especially, some of the most highly valued prime agricultural lands in the country in terms of productive capability. Lastly, Muskoka can be described as largely rural in character, lacking any large serviced urban centres as the jurisdiction is home to countless interconnected lakes, rivers and forested areas spread among the rugged terrain of the Canadian Shield.

Although these groups of municipalities in one form or another have remained coordinated under a common regional governance model for many decades (Niagara Region and York Region each established 1970; Muskoka District established 1971; Region of Waterloo established 1972; Durham, Halton and Peel Regions each established 1974; Oxford County in its current form established 1975), each member municipality has the freedom to levy their own development charges independent of the Region in response to local circumstances and demands. It is important to note that while there is complete local control in regard to local DCs, the coordinating regional government also has the power to levy their own development charges in parallel with those set by the local member municipalities. As per Tables 4.1 through 4.8, development charge levels can vary quite widely even within the same regional system. A general pattern observed in these examples reveals that higher growth municipalities generally apply larger development charges to the same forms of residential development versus their lower-growth counterpart

jurisdictions found within the same coordinated regional government system however outliers do exist. It is important to note that all of the referenced and posted development charge rates shown in the tables below immediately pre-date the most recent population reporting from the 2021 Canadian Census which was released in February 2022 (Statistics Canada, 2021).

Out of the eight regional municipalities in Ontario, three have been selected for direct analysis in order to provide a meaningful sample review with respect to the research questions and to investigate whether any notable comparative differences exist on account of their varying geographies and growth characteristics. The regional municipalities of Durham, Peel and Waterloo have each been selected for direct review out of the group of eight on the basis of their varying urban-rural development characteristics and comparative regional growth rates over the 2016 to 2021 census periods as captured in Table 4.9.

On the basis of growth, Peel Region was found to have the lowest population growth rate over the 2016-2021 period out of all eight regions with Waterloo Region being above average and within the top three regions while Durham Region achieved a growth rate being very close to the average of 7.97% among the group as per Table 4.9. Waterloo, Durham and Peel therefore each represent a high, mid and low growth rate scenario, respectively, by which to comparatively assess the impacts of DC rate changes within different population growth contexts.

Table 4.1: Durham Region residential DC & population growth rates by local municipality (current to February 2022)

Local Municipality (Durham Region)	Development Charge (DC) by Unit Type (Local municipal DC rates shown)			Population Data (Based on comparative Census data)		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)	2016 Census	2021 Census	Population Change 2016-21
City of Oshawa[1]	$28,960	$23,333	$18,224	159,458	175,383	10.00%
*City of Pickering[2]	$21,687	$17,512	$13,702	91,771	99,186	8.10%
Municipality of Clarington[3]	$22,126	$18,135	$11,780	92,013	101,427	10.20%
Town of Ajax[4]	$29,158	$23,024	$14,028	119,677	126.666	5.80%
Town of Whitby[5]	$35,815	$27,296	$15,036	128,377	138,501	7.90%
Township of Brock[6]	$21,218	$17,271	$12,561	11,642	12,567	7.90%
Township of Scugog[7]	$17,918	$14,479	$9,954	21,617	21,581	-0.20%
Township of Uxbridge[8]	$16,170	$12,379	$8,084	21,176	21,556	1.80%

*Local municipality also has area-specific development charges not shown in chart. All quoted figures are municipality-wide charges.

[1]City of Oshawa development charges as per By-law 60-2019 as amended; fees current to 2022-01-01.
(see: https://www.oshawa.ca/residents/resources/Development_Charges_Jan-1-2022.pdf)

[2]City of Pickering development charges as per By-law 7595/17 as amended; fees current to 2021-07-01.
(see: https://www.pickering.ca/en/city-hall/resources/developmentcharges2021-2022.pdf)

[3]Municipality of Clarington development charges as per By-law 2021-010; fees current to 2021-07-01.
(see: https://www.clarington.net/en/business-and-development/resources/Development-Charges/Development-Charges-AODA.pdf)

[4]Town of Ajax development charges as per By-law 50-2018 as amended; fees current to 2021-07-01.
(see: https://www.ajax.ca/en/inside-townhall/development-charges.aspx)

[5]Town of Whitby development charges as per By-law 7748-21; fees current to 2021-06-01.
(see: https://www.whitby.ca/en/work/resources/development-charges/7748-21---Development-Charge-By-law_amended.pdf)

[6]Township of Brock development charges as per By-law 2880-2019-PL; fees current to 2021-07-01.
(see: https://www.townshipofbrock.ca/en/building-and-business-development/resources/Documents/DevelopmentCharges_Dec2021.pdf)

[7]Township of Scugog development charges as per By-law 53-19; fees current to 2021-07-01.
(see: https://www.scugog.ca/en/do-business/resources/2020---Dev-Charges/2021-Scugog-Schedule-of-Development-Charges---July-2021.pdf)

[8]Township of Uxbridge development charges as per By-law 2019-076; fees current to 2021-07-01.
(see: https://www.uxbridge.ca/en/business-and-development/resources/Documents/Development-Charges-Chart---Website-2021-new.pdf)

Table 4.2: Halton Region residential DC & population growth rates by local municipality (current to February 2022)

Local Municipality (Halton Region)	Development Charge (DC) by Unit Type (Local municipal DC rates shown)			Population Data (Based on comparative Census data)		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)	2016 Census	2021 Census	Population Change 2016-21
City of Burlington[1]	$15,367	$8,759	$7,815	183,314	186,948	2.00%
*Town of Halton Hills[2]	$55,692	$36,184	$26,331	61,161	62,951	2.90%
*Town of Milton[3]	$20,884	$15,706	$9,638	110,128	132,979	20.70%
Town of Oakville[4]	$39,969	$29,119	$21,480	193,832	213,759	10.30%

*Local municipality also has area-specific development charges not shown in chart. All quoted figures are municipality-wide charges.

[1]City of Burlington development charges as per By-law 26-2022; fees current to 2022-03-22.
(see: https://www.burlington.ca/en/services-for-you/resources/Planning_and_Development/Development_Charges/26-2022-Amendments-to-Development-Charges-By-law-29-2019.pdf)

[2]Town of Halton Hills development charges as per By-law 2017-0049 as indexed; fees current to 2022-04-01.
(see: https://www.haltonhills.ca/en/business/resources/Documents/Development%20Charges/DC%20Charges%20April%201%202022.pdf)

[3]Town of Milton development charges as per By-law 045-2021; fees current to 2021-05-31.
(see: https://www.milton.ca/en/business-and-development/resources/development-documents/Development-Charge-Documents/DevelopmentChargesByLaw_AllOtherServices.pdf)

[4]Town of Oakville development charges as per By-law 2018-001; fees current to 2021-04-01.
(see: https://www.oakville.ca/assets/DC-rate-schedule-April-1-2021.pdf)

Table 4.3: Muskoka District residential DC & population growth rates by local municipality (current to February 2022)

Local Municipality (Muskoka District)	Development Charge (DC) by Unit Type (Local municipal DC rates shown)			Population Data (Based on comparative Census data)		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)	2016 Census	2021 Census	Population Change 2016-21
Town of Bracebridge[1]	$4,795	$3,980	$3,529	16,010	17,305	8.10%
Town of Gravenhurst[2]	$3,935	$3,541	$3,306	12,311	13,157	6.90%
Town of Huntsville[3]	$5,698	$4,419	$3,905	19,816	21,147	6.70%
Township of Georgian Bay[4]	$5,612	$3,277	$2,658	2,514	3,441	36.90%
Township of Lake of Bays[5]	$2,127	$2,026	$1,715	3,167	3,759	18.70%
Township of Muskoka Lakes[6]	$4,445	$2,447	$1,985	6,588	7,652	16.20%

*Local municipality also has area-specific development charges not shown in chart. All quoted figures are municipality-wide charges

[1]Town of Bracebridge development charges as per By-law 2019-056 as indexed; fees current to 2022-01-01.
(see: https://www.bracebridge.ca/en/do-business/Financial-Incentives.aspx?_mid_=1594)

[2]Town of Gravenhurst development charges as per By-law 2019-091 as indexed; fees current to 2022-01-01.
(see: https://www.gravenhurst.ca/en/services-and-info/resources/Documents/User-Fees-2022/Town-of-Gravenhurst---Development-Charges-Pamphlet---2022.pdf)

[3]Town of Huntsville development charges as per By-law 2019-133 as indexed; fees current to 2022-01-01.
(see: https://www.huntsville.ca/en/home-property-and-planning/development-charges.aspx)

[4]Township of Georgian Bay development charges as per By-law 2019-64 as indexed; fees current to 2022-01-01.
(see: https://www.gbtownship.ca/en/township-hall/resources/Documents/DC-Bylaw-Pamphlet-2022-v3-webpage-with-links.pdf)

[5]Township of Lake of Bays development charges as per By-law 2015-022 as indexed; fees current to 2015-02-17.
(see: https://www.lakeofbays.on.ca/en/municipal-services/resources/Documents/By-law-2015-022-Development-Charges.pdf)

[6]Township of Muskoka Lakes development charges as per By-law 2019-074 as indexed; fees current to 2019-07-17.
(see: https://muskokalakes.civicweb.net/filepro/documents/78263?preview=123373)

Table 4.4: Niagara Region residential DC & population growth rates by local municipality (current to February 2022)

Local Municipality (Niagara Region)	Development Charge (DC) by Unit Type (Local Municipal DC rates shown)			Population Data (Based on comparative Census data)		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)	2016 Census	2021 Census	Population Change 2016-21
*City of Niagara Falls[1]	$14,242	$8,932	$6,771	88,071	94,415	7.20%
City of Port Colborne[2]	$4,567	$0	$0	18,306	20,033	9.40%
City of St. Catharines[3]	$10,132	$7,432	$7,355	133,113	136,803	2.80%
City of Thorold[4]	$18,246	$12,066	$11,781	18,801	23,816	26.70%
*City of Welland[5]	$8,817	$7,496	$7,498	52,293	55,750	6.60%
*Town of Fort Erie[6]	$18,049	$12,607	$11,858	30,710	32,901	7.10%
*Town of Grimsby[7]	$17,690	$12,030	$11,219	27,314	28,883	5.70%
*Town of Lincoln[8]	$22,326	$18,039	$15,036	23,787	25,719	8.10%
Town of Niagara-on-the-Lake[9]	$10,503	$8,618	$7,139	17,511	19,088	9.00%
Town of Pelham[10]	$17,040	$12,138	$11,664	17,110	18,192	6.30%
Township of Wainfleet[11]	$8,142	$5,682	$5,360	6,372	6,887	8.10%
Township of West Lincoln[12]	$13,891	$9,261	$8,840	14,500	15,454	6.60%

*Local municipality also has area-specific development charges not shown in chart. All quoted figures are municipality-wide charges.

[1]City of Niagara Falls development charges as per By-law 2019-69; fees current to 2021-09-01.
(see: https://niagarafalls.ca/city-hall/building/development-charges.aspx)

[2]City of Port Colborne development charges as per By-law 6733/97/19; fees current to 2019-11-12.
(see: https://www.portcolborne.ca/en/business-and-development/resources/Documents/Building/DevelopmentCharges/Development-Charges---Fees.pdf) [3]City of St. Catharines development charges as per By-law 2021-140 passed 2021-09-13.
(see: https://icreate3.esolutionsgroup.ca/230607_StCatharines/en/governin/resources/Development-Charges/2021-Development-CHarges-Bylaw.pdf)

[4]City of Thorold development charges as per By-law 46-2019; fees current to 2022-01-01.
(see: https://www.thorold.ca/en/city-hall/resources/BUILDING-/Development-Charges/Thorold-dcindex-2022.pdf)

[5]City of Welland development charges as per By-law 2019-83; fees current to 2022-01-01.

(see: https://www.welland.ca/Planning/pdfs/COWDevelopmentcharges.pdf)

[6]Town of Fort Erie development charges as per By-law 47-2019; fees current to 2022-01-01.
(see: https://www.forterie.ca/resource/files/B23FD4BDEACEF6CC852587C3007126CE/%24File/2022%20-%20January%201%20DC's.pdf)

[7]Town of Grimsby development charges as per By-law 21-44; fees current to 2022-01-01.
(see: https://www.grimsby.ca/en/doing-business/resources/Documents/Public-Works-documents/DC-Study-docs/2022-01-20---2021-DC-By-law---Fees-Schedule---January-1-2022-to-March-21-2022---rev2.pdf)

[8]Town of Lincoln development charges as per By-law 2018-93; fees current to 2022-01-01.
(see: https://lincoln.ca/sites/default/files/development_charges_-_rates_effective_january_1_2022-sq_ft.pdf)

[9]Town of Niagara-on-the-Lake development charges as per By-law 5072-18; fees current to 2022-01-01.
(see: https://notl.civicweb.net/document/15768)

[10]Town of Pelham development charges as per By-law 4314 (2021); fees current to 2022-01-01.
(see: https://www.pelham.ca/en/town-hall/resources/Documents/Development-Charges/2022-Development-Charges-Pamphlet.pdf)

[11]Township of Wainfleet development charges as per By-law 025-2021; fees current to 2021-07-27.
(see: https://www.wainfleet.ca/en/build-and-invest/resources/Documents/BL025-2021-Signed.pdf)

[12]Township of West Lincoln development charges as per By-law 025-2021; fees current to 2022-01-01.
(see: https://www.westlincoln.ca/en/resourcesGeneral/Development-Charges-Pamphlet--2021_KH-review.pdf)

Table 4.5: Oxford County residential DC & population growth rates by local municipality (current to February 2022)

Local Municipality (Oxford County)	Development Charge (DC) by Unit Type (Local municipal DC rates shown)			Population Data (Based on comparative Census data)		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)	2016 Census	2021 Census	Population Change 2016-21
City of Woodstock[1]	$10,837	$8,596	$6,056	41,098	46,705	13.60%
Town of Ingersoll[2]	$4,056	$2,548	$2,162	12,757	13,693	7.30%
Town of Tillsonburg[3]	$7,934	$4,985	$4,231	15,872	18,615	17.30%
Township of Blandford Blenheim[4]	$10,160	$6,384	$5,417	7,399	7,565	2.20%
Township of East Zorra-Tavistock[5]	$5,133	$3,224	$2,737	7,113	7,841	10.20%
Township of Norwich[6]	$7,823	$4,914	$4,170	10,835	11,151	2.90%
Township of South-West Oxford[7]	$4,127	$2,593	$2,200	7,634	7,583	-0.70%
Township of Zorra[8]	$4,771	$2,997	$2,544	8,138	8,628	6.00%

*Local municipality also has area-specific development charges not shown in chart. All quoted figures are municipality-wide charges

[1]City of Woodstock development charges per By-law 9208-19 as indexed; fees current to 2022-04-01.
(see: https://www.cityofwoodstock.ca/en/residential-services/resources/Building/Development-Charges/DC-Charges-April-1-2022---Accessible.pdf)

[2]Town of Ingersoll development charges per By-law 21-5131 as indexed; fees current to 2022-04-01.
(see: https://www.ingersoll.ca/download/2022-development-charges/?wpdmdl=7852&masterkey=x7TnJWY5jP_wui39EtwfADvnJiYf-ddbzTgEbu7ekQSpG2p9-Mi1Q6-WeFaMH9Zq1Pooy0WwmTla7Te9Ju7llrt9gpwSTYROrtmdw52c9hU)

[3]Town of Tillsonburg development charges per By-law 2021-036 as indexed; fees current to 2022-04-01.
(see: https://www.tillsonburg.ca/en/do-business/resources/Documents/DC-Rates-April-1-2022-to-March-31-2023.pdf)

[4]Township Blandford Blenheim development charges per By-law 2148-2019 as indexed; fees current to 2021-04-01.

https://www.blandfordblenheim.ca/Portals/BlaBle//Documents/Fees%20%26%20Charges/Development%20Charges%20brochure%20Apr%202021.pdf

[5]Township of East Zorra-Tavistock development charges per By-law 2021-15; fees current to 2021-03-17.
(see: https://www.ezt.ca/en/business-and-development/resources/DC-By-law_2021-015_Complete.pdf)

[6]Township of Norwich development charges per By-law 19-2021; fees current to 2021-03-23.
(see: https://www.ezt.ca/en/business-and-development/resources/DC-By-law_2021-015_Complete.pdf)

[7]Township of South-West Oxford development charges per By-law 25-2021; fees current to 2021-04-01.
(see: https://www.swox.org/en/business-and-development/resources/Building-and-Development/04012021-Dev-Charges-Pamphlet.pdf)

[8]Township of Zorra development charges per By-law 18-21; fees current to 2021-04-01.
(see: http://www.zorra.ca/Portals/8/Documents/ByLaws/32-19%20Development%20Charges%20Consolidated.pdf)

Table 4.6: Peel Region residential DC & population growth rates by local municipality (current to February 2022)

Local Municipality (Peel Region)	Development Charge (DC) by Unit Type (Local municipal DC rates shown)			Population Data (Based on comparative Census data)		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)	2016 Census	2021 Census	Population Change 2016-21
*City of Brampton[1]	$43,740	$32,426	$26,296	593,638	656,480	10.60%
*City of Mississauga[2]	$42,966	$33,427	$29,285	721,599	717,961	-0.50%
Town of Caledon[3]	$40,924	$31,156	$23,776	66,502	76,581	15.20%

*Local municipality also has area-specific development charges not shown in chart. All quoted figures are municipality-wide charges

[1]City of Brampton development charges per By-law 129-2019 as indexed; fees current to 2022-02-01.
(see: https://www.brampton.ca/EN/Business/planning-development/development_charges/Pages/Amended-Rates.aspx)

[2]City of Mississauga development charges per By-law 0096-2019 as indexed; fees current to 2022-02-01.
(see: https://www.mississauga.ca/wp-content/uploads/2022/01/11174227/DC-Rate-Sheet-Feb-1-2022.pdf)

[3]Town of Caledon development charges per By-law 2021-65 as indexed; fees current to 2021-07-14.
(see: https://www.caledon.ca/en/town-services/resources/Documents/business-planning-development/2021-Development-Charges-Pamphlet.pdf)

Table 4.7: Waterloo Region residential DC & population growth rates by local municipality (current to February 2022)

Local Municipality (Niagara Region)	Development Charge (DC) by Unit Type (Local Municipal DC rates shown)			Population Data (Based on comparative Census data)		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)	2016 Census	2021 Census	Population Change 2016-21
*City of Cambridge[1]	$21,262	$14,950	$10,951	129,920	138,479	6.60%
*City of Kitchener[2]	$20,945	$14,708	$10,588	233,222	256,885	10.10%
City of Waterloo[3]	$18,045	$11,869	$9,935	104,986	121,436	15.70%
Township of North Dumfries[4]	$12,801	$9,711	$8,488	10,215	10,619	4.00%
Township of Wellesley[5]	$10,992	$8,050	$7,037	11,260	11,318	0.50%
*Township of Wilmot[6]	$27,369	$20,843	$18,628	20,545	21,429	4.30%
*Township of Woolwich[7]	$12,316	$8,711	$7,714	25,006	26,999	8.00%

*Local municipality also has area-specific development charges not shown in chart. All quoted figures are municipality-wide charges.

[1]City of Cambridge development charges as per By-law 19-094; fees current to 2022-01-19.
(see: https://www.cambridge.ca/en/build-invest-grow/resources/C-of-A--DCs/DC-Schedules---Jan-19-2022.pdf)

[2]City of Kitchener development charges as per municipal website accessed 2022-03-20.
(see: https://www.kitchener.ca/en/development-and-construction/development-charges.aspx)

[3]City of Waterloo development charges as per By-law 2019-064; fees current to 2022-01-01.
(see: https://www.waterloo.ca/en/government/development-charges.aspx#)

[4]Township of North Dumfries development charges as per By-law 3208-20; fees current to 2021-12-01.
(see: https://www.northdumfries.ca/en/doing-business/resources/Documents/Development-Charges/2022-Township-Development-Charges.pdf)

[5]Township of Wellesley development charges as per By-law 55/2019; fees current to 2021-12-01.
(see: https://www.wellesley.ca/en/resources/2021-DC-Brochure-Wellesley-December-2021.pdf)

[6]Township of Wilmot development charges as per By-law 2021-38; fees current to 2021-12-01.
(see: https://www.wilmot.ca/en/doing-business/resources/Documents/buildingandconstruction/dcchargesDec2021.pdf)

[7]Township of Woolwich development charges as per By-law 45-2019; fees current to 2021-01-01
(see: https://www.woolwich.ca/en/resources/AODA--2021/45-2019-v3---Development-Charges.pdf)

Table 4.8: York Region residential DC rates and population growth rates by local municipality (as of February 2022)

Local Municipality (York Region)	Development Charge (DC) by Unit Type (Local Municipal DC rates shown)			Population Data (Based on comparative Census data)		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)	2016 Census	2021 Census	Population Change 2016-21
*City of Markham[1]	$116,722	$93,743	$72,107	328,966	338,503	2.90%
*City of Richmond Hill[2]	$21,429	$17,544	$14,615	195,022	202,022	3.60%
*City of Vaughan[3]	$61,215	$50,493	$37,333	306,233	323,103	5.50%
Town of Aurora[4]	$29,761	$22,129	$17,979	55,445	62,057	11.90%
*Town of East Gwillimbury[5]	$47,344	$38,200	$28,057	23,991	34,637	44.40%
*Town of Georgina[6]	$17,842	$14,296	$12,406	45,418	47,642	4.90%
Town of Newmarket[7]	$30,680	$24,067	$18,213	84,224	87,942	4.40%
*Town of Whitchurch-Stouffville[8]	$24,099	$19,183	$15,687	45,837	49,864	8.80%
*Township of King[9]	$35,532	$30,096	$22,314	24,512	27,333	11.50%

*Local municipality also has area-specific development charges not shown in chart. All quoted figures are municipality-wide charges.

[1]City of Markham development charges as per By-laws 2017-116 and 2017-117; fees current to 2017-12-13.
(see: https://www.markham.ca/wps/portal/home/business/planning/development-charges/06-development-charges)

[2]City of Richmond Hill development charges as per By-law 47-19 (amended by 34-21); fees current to 2021-06-23.
(see: https://www.richmondhill.ca/en/shared-content/resources/documents/Development-Charges-Brochure.pdf)

[3]City of Vaughn development charges as per By-law 083-2018 in effect 2018-05-23 as indexed.
(see: https://www.vaughan.ca/services/business/development_charges/General%20Documents/2022%2001%2001%20rate%20schedule%20with%20increase%20notice.pdf)

[4]Town of Aurora development charges as per By-law 6166-19 in effect 2019-03-26 as indexed.
(see: https://www.aurora.ca/en/business-and-development/resources/Development-charges/2022-01-residential-rate-sheet.pdf)

[5]Town of East Gwillimbury development charges as per By-law 2022-005; fees current to 2022-02-01.
(see: https://www.eastgwillimbury.ca/en/government/resources/Documents/DevelopmentCharges/Feb-1-2022-DC-Rate-Schedule.pdf)

[6]Town of Georgina development charges as per By-law 2021-0041 (AD-5); fees current to 2022-05-19.
(see: https://www.georgina.ca/municipal-government/budget/development-charges)

[7]Town of Newmarket development charges as per By-law 2019-46 in effect 2019-07-18 as indexed.
(see: https://www.newmarket.ca/TownGovernment/Pages/Budgets%20and%20Finances/Development-Charges.aspx)

[8]Township of Whitchurch-Stouffville development charges per By-law 2018-142-FI in effect 2018-12-11 as indexed.
(see: https://www.townofws.ca/en/residents/resources/Documents/Building_Forms/DC_GUIDE_PDF.pdf)

[9]Township of King development charges as per By-law 2021-002 in effect as indexed to 2022-01-01.
(see: https://www.townofws.ca/en/residents/resources/Documents/Building_Forms/DC_GUIDE_PDF.pdf)

Table 4.9: Comparative Regional population growth rates (2016 to 2021)

Regional Municipality (ordered by growth rate; highest to lowest)	Population Data (Based on comparative Census data)		
	2016 Census	2021 Census	Population Change as % (2016 to 2021) Average Regional Growth Rate = 7.97%
District of Muskoka	60,406	66,461	10.01%
Oxford County	110,846	121,781	9.86%
Region of Waterloo*	535,154	587,165	9.72%
Halton Region	548,435	596,637	8.79%
Durham Region*	645,731	696,867	7.92%
Niagara Region	447,888	477,941	6.71%
York Region	1,109,648	1,173,103	5.72%
Peel Region*	1,381,739	1,451,022	5.01%

*Regional municipality selected for further analysis on basis of relative ranking of population growth over 2016 to 2021 census periods.

While rates of population growth certainly play a significant role in justifying the need for the Development Charge levels needed to support the provision of municipal services and inform the background studies that shape a given municipality's DC By-law, the Development Charges Act, 1997 under Section 5(1) specifies that for the purposes of calculating DCs, the municipality must base the amount required to be collected for respective forms of development on the average level of service provided in the municipality for the 10-year period preceding the most current DC background study (Province of Ontario, 2021).

This legislated moderation of DCs is intended to ensure that charge levels remain rooted in the historic local economic realities of service provision and provide peace of mind to both municipal officials and development industry proponents. Given this approach, it is reasonable to assume that locking future DCs into a historically rooted service provision cost structure affords

little leeway for municipalities to independently navigate and buffer themselves from sudden inflationary or economic shocks. It can also be said that this backwards looking cost estimation model for determining DC rates undermines any incentive for municipalities to make fundamental or significant changes to their levels of service as level of service must be balanced with factors affecting promotion of growth via DC charge rates for developers (Clinch and O'Neill, 2010, 47(10)).

In attempting to answer the remaining research question of whether changes to development charge levels generally lag or lead growth in a municipality, we need to dig deeper into the local contextual growth pressures and patterns affecting the selected regional municipalities and continue to examine the theoretical literature more broadly as it applies. This will also require an examination of building permit activity in our respective regional municipalities and how permit activity interfaces with the timing and relative magnitude of DCs. Building permit activity and DCs are generally strongly linked from an administrative timing perspective in many municipalities as charges are typically collected as a precondition to the issuance of a building permit. A noted exception to this can be where a subdivision or consent servicing agreement is executed through a Planning Act process that may compel the collection or partial collection of development charges in some form well ahead of new parcel registrations and issuance of building permits.

4.4 Summary

To summarize from this chapter, the Development Charges Act, 1997 (DCA) is the operative legislation in Ontario that enables municipalities to levy charges on new development through implementing By-laws of Council. The levels at which DCs are set are guided and informed by professional background studies that account for forecast growth, supporting infrastructure services and associated capital costs for these services where the implementing

DC By-laws are considered through an open public process. As infrastructure costs are often acute and represent large point-in-time fiscal outlays, DCs are intended to ameliorate the abruptness of these costs through a planned cost-recovery approach. Part of the impetus for DCs is not only to ensure that necessary infrastructure costs can be covered for new growth and development but also that from an equity perspective, existing residents and property owners are not encumbered with the burden of paying for new services related to growth directly which relates to the familiar municipal axiom of *growth pays for growth*. Within the existing academic literature, some scholars postulate that the commonly employed average-cost approach for development charges applied municipally wide across common forms of development is inherently not as equitable as using an area-specific approach for DCs that takes additional local level characteristics into consideration within select areas of municipalities.

Among the combined 57 local municipalities that belong to the eight regional municipal governments in Ontario, all but one was found to levy development charges on new development. Among this group, 68 percent of local municipalities achieved population growth exceeding the provincial average within the most recent comparative national population census periods (2016 to 2021). As a general pattern and trend, it was observed that higher growth municipalities typically levy larger development charges on similar forms of residential development as compared to lower growth areas.

The three regional municipalities of Waterloo, Durham and Peel have been selected for further analysis in this report since they respectively represent high, mid and low growth scenarios on the basis of the most recently published Canadian 2021 population census.

CHAPTER 5: The Timing of Development Charges

5.1: Introduction

This chapter addresses how point-in-time changes to development charge rates may impact development activity with respect to the selected regional municipalities under the low, mid and high growth scenarios. The contents of this chapter relate primarily to research question number three which attempts to provide insight into whether development charge levels generally lag or lead growth in a given municipality based on building permit (development) activity.

5.2: Development Charges as a Leading or Lagging Indicator

When examining a local development market, it is generally assumed that the pace of growth and the form it takes are the result of market forces expressing consumer preferences, potentially moderated and incentivized or dis-incentivized by local land-use policies. While this blunt free-market theory is not without merit, the true reality of what drives and determines growth within many municipalities can be more accurately described as approaching a pluralistic model that is underpinned by more than one principle or individual influencing factor (Baumeister, 2012).

Implied purely by the administrative timing of their implementation, it can be said that development charges lead growth as they are generally collected before Building Permits can be issued to allow construction to proceed. Examining the timing of rate changes through this narrow perspective would lead one to believe that of course, development charges dictate new growth and that it cannot possibly be assumed to occur in the reverse of this sequence. Taking this approach to theorizing about influence among development charges and growth however ignores the long lead-up of development processes under the Planning Act that underpin and set the stage for construction activity within local jurisdictions. It is commonplace to find that in fact the final sign-off of a building permit has its origins in the public processes prescribed by the Planning Act held years earlier which created the necessary land assemblies and parcel fabrics, even if

only in draft format, to initiate, guide and direct the development. While development charges in this respect do not directly create the physical layout upon which development will fill in the blanks so-to-speak, they can and do affect the timing of development and with regard to zoning permissions, can affect the preferred choice of physical development by means of financial incentives and disincentives.

For the municipalities examined in this study, we will attempt to evaluate whether the change in DC charge levels resulting from the indexing or updating of DC By-laws has any effect on residential building permit activity. Using this research approach, the DC charge level acts as the independent variable causing the change or effect, we are interested in observing while building permit activity or number of permits issued between comparative points in time represents the dependent variable being that variable which shows a change or effect as a result of a change in the independent variable, holding other potential factors constant (van Thiel, 2014).

5.2.1: Region of Peel – DCs in a Low-Growth Scenario

Starting with our low-growth example from Region of Peel and referring back to Table 4.6 with focus on the City of Mississauga as our first example, the municipality updated its DC charges for residential uses on February 1, 2022 where the new charges for singles/semis, rows/other multiples and apartments were each set at $42,966, $33,427 and $29,285 respectively. For the City of Mississauga, DC rates are indexed twice per year based on the existing DC By-law (No. 0096-2019) with the first indexing occurring on February 1st and the second indexing occurring on August 1st of each calendar year (City of Mississauga, 2019). When correlating with reported building permit activity for the municipality, it is noted based on the most recent two 6-month cycles leading up to scheduled increases in the DC rates for residential development that a substantial jump in the number of new units created, and therefore number of building permits issued, occurs in the final months preceding the scheduled rate increase following which a comparative lull in building permit activity occurs. While a limitation here is that

these statements are derived from the observation of just two DC rate cycles, it is noted that for these cycles, the abrupt jumps in permit activity occur independent of seasonality that could affect construction processes (e.g., summer versus winter weather).

Table 5.1: City of Mississauga residential DC rate changes (2021-2022)[1]

Rate Period	Development Charge (DC) by Unit Type		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)
"Period 1" Feb-1-2022 to July-31-2021	$38,425	$29,894	$26,190
"Period 2" Aug-1-2021 to Jan-31-2022	$39,217	$30,510	$26,730
% change in rate	2.06%	2.06%	2.06%

[1]City of Mississauga development charges per By-law 0096-2019 as indexed; fees current to 2022-02-01.
(see: https://www.mississauga.ca/wp-content/uploads/2022/01/11174227/DC-Rate-Sheet-Feb-1-2022.pdf)

Table 5.2: City of Mississauga Permit activity ("Period 1": Feb-21 to Jul-21)[1]

Month-Year	Number of New Units Created	Construction Value ($000s)
Feb-21	50	$21,215
Mar-21	72	$23,417
Apr-21	223	$63,889
May-21	70	$33,873
Jun-21	1,410	$332,421
Jul-21	1,507	$399,193

[1]City of Mississauga building permit summary reports.
(see: https://www.mississauga.ca/services-and-programs/building-and-renovating/building-reports/)

Table 5.3: City of Mississauga Permit activity ("Period 2": Aug-21 to Jan-22)[1]

Month-Year	Number of New Units Created	Construction Value ($000s)
Aug-21	35	$17,271
Sep-21	901	$234,800
Oct-21	42	$29,895
Nov-21	415	$91,696
Dec-21	73	$33,517
Jan-22	2,129	$514,844

[1]City of Mississauga building permit summary reports.
(see: https://www.mississauga.ca/services-and-programs/building-and-renovating/building-reports/)

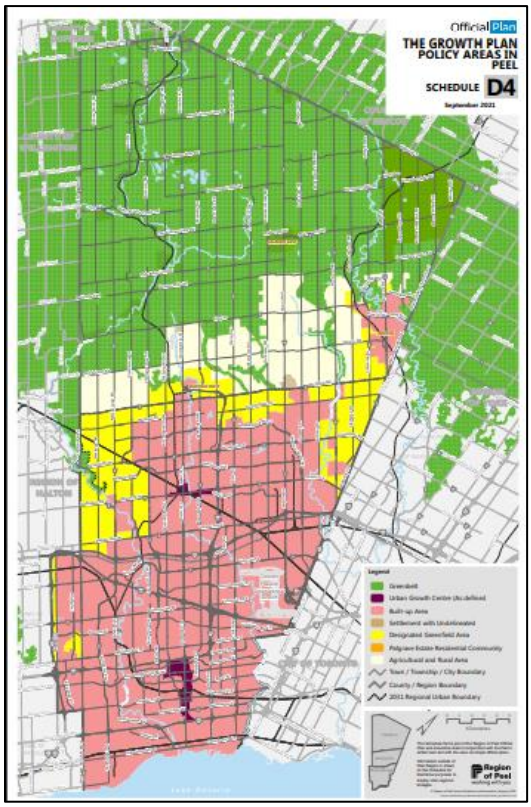
While the observed causality in the City of Mississauga example is based on a limited data set, it provides us with an initial observation from a large urban centre to inform the hypothesis of whether development charges lead or lag growth. In this particular case, it can be inferred that

changes in the independent variable (DC charge rate) do have some effect on the behaviour and response of the dependent variable (building permit activity) in terms of timing. Whether we can state with some level of confidence that development charge rates lag or lead growth in terms of building permit activity requires us to investigate more widely among the selected municipalities to determine whether the Mississauga observation is an isolated occurrence or actually part of a larger pattern among the selected Ontario municipalities. The City of Mississauga example on its own would indicate that development charge rates potentially have a leading effect on growth whereby an anticipated increase in the charge level incentivizes development to happen before the change takes effect.

Investigating the causation from City of Mississauga further, we turn to its urban neighbour to the north, the City of Brampton, which also forms a significant portion of the Region of Peel. As per Table 4.6 the combined populations of the two cities account for approximately 95% of the population of the entire region with the Town of Caledon accounting for the remaining 5% of residents. It is noted that as per the 2021 Census, the City of Mississauga experienced slight negative growth (-0.5%) since 2016 while City of Brampton over the same period experienced growth at nearly double the provincial average, clocking in at 10.6%. For comparative purposes, it is also noted that both urban areas are very similarly sized with City of Brampton (656,480 residents) being approximately 90% the size of City of Mississauga (717,961 residents).

As per Figure 5.1 taken from the Region of Peel Official Plan, distribution of existing and designated urban development lands among the three local municipalities show that City of Brampton and City of Mississauga possess and are allocated the vast majority while the Town of Caledon possesses little in the way of designated urban lands due to prime agricultural lands afforded protection under the PPS and greenbelt lands associated with protected natural features.

Figure 5.1: Region of Peel – Area Municipalities and Growth Plan Areas[1]



[1]Region of Peel Official Plan (Office consolidation September 2021).
(see: https://www.peelregion.ca/officialplan/download/)

Unlike how the City of Mississauga publicly reports their permit data, the City of Brampton does not provide a running monthly summary but instead expresses permit activity on a total annual basis as part of their Building Division Year-End Reporting (City of Brampton, 2020). An added challenge in correlating the data sets pertaining to DC rates and permit activity from City of Brampton relates to the fact that just like City of Mississauga, the City of Brampton also indexes their DC rates twice per year (February 1st and August 1st) based on their existing DC By-laws which means that the changes to DC rates are staggered from the reporting periods for permit activity by 1 month with changes occurring twice within each permit reporting period. To account for these offsets in the posted data, an annual average of the DC rate for City of Brampton has been taken in each year based on the split periods of February 1st to July 31st and August 1st to January 31st in order to arrive at a reasonable analysis of how permit activity behaves with respect

to changes in development charge levels. Tables 5.4 and 5.5 provide a summary of this data for the City of Brampton.

Table 5.4: City of Brampton residential DC rate changes (Years 2015-2021)[1]

Rate Period	Development Charge (DC) by Unit Type		
	Singles & Semis	Rows & Other Multiples	Apartments (2+ bedroom)
"2021" (Feb-1-2021 to Jan-31-2022)	$39,624	$29,375	$23,822
"2020" (Feb-1-2020 to Jan-31-2021)	$38,640	$28,646	$23,230
"2019" (Feb-1-2019 to Jan-31-2020)	$34,359	$26,482	$20,101
"2018" (Feb-1-2018 to Jan-31-2019)	$29,680	$23,940	$16,777
"2017" (Feb-1-2017 to Jan-31-2018)	$28,810	$23,238	$16,284
"2016" (Feb-1-2016 to Jan-31-2017)	$27,814	$22,436	$15,722
"2015" (Feb-1-2015 to Jan-31-2016)	$27,340	$22,052	$15,454

[1]City of Brampton archived development charge rates.
(see: https://www.brampton.ca/EN/Business/planning-development/development_charges/Pages/welcome.aspx)

Table 5.5: City of Brampton Permit activity (Years 2015-2021)[1]

Year	Number of New Units Created	Construction Value ($000s)
2021	7,888	$1,250,000
2020	5,282	$1,050,000
2019	2,186	$1,250,000
2018	1,109	$625,000
2017	2,002	$1,100,000
2016	3,491	$1,600,000
2015	4,950	$2,250,000

[1]City of Brampton building permit summary reports.
(see: https://www.brampton.ca/EN/residents/Building-Permits/Documents/Statistics%20and%20Bulletins/2021%20Year%20End.pdf)

Reading into the data for City of Brampton, the period 2015 to 2018 saw modest increases of 1.73%, 3.58% and 3.02% to the average annual development charge rates between each successive year while over that span, residential development activity gradually dropped from a

high of 4,950 units in 2015 to a low of 1,109 units created in 2018, representing a 78% decline in residential development activity across the city over a 4-year span (Brampton, 2020).

Moving into 2019, the city saw a rapid rebound in residential development activity from the 2018 low with unit creation increasing by 97% in 2019, 242% in 2020 and 49% in 2021 on a year-over-year basis. Interestingly, the turning point in 2019 which saw a rapid rise in development activity from the 2018 low also corresponds to a noticeable increase in the average annual development charge rate established by the municipality. Coming out of the 2018 development lull, the City of Brampton opted for an aggressive approach, increasing its average DC rate by almost 16% in 2019 as the local development market responded strongly. Similarly, the rate was raised by approximately 12% in 2020 which saw over a doubling in development activity year-over-year. Similar to the City of Mississauga example, it can also be inferred that in the case of the City of Brampton, changes in the independent variable (DC charge rate) do have noticeable effect on the behaviour and response of the dependent variable (building permit activity) in terms of timing. Like Mississauga, the Brampton example also indicates that development charge rates potentially have a leading effect on growth where an anticipated increase in the charge level incentivizes development to happen before further increases take effect.

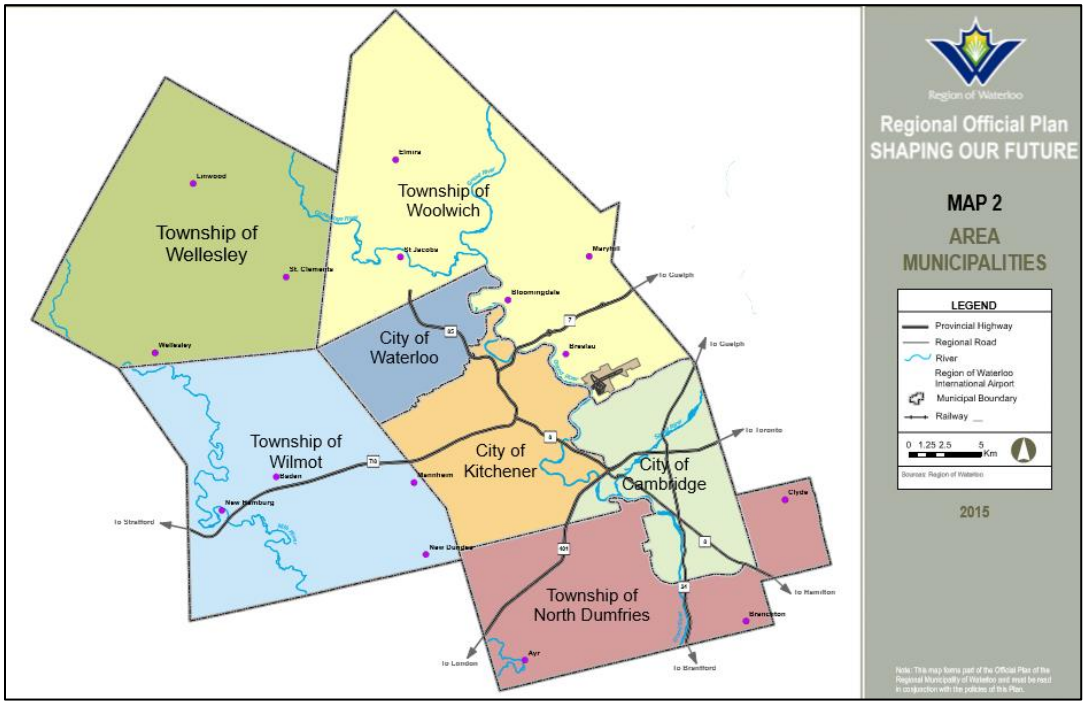
While a similar pattern of DC rate changes leading growth has been observed among Brampton and Mississauga, these are two municipalities with common urban profiles and growth pressures that exist within the same coordinating regional government that share a large urban boundary with each other.

5.2.2: Region of Waterloo – DCs in a High-Growth Scenario

To test whether the relationship of DC changes leading and incentivizing growth holds true more broadly versus acting as a response to growth, we need to look at other examples. Contrasting with the Peel Region municipalities (Mississauga and Brampton), the cities of Cambridge, Kitchener and Waterloo each represent urban settings subject to similar growth

pressures within the Greater Golden Horseshoe (GGH) that also border each other. Unlike Brampton and Mississauga, they are considered mid-sized cities and therefore do not possess the same price-setting power and market command of their larger counterparts. These urban centres are also coordinated under a regional model that includes a series of surrounding mixed rural-urban townships which play an outsized role in the local development industry due to the balanced growth strategies directed by the Region. The relative coverage and location of the local municipalities found within Region of Waterloo are illustrated by Figure 5.2.

Figure 5.2: Region of Waterloo – Area Municipalities[1]



[1]Region of Waterloo Official Plan 2031.
(see: https://www.regionofwaterloo.ca/en/regional-government/land-use-planning.aspx#Regional-Official-Plan)

Leading into further analysis, the following series of tables provide background data for the 2018-2021 period as it concerns development charge and building permit activity across the seven municipalities belonging to the Region of Waterloo. The data has been divided between the three core-urban cities and four mixed urban-rural townships given the distinct geography and development features of each group.

Table 5.6: Cambridge, Kitchener and Waterloo DC Rates (2018-2021)[1]

Municipality	Development Charge by Unit Type											
	Singles & Semis				Rows & Other Multiples				Apartments (2+ bedroom)			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Cambridge	$10,996	$13,119	$13,657	$16,457	$10,996	$9,224	$9,639	$11,615	$6,821	$6,567	$6,862	$8,269
Kitchener[2]	$10,400	$10,755	$11,024	$12,314	$7,304	$7,552	$7,741	$8,647	$5,257	$5,436	$5,572	$6,224
Waterloo	$15,098	$15,881	$15,777	$16,140	$10,916	$11,482	$10,377	$10,616	$9,893	$10,407	$8,684	$8,886

[2]City of Kitchener By-law 2019-086 prescribes an annual adjustment to Development Charge rates on December 1st of every year in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.kitchener.ca/en/resourcesGeneral/Documents/DSD_BUILD_2019_Development_Charges_Background_Study.pdf)

Table 5.7: Cambridge, Kitchener and Waterloo Permit activity (2018-2021)[1]

Municipality	Total Number of New Units Created (single/semi, rowhouse, apartment)			
	2018	2019	2020	2021
Cambridge	566	942	449	1,188
Kitchener	1,318	3,502	3,140	3,021
Waterloo	783	1,214	1,241	1,342

[1]Region of Waterloo building activity reports.
(see: https://www.regionofwaterloo.ca/en/regional-government/land-use-planning.aspx#Building-Activity)

Table 5.8: North Dumfries, Wellesley, Wilmot, Woolwich DC Rates (2018-2021)

Municipality	Development Charge by Unit Type											
	Singles & Semis				Rows & Other Multiples				Apartments (2+ bedroom)			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
North Dumfries[1]	$5,925	$6,268	$6,359	$11,470	$4.007	$4,239	$4,824	$8,702	$2,731	$2,889	$4,216	$7,606
Wellesley[2]	$8,405	$8,923	$9,190	$9,392	$6,156	$6,535	$6,730	$6,878	$5,381	$5,712	$5,883	$6,012
Wilmot[3]	$10,486	$11,132	$11,465	$11,717	$7,987	$8,479	$8,732	$8,924	$7,138	$7,578	$7,804	$7,976
Woolwich[4]	$7,048	$11,663	$11,849	$12,749	$5,481	$8,251	$8,383	$9,020	$4,050	$7,308	$7,425	$7,989

[1]Township of North Dumfries By-law 2660-15 and By-law 3122-19 each prescribed an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.northdumfries.ca/en/doing-business/resources/Documents/By-law-No.-2660-15---Development-Charges.pdf)
(see: https://www.northdumfries.ca/en/doing-business/resources/Documents/By-law-No.-3122-19-Impose-Certain-Development-Charges.pdf)
[2]Township of Wellesley By-law 55/2019 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.wellesley.ca/en/township-services/resources/Documents/By-law-55-2019---Development-Charges-By-law.pdf)
[3]Township of Wilmot By-law 2019-42 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.wilmot.ca/en/doing-business/resources/Documents/Wilmot-DC-2019-By-law-2019.08.26.pdf)
[4]Township of Woolwich By-law 45-2019 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.woolwich.ca/en/resources/AODA--2021/45-2019-v3---Development-Charges.pdf)

Table 5.9: North Dumfries, Wellesley, Wilmot, Woolwich Permit activity (2018-2021)[1]

Municipality	Total Number of New Units Created (single/semi, rowhouse, apartment)			
	2018	2019	2020	2021
North Dumfries	57	28	41	126
Wellesley	17	26	40	30
Wilmot	90	81	43	47
Woolwich	94	403	241	255

[1]Region of Waterloo building activity reports.
(see: https://www.regionofwaterloo.ca/en/regional-government/land-use-planning.aspx#Building-Activity)

Table 5.10: Region of Waterloo – New Residential Units by Type & Municipality (2018-2021)[1]

Municipality	Singles & Semis				Rows & Other Multiples				Apartments			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Cambridge	316	72	61	81	130	462	172	669	120	408	216	438
Kitchener	334	362	678	583	405	649	473	674	579	2,491	1,989	1,764
Waterloo	158	126	85	175	8	6	73	5	617	1,082	1,083	1,162
North Dumfries	18	4	41	64	0	12	0	61	39	12	0	1
Wellesley	15	22	39	23	0	0	0	0	2	4	1	7
Wilmot	77	65	32	21	0	8	0	0	13	8	11	26
Woolwich	57	246	220	220	29	78	11	23	8	79	10	12
Region Total	**975**	**897**	**1,156**	**1,167**	**572**	**1,215**	**729**	**1,432**	**1,378**	**4,084**	**3,310**	**3,410**
% of Total	**23%**	**21%**	**27%**	**29%**	**15%**	**31%**	**18%**	**36%**	**11%**	**34%**	**27%**	**28%**

[1]Region of Waterloo building activity reports.
(see: https://www.regionofwaterloo.ca/en/regional-government/land-use-planning.aspx#Building-Activity)

The figures noted in Tables 5.7 and 5.9 above for the seven member municipalities of the Region of Waterloo accounts for the number of building permits issued within each local jurisdiction for the reported years and does not account for building completions where occupancy permits have been issued hence why the term ‘permit activity’ is used in the title block of each table. A marked increase in permit activity was noted for both Township of Woolwich and City of Kitchener between 2018 and 2019 with elevated residential building activity being sustained in the subsequent years thereafter. Residential permit activity in the Township of Wellesley and Township of North Dumfries remained relatively stable over the 2018 to 2021 period with an uptick in activity in 2021 for North Dumfries. The relative stability in residential permit activity for these two jurisdictions can likely be attributed to their largely rural character and significant lack of larger serviced urban settlement areas and available development lands by comparison to their peer

municipalities within the Region of Waterloo. With regard to the cities of Cambridge, Kitchener and Waterloo, all three saw significant gains in permit activity for 2019 versus 2018 with relative year-over-year increases of 66%, 266% and 155%, respectively. A significant uptick in permit activity was also noted for the City of Cambridge in 2021 as compared to 2020 with activity for Kitchener and Waterloo remaining at elevated relative levels in 2020 and 2021 consistent with the similar increase achieved in 2019 across both jurisdictions.

When correlating the reported permit activity for each jurisdiction with development charge rates, some patterns are revealed. Noting that updated DC rates are established in all cases either at or near the beginning of each calendar year outside of those years where a new DC By-law is established, the reported permit activity for each year-end inevitably always lags the DC increase due to the nature of how the charge increases are timed. Selecting any given year outside of when a new DC By-law is established (most recently, 2019 was the year in which a new DC By-law was established in all seven cases), reported permit activity assumes a dependent variable response to the independent variable being the DC rate. Attempting to address and answer the question of whether DC levels lag or lead growth based on permit activity therefore is effectively trying to answer whether there is a dependent variable response based on the recurring timing of activity versus charge adjustments while holding other factors constant.

Examining the City of Cambridge for instance reveals jumps in annual permit activity as a response to noticeable shifts in development charge levels set at the start of each year. As per Tables 5.6 and 5.7, Cambridge experienced a 66% increase in permit activity by 2019 year-end versus the same period in 2018 where a 20% increase in the development charge rate for single-detached and semi-detached dwellings was noted while the charge rates for row-houses/other multiples and apartments were decreased by 16% and 4% versus the 2018 rates, respectively. When correlating these DC rates with development activity by residential unit type, it does appear that the year-to-year changes in the rate may have produced notable effects in terms of the mix

of unit types produced. When compared to 2018, development activity for singles and semis in 2019 saw over a four-fold drop in numbers for Cambridge (20% per unit DC increase) while activity for row-houses/other multiples and apartments saw tremendous jumps of 355% and 340%, respectively. This isolated observation for City of Cambridge demonstrates the possible incentive or disincentive potential that DCs may have within the broader context of the development cycle.

Extrapolating further with respect to the data captured in Table 5.6, 2021 saw notable increases for DC rates in Cambridge with an increase of 20% versus the 2020 rate across all residential unit types. Correlating this blanket increase to reported development activity at year-end 2021, limited change in the creation of new single-detached and semi-detached units was noted versus 2020 however noticeable increases in row-house/multiples and apartments were noted, recording robust growth of 388% and 203% in terms of total numbers created versus that of year 2020. When the two comparative periods of 2018/2019 and 2020/2021 are matched to each other, it would appear that changes in the DC rate have some elasticity or response as it applies to creation of lower density urban forms (i.e. singles and semis) while higher density urban forms such as row-houses and apartments seem to respond in an inelastic fashion with respect to DC rate changes that is, whether the rate goes up or down, does not seem to have much correlating effect on the incentive to create more units, at least as far as the Cambridge case is concerned. While it would be premature to suggest this holds true as a general rule, the Cambridge example provides us with a reference point with which to test this hypothesis of the elastic response of permit activity with respect to changes in DC rates.

The following chart in Table 5.11 illustrates a binary scale applied to all seven member municipalities of the Region of Waterloo measuring building permit activity response to DC rate changes over the 4-year period of 2018 to 2021. Within this chart, the ● symbol represents a positive response in permit activity to a change in the DC rate while the ○ symbol represents a negative response or no growth in permit activity with respect to a change in the DC rate on a

year-over-year basis across different dwelling unit types. It is noted that in the case of every year captured within Table 5.11 and for every unit type, the annual DC rate was recorded as increasing either due to adoption of a new Development Charges By-law or as result of indexing prescribed within each By-law in accordance with Ontario Regulation 82/98 issued under the Development Charges Act, 1997 (Ontario, October 2021). Related to our analysis, a rate increase was always a constant that related to all data points recording the presence of a positive or negative building permit activity response.

Table 5.11: Region of Waterloo – Permit Activity Response to DC Rate Changes (2018-2021)[1][2]

Municipality	Singles & Semis				Rows & Other Multiples				Apartments			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Cambridge	●	○	○	●	○	●	○	●	●	●	○	●
Kitchener	●	●	●	○	●	●	○	●	●	●	○	●
Waterloo	○	○	○	●	○	○	●	○	○	●	●	●
North Dumfries	○	○	●	●	○	●	○	●	●	○	○	●
Wellesley	○	●	●	○	○	○	○	○	○	●	○	●
Wilmot	○	○	○	○	○	●	○	○	●	○	●	●
Woolwich	○	●	○	○	○	●	○	●	○	●	○	●

[1]Region of Waterloo building activity reports.
(see: https://www.regionofwaterloo.ca/en/regional-government/land-use-planning.aspx#Building-Activity)

[2]2018 figures derived from Region of Waterloo 2018 Building Permit Activity and Growth Monitoring report.
(see: https://www.regionofwaterloo.ca/en/regional-government/resources/2018_Building_Permit_Activity_and_Growth_Monitoring.pdf)

As per Table 5.11, out of the 84 data points recorded across the seven local municipalities for Region of Waterloo for the three common dwelling unit types that DC By-laws assign different rates to, in 48% of cases a positive response in building permit activity was noted with respect to an annual DC rate increase (i.e. more permits issued than the year prior for the dwelling unit type) while in 52% of cases, a negative response to building permit activity was noted being that there were fewer permits issued than the year prior for the particular dwelling unit type. When analyzed on a dwelling type basis, building permit activity for apartment units had the strongest response with 64% of all cases showing a positive response in activity to a DC rate increase versus 36% exhibiting a negative activity response on a given comparative year-over-year basis. Comparatively, singles and semis as well as rows and other multiples (e.g. townhomes) had lower

positive response to DC increases over the recorded 4-year period with a 39% incidence of increased building activity for each unit type.

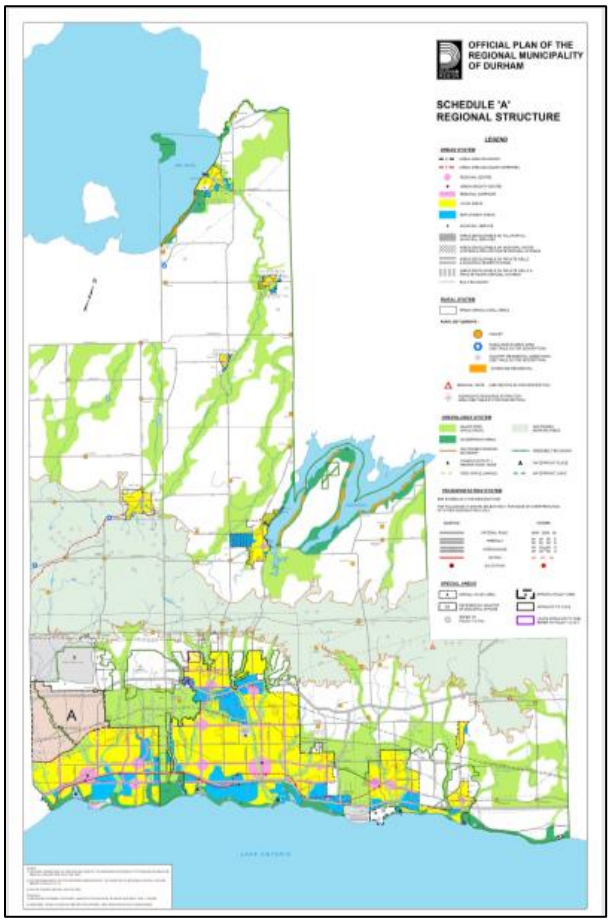
These positive response rates to DC rate increases for the different unit types also appear to be consistent when comparing the separate groups of more heavily urbanized municipalities (Cambridge, Kitchener, Waterloo) and less heavily urbanized municipalities (North Dumfries, Wellesley, Wilmot, Woolwich) with each other. For the more heavily urbanized municipalities, in 58% of cases a positive response in building permit activity was noted with respect to an annual DC rate increase across all dwelling unit types while for the less heavily urbanized municipalities, a similar 53% positive response rate was found. Based on this sampling of the Region of Waterloo, it would appear that similar levels of positive development response to DC rates occur independent of whether the municipality itself is predominately more or less urban or rural. Based on the Region of Waterloo example, it would appear that apartment unit construction activity responds more positively to DC rate increases while other unit types including single-detached, semi-detached, row-houses and other multiples respond more negatively to such increases. To further test whether this is a wider pattern or not, we will now apply the same lens to the remaining regional municipalities in our study.

5.2.3: Durham Region – DCs in a Mid-Growth Scenario

The next regional municipality considered is the Region of Durham or 'Durham Region' which is located at the eastern extent of the Greater Toronto Area. Like the Region of Waterloo, the Region of Durham is characterized by a mix of heavily urbanized member municipalities that in this case hug the northern shore of Lake Ontario (jurisdictions of Ajax, Clarington, Oshawa, Pickering and Whitby) and a group of rural municipalities characterized by prime agricultural lands, protected natural areas and a limited number of serviced settlement areas (jurisdictions of

Brock, Scugog and Uxbridge). The relative geographic coverage and location of the urban and non-urban areas for Durham Region are illustrated by Figure 5.3.

Figure 5.3: Durham Region – Regional Structure[1]



[1]2020 Durham Regional Official Plan (2020 Office Consolidation).
(see: https://www.durham.ca/en/doing-business/official-plan.aspx)

Table 5.12: Durham Region local municipality DC Rates (2018-2021)

Municipality	Development Charge by Unit Type											
	Singles & Semis				Rows & Other Multiples				Apartments (2+ bedroom)			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Ajax[1]	$24,978	$25,852	$26,369	$30,034	$19,724	$20,414	$20,822	$23,716	$12,015	$12,436	$12,685	$14,448
Brock[2]	$10,083	$11,032*	$11,253	$12,817	$8,208	$8,980*	$9,160	$10,433	$5,969	$6,531*	$6,662	$7,588
Clarington[3]	$16,204	$17,111	$17,384	$21,461*	$12,527	$13,228	$13,440	$17,590*	$7,752	$8,186	$8,317	$11,426*
Oshawa[4]	$16,654	$17,642*	$17,924	$19,286	$12,845	$13,607*	$13,824	$14,875	$12,001	$12,713*	$12,916	$13,898
Pickering[5]	$14,349*	$15,152	$15,482*	$16,659	$11,586*	$12,235	$12,501*	$13,451	$9,066*	$9,574	$9,782*	$10,525
Scugog[6]	$9,433	$9,993*	$10,152	$10,923	$7,623	$8,075*	$8,204	$8,828	$5,241	$5,552*	$5,641	$6,070
Uxbridge[7]	$7,040	$7,458*	$7,577	$8,153	$5,276	$5,710*	$5,801	$6,242	$3,519	$3,728*	$3,788	$4,076
Whitby[8]	$21,486	$22,689	$23,052	$24,803	$12,666	$13,375	$13,589	$14,622	$12,666	$13,375	$13,589	$14,622

[1]Town of Ajax By-law 50-2018 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.ajax.ca/en/inside-townhall/resources/Finance/2018/Development-Charge-By-law---50-2018.pdf)

[2]Township of Brock By-law 2118-2019 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.townshipofbrock.ca/en/building-and-business-development/resources/Documents/2019-Development-Charges-Background-Study.pdf)

[3]Municipality of Clarington By-law 2021-010 and previous By-law 2015-035 prescribe an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://weblink.clarington.net/WebLink/ElectronicFile.aspx?docid=340511&dbid=0)

[4]City of Oshawa By-law 60-2019 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.oshawa.ca/uploads/16/DevelopmentChargesBy-law80-2014.pdf?ts=637889332747398668)

[5]City of Pickering By-law 7727/19 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://corporate.pickering.ca/weblink/1/edoc/220826/By-law%20772719.pdf)

[6]Township of Scugog By-law 53-19 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.scugog.ca/en/do-business/resources/Documents/53-19-Development-Charges.pdf)

[7]Township of Uxbridge By-law 2019-076 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.uxbridge.ca/en/business-and-development/resources/Documents/By-Law-No.-2019-076---Development-Charge-By-law.pdf)

[8]Town of Whitby By-law 2019-076 prescribes an annual adjustment to Development Charge rates in accordance with the index prescribed by Ontario Regulation 82/98.
(see: https://www.uxbridge.ca/en/business-and-development/resources/Documents/By-Law-No.-2019-076---Development-Charge-By-law.pdf)

Table 5.13: Durham Region – New Residential Units by Type & Municipality (2017-2020)[123]

Municipality	Singles & Semis				Rows & Other Multiples				Apartments			
	2017	2018	2019	2020	2017	2018	2019	2020	2017	2018	2019	2020
Ajax	167	217	111	96	125	162	76	77	146	189	52	120
Brock	50	45	95	37	38	33	65	30	44	39	44	47
Clarington	372	308	135	330	279	231	93	269	325	269	63	419
Oshawa	661	481	255	512	497	361	177	417	578	421	120	650
Pickering	206	484	237	254	154	364	163	207	180	424	111	322
Scugog	18	18	28	45	14	14	20	37	16	16	13	57
Uxbridge	10	9	18	27	8	7	13	22	9	8	9	34
Whitby	218	240	570	443	163	180	394	361	190	209	268	562
Region Total	**1,702**	**1,802**	**1,449**	**1,744**	**1,278**	**1,352**	**1,001**	**1,420**	**1,488**	**1,575**	**680**	**2,211**
% of Total	**25%**	**27%**	**22%**	**26%**	**25%**	**27%**	**20%**	**28%**	**25%**	**26%**	**11%**	**38%**

[1]Region of Durham 2018 Annual Building Activity Review.
(see: https://www.durham.ca/en/living-here/resources/Documents/2018-Annual-Building-Activity-Review.pdf)

[2]Region of Durham 2019 Annual Building Activity Review.
(see: https://www.durham.ca/en/living-here/resources/Documents/2019-Annual-Building-Activity-Review---Final---Accessible.pdf)

[3]Region of Durham 2020 Annual Building Activity Review.
(see: https://www.durham.ca/en/living-here/resources/Documents/2020-Annual-Building-Activity-Review.pdf)

Table 5.14: Durham Region – Permit Activity Response to DC Rate Changes (2018-2021)[12]

Municipality	Singles & Semis				Rows & Other Multiples				Apartments			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Ajax	●	○	○	n/a	●	○	●	n/a	●	○	●	n/a
Brock	○	●	○	n/a	○	●	○	n/a	○	●	●	n/a
Clarington	○	○	●	n/a	○	○	●	n/a	○	●	●	n/a
Oshawa	○	○	●	n/a	○	○	●	n/a	○	○	●	n/a
Pickering	●	○	●	n/a	●	○	●	n/a	●	○	●	n/a
Scugog	○	●	●	n/a	○	●	●	n/a	○	○	●	n/a
Uxbridge	○	●	●	n/a	○	●	●	n/a	○	●	●	n/a
Whitby	●	●	○	n/a	●	●	○	n/a	●	●	●	n/a

Out of the 72 data points captured for Durham Region across the eight member municipalities, 51% of cases were noted as having a positive response to DC rate increases while 49% had a negative response (decreased permit activity) to DC rate increases. It is noted at the time of writing that permit data was not available for 2021 to correlate with related development charge increases. This split in comparative positive-negative response is noted to be very similar

and almost identical to that of the previous example from Region of Waterloo. When analyzed on a dwelling type basis, building permit activity for apartment units had the strongest response with 63% of all cases showing a positive response in activity to a DC rate increase while singles and semis had a 50% positive response with row-houses and other multiples recorded a 54% positive response rate in year-over-year growth for increases in DC rates. Again, similar to Region of Waterloo, the Region of Durham exhibited the strongest response for growth in the number of units created for apartments with singles, semis and row-houses have lower response albeit stronger than that observed in Region of Waterloo.

CHAPTER 6: Final Thoughts & Opportunities for Further Research

As highlighted in the historical background to this report, development charges have become a ubiquitous feature of local government in Ontario that over the decades have become an indispensable financial lever for municipalities to guarantee proper service levels for new development while assuring land developers that a fair, transparent and predictable environment exists to support and encourage construction activities.

The findings of this study support the concept that the anticipated timing of DC rate increases can affect the timing during the year when developers choose to pursue and submit for building permits. This timing observation is important since when taken on a wide scale, can have far-ranging impacts on the level of funds that municipalities are able to capture for future infrastructure costs. A month or two difference in the timing of DC collection can potentially mean the difference in capturing or not capturing hundreds of thousands if not, millions of dollars in revenue that municipalities dedicate for servicing and infrastructure costs.

Regardless of the regional growth scenario, whether high, mid or low, it has been observed that DC rate increases have a greater impact on the amount of higher density development pursued and undertaken as higher density developments are seemingly more resilient and more resistant towards DC rate increases in terms of their level or rate of construction versus lower density forms of development such as single-detached and semi-detached units. Based on the observations contained in this report, DC rate increases have a greater dampening effect towards the amount of construction activity for lower density forms of development. These observations point to the idea that DC rate increases have a leading effect on higher density forms of development while they have a lagging effect on lower density forms of development. Given the scope of this study having examined just three out of eight of Ontario's regional municipalities, opportunities for further research include an expanded study to examine all eight regional

municipalities and potentially, looking at the impact, interface and construction response behaviour of regional development charges versus local development charges.

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