

# Economic Impact of Durham College On Durham Region & its Municipalities: A Comparative Analysis

**To:**

**Donna McFarlane**  
Vice-President, Communications, Marketing and External Relations  
**Durham College**

2069 Simcoe Street North  
Oshawa, ON  
L1H 7L7

EM: [donna.mcfarlane@durhamcollege.ca](mailto:donna.mcfarlane@durhamcollege.ca)

Tel: 905-721-2000 x 2952

Cell: 905-449-5775

Fax: 905-721-3155

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**Adventus  
Research  
Inc.**

35 Tanager Drive  
Guelph, ON, N1C 1B7  
519-824-7456  
[gs@adventusresearch.com](mailto:gs@adventusresearch.com)

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## 1.0 EXECUTIVE SUMMARY

### Introduction & Background

Durham College, founded in 1969, currently has 7,600 post-secondary full-time equivalent students as of November 2010, and is planning to grow over the next 5 years to about 10,000 full-time equivalent students, an increase of 32%. To accommodate this influx of students, Durham College is looking at the possibility of various locations to house the facilities. Future plans include building a new student services building, significant expansion of the Whitby campus facilities, and a possible smaller presence in the City of Pickering.

In the long-term, the increased student and infrastructure growth will have a dramatic positive impact on the local economy of Durham Region. These people will take public transit; support the local eating establishments and purchase goods and services at local retailers. In addition, some may choose to live in the immediate vicinity, thus paying rent and taxes.

**Durham College engaged Adventus Research to examine the economic impact of these developments at Durham College by using a comparative analysis of similar projects in other selected Ontario cities.**

This study was conducted in August through September 2010 by the consulting firm Adventus Research Inc. of Guelph, Ontario to examine the economic impact by comparing the impacts of similar projects in other selected Ontario cities - in particular, the University of Ontario Institute of Technology (2010), Laurier Brantford/Mohawk College (2005), and the WLU Faculty of Social Work (2004).

### Methodology

The calculation of the overall economic impact of monies forecast to be spent on Durham College over the five-year period 2011-2015 depends on a number of factors, which can be grouped into four principal areas. The first three (direct, indirect and induced) are quantitative impacts, and are measurable in dollars. The fourth area is the qualitative impacts, concentrating on improvements to various aspects of the quality of a community.

#### **Direct impacts**

These are the impacts that result from initial expenditures in the local economy (including private sector construction projects planned as a direct result of investments in the College):

- The costs of ongoing construction and renovation, with the associated wages and materials.
- The costs of operating expenditures.

#### **Indirect impacts**

These include the subsequent purchases by suppliers of services/materials to sustain the original initiative:

- Salaries paid or jobs created from producing supplies to be used in the construction or operation of the project.
- Spending of full-time and part-time students, faculty and staff (on and off campus).
- Spending of visitors to the institutions to attend functions on campus.

#### **Induced impacts**

These are the secondary economic effects that result when workers and suppliers in sectors stimulated by the direct and indirect expenditures spend their additional income on local consumer goods and services.

### Comparisons to Other Ontario-based University Economic Impact Studies

This analysis utilized similar methodology to that developed for other studies performed on universities in Durham Region (UOIT) Waterloo Region (WLU) and the City of Brantford (Laurier Brantford/Mohawk College). While there are some small differences between Durham Region and the other jurisdictions used for comparison purposes, it was determined that these differences are small and a comparative economic impact analysis is therefore valid.

### Multipliers Used

The "multiplier" is the technical concept used in economic impact modeling that captures the extent to which the initial spending generates a magnified amount of economic activity. A multiplier of 2, for example, means that new spending of \$1 million in the community will result in \$2 million of total additional income in the community. The use of an appropriate multiplier allows for the proper estimation of the full impact of an entity or of new spending in a community. Multipliers used for this study were consistent with previous economic impact studies conducted for universities in Southern Ontario.



## Results & Conclusions

The results and conclusions of this study of the economic impacts of Durham College are discussed first on a Durham Region-wide basis, and then individually for each of the eight Durham Region municipalities: Oshawa, Pickering, Whitby, Ajax, Clarington, Scugog, Uxbridge and Brock.

### Durham Region



With a population of 561,258 in 2006, Durham Region has experienced rapid growth over the past 35 years, growing at a compounded annual rate of 2.8% over the 1976-2006 period. Durham Region is forecast to continue to grow at a 2.2% annualized rate through 2031, reaching a forecast population of 960,000. With the growth rate of Durham Region exceeding the Ontario provincial average over the last few decades, it has grown from 3.0% of the province's population in 1976, to 4.6% by 2006.

### Construction Impacts

1. The estimated construction costs for Durham College over 2011-2015 will total \$ 51 -151 million. These expenditures will support a temporary increase in income in the province of \$ 61 - 180 million, **of which \$ 36 – 107 million will be retained within Durham Region.**
2. A total of 624 – 1,853 person years of employment are estimated to implement the proposed Durham College construction and/or renovation projects. Of this amount, an estimated 372 – 1,105 person years of employment, or **74 - 221 jobs, will be retained in Durham Region.**
3. In addition, governments will collect additional taxes at all levels. The federal government would collect \$ 20 - 60 million. The provincial government would collect \$ 8 - 23 million. **Local government would collect \$ 2 - 6 million** in fees, permits and increased revenues due to higher property values.

### Operating Impacts

4. The sustained economic benefits of the operations of Durham College are based on operating expenditures of \$ 861 - 894 million over 2011-2015. These expenditures in turn drive additional spending of \$ 1,438 – 1,493 million in the province, of which **\$ 1,145 – 1,189 million will be spent within Durham Region.**
5. In terms of jobs created, 16,637 – 17,270 person years of work, or an average of 3,327 – 3,454 jobs, will be sustained by the activities of Durham College in the province. Of this amount, 12,888 – 13,383 person years - an average of **2,578 – 2,677 jobs - will be from Durham Region.**
6. In terms of revenues collected for the levels of government, total operational impacts are estimated at \$ 173 - 179 million for the federal government, \$ 126 - 131 million for the provincial government and **\$ 33 - 35 million for the local government.**

### Total Impacts

7. Based on the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures, student non-university spending and visitors, the total average economic impact of Durham College through 2011-2015 in Durham Region is estimated **at \$ 255 - 294 million annually.** This is proportionally comparable to the impacts of other similar Ontario Colleges and Universities – Laurier Brantford/Mohawk College (Brantford - 2005) and the WLU Faculty of Social Work (Waterloo Region - 2004).

Within this estimate, the total **annual indirect economic impacts** of the presence of Durham College to selected sectors of the Durham Region economy are as follows:

* Restaurants	\$ 9.7 – 10.4 million
* Retail food industry	\$ 16.5 – 21.5 million
* Housing & rental accommodation	\$ 23.3 – 33.0 million
* Retail clothing	\$ 10.9 – 13.4 million
* Transportation (including autos & public transit)	\$ 19.3 – 26.0 million



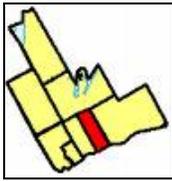
8. **Other impacts in economic status** for the citizens of Durham Region due to the ongoing presence of Durham College over 2011-2015 include the following:
- a) The **Education Premium** – An Ontario college diploma holder earns on average \$ 450,000 more over a career than a high school graduate.
  - b) **Economic Stimulus of Higher Education** – Businesses tend to locate closer to supplies of college graduates.
  - c) **Innovation Premium** – College and university research and development leads to spin-off companies, usually located in proximity to the university.
  - d) **Volunteerism Premium** – College students volunteer more, producing an economic benefit estimated at \$ 2.4 million in Durham Region annually.
  - e) **Philanthropic Premium** – College and university graduates tend to donate more often and in larger amounts than do high school graduates. The most recent estimated benefit<sup>1</sup> of this was \$ 537 million in 2010 dollars.
  - f) **Durham College Student Spending** – Estimated at \$ 49.9 million in Durham Region annually.
  - g) **Durham College Visitor Spending** – Estimated at \$ 6.0 million in Durham Region annually.
  - h) The impact of local **Alumni** – there are currently 23,000 Durham College alumni residing in Durham Region.

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<sup>1</sup> Enterprise Canada Research (2000), *The Economic Impact of Ontario's Universities*, *The Council of Ontario Universities*



## City of Oshawa



The City of Oshawa is the largest municipality in Durham Region, with a population of 141,590 in 2006, representing 25% of Durham Region’s population. Due to relatively slower forecasted growth rates of only 1.3% through 2031, Oshawa’s population of 197,000 in 2031 will represent an estimated 20.5% of the population, dropping it behind Pickering to become the second-largest municipality in Durham Region.

Oshawa will comprise an estimated 23.9% of Durham Region by population in 2011. However, due to the fact that Durham College is largely located within the Municipality of Oshawa, although economic benefits will accrue to the Region, due to proximity, Durham College benefits will be weighted in favour of Oshawa (and Whitby). Adventus estimates that Oshawa will receive a weighted average of **30% of the total benefits** accruing to Durham Region from Durham College from 2011-2015.

Following is the summary of the 2011-2015 Durham College impacts to the City of Oshawa.

### Construction Impacts

1. The estimated construction costs for Durham College over 2011 - 2015 will support a temporary increase in income **within Oshawa of \$ 11 - 32 million.**
2. A total of **112 - 331 person years of employment, or 22 - 66 jobs within Oshawa,** are estimated to implement the proposed Durham College construction and/or renovation projects.
3. In addition, the federal government would collect \$ 6 - 18 million, the provincial government \$ 2.4 – 6.9 million and the **local government would collect \$ 0.6 – 1.8 million** in fees, permits and increased revenues due to higher property values in Oshawa.

### Operating Impacts

4. The sustained economic benefits of the operations of Durham College will drive additional spending of **\$ 343 - 357 million** within Oshawa.
5. In terms of jobs created, 3,866 – 4,015 person years of work - an average of **773 - 803 jobs - will be created** within Oshawa.
6. In terms of revenues collected for the levels of government, the federal government would collect \$ 52 - 54 million, the provincial government \$ 38 - 39 million, and **the local government would collect \$ 10.0 – 10.5 million** within Oshawa.

### Total Impacts

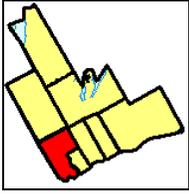
7. Based on the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures, student non-university spending and visitors, the total average economic impact of Durham College through 2011-2015 in Oshawa is estimated **at \$ 76.5 – 88.2 million annually.**

Within this estimate, the total **annual indirect economic impacts** of the presence of Durham College to selected sectors of the Oshawa economy are as follows:

* Restaurants	\$ 2.9 – 3.1 million
* Retail food industry	\$ 5.0 – 6.5 million
* Housing & rental accommodation	\$ 7.0 – 10.0 million
* Retail clothing	\$ 3.3 – 4.0 million
* Transportation (including autos & public transit)	\$ 5.8 – 7.8 million



## City of Pickering



The City of Pickering is the fourth largest municipality in Durham Region as of 2006, with a population of 87,838, representing about 16% of the total population of the Region. However, Pickering, which grew at a rate of 3.9% in the 1976-2006 time period, is expected to continue growing virtually at the same pace (3.8%) through 2031, becoming the largest municipality by population in Durham Region, with a forecast 225,670 people by 2031.

Pickering will comprise an estimated 17.1% of Durham Region by population in 2011. However, due to proximity, Durham College benefits will be somewhat weighted in favour of Oshawa and Whitby, and secondarily to Scugog and Uxbridge. Adventus estimates that Pickering will receive a weighted average of **13.9% of the total benefits** accruing to Durham Region from Durham College from 2011-2015.

Following is the summary of the 2011-2015 Durham College impacts to the City of Pickering.

### Construction Impacts

1. The estimated construction costs for Durham College over 2011-2015 will support a temporary increase in income **within Pickering of \$ 5.0 - 14.9 million.**
2. A total of 51 - 154 person years of employment, or **10 - 31 jobs within Pickering,** are estimated to implement the proposed Durham College construction and/or renovation projects.
3. In addition, the federal government would collect \$ 2.8 – 8.3 million, the provincial government \$ 1.1 – 3.2 million and the **local government would collect \$ 0.3 – 0.8 million** in fees, permits and increased revenues due to higher property values in Pickering.

### Operating Impacts

4. The sustained economic benefits of the operations of Durham College will drive additional spending of **\$ 159 - 165 million** within Pickering.
5. In terms of jobs created, 1,791 – 1,860 person years of work – representing an average of **358 - 372 jobs - will be created** within Pickering.
6. In terms of revenues collected for the levels of government, the federal government would collect \$ 24 - 25 million, the provincial government \$ 18 million, and **the local government would collect \$ 4.6 – 4.8 million** within Pickering.

### Total Impacts

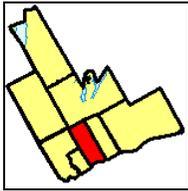
7. Based on the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures, student non-university spending and visitors, the total average economic impact of Durham College through 2011-2015 in Pickering is estimated **at \$ 35 - 41 million annually.**

Within this estimate, the total **annual indirect economic impacts** of the presence of Durham College to selected sectors of the Pickering economy are as follows:

* Restaurants	\$ 1.3 – 1.4 million
* Retail food industry	\$ 2.3 – 3.0 million
* Housing & rental accommodation	\$ 3.2 – 4.6 million
* Retail clothing	\$ 1.5 – 1.9 million
* Transportation (including autos & public transit)	\$ 2.7 – 3.6 million



## Town of Whitby



The Town of Whitby is the second-largest municipality in Durham Region as of 2006, with a population of 111,184, due to its strong average growth rate of 4.7% annually over the 1976-2006 period. Whitby's growth rate is expected to decrease to an average annual rate of 2.2% through 2031, towards a projected 2031 population of 192,860, making it Durham Region's third largest municipality by that time, after Pickering and Oshawa, with an estimated 20.1% of the Region's population.

Whitby will comprise an estimated 19.4% of Durham Region by population in 2011. However, due to proximity, Durham College benefits will be weighted somewhat in favour of Whitby (and Oshawa). Adventus estimates that Whitby will receive a weighted average of **22.0% of the total benefits** accruing to Durham Region from Durham College from 2011-2015.

Following is the summary of the 2011-2015 Durham College impacts to the Town of Whitby.

### Construction Impacts

1. The estimated construction costs for Durham College over 2011-2015 will support a temporary increase in income **within Whitby of \$ 7.9 – 23.5 million.**
2. A total of 82 - 243 person years of employment, or **16 - 49 jobs within Whitby**, are estimated to implement the proposed Durham College construction and/or renovation projects.
3. In addition, the federal government would collect \$ 4.4 – 13.2 million, the provincial government \$ 1.8 – 5.1 million and the **local government would collect \$ 0.4 – 1.3 million** in fees, permits and increased revenues due to higher property values in Whitby.

### Operating Impacts

4. The sustained economic benefits of the operations of Durham College will drive additional spending of **\$ 252 - 262 million** within Whitby.
5. In terms of jobs created, 2,835 – 2,944 person years of work - an average of **567 - 589 jobs - will be created** within Whitby.
6. In terms of revenues collected for the levels of government, the federal government would collect \$ 38 - 39 million, the provincial government \$ 28 - 29 million, and **the local government would collect \$ 7.3 – 7.7 million** within Whitby.

### Total Impacts

7. Based on the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures, student non-university spending and visitors, the total average economic impact of Durham College through 2011-2015 in Whitby is estimated **at \$ 56 - 65 million annually.**

Within this estimate, the total **annual indirect economic impacts** of the presence of Durham College to selected sectors of the Whitby economy are as follows:

* Restaurants	\$ 2.1 – 2.3 million
* Retail food industry	\$ 3.6 - 4.7 million
* Housing & rental accommodation	\$ 5.1 – 7.3 million
* Retail clothing	\$ 2.4 – 2.9 million
* Transportation (including autos & public transit)	\$ 4.2 – 5.7 million



## Town of Ajax



The Town of Ajax grew at the fastest rate of any Durham Region municipality in the 1976-2006 period, at an annualized rate of 5.0%, to become the third-largest municipality by population by 2006, at 90,167. However, its growth rate is forecast to drop significantly through 2031 to an annualized 1.7%, becoming Durham Region's fifth-largest municipality by 2031 with a population of 137,670 – representing 14.3% of the Region's population.

Ajax will comprise an estimated 19.4% of Durham Region by population in 2011. However, due to proximity, Durham College benefits will be weighted somewhat in favour of Oshawa, Whitby, and secondarily to Uxbridge and Scugog. Adventus estimates that Ajax will receive a weighted average of **13.4% of the total benefits** accruing to Durham Region from Durham College from 2011 - 2015.

Following is the summary of the 2011-2015 Durham College impacts to the Town of Ajax.

### Construction Impacts

1. The estimated construction costs for Durham College over 2011 - 2015 will support a temporary increase in income **within Ajax of \$ 4.8 – 14.3 million.**
2. A total of 50 - 148 person years of employment, or **10 - 30 jobs within Ajax,** are estimated to implement the proposed Durham College construction and/or renovation projects.
3. In addition, the federal government would collect \$ 2.7 – 8.0 million, the provincial government \$ 1.1 – 3.1 million and the **local government would collect \$ 0.3 – 0.8 million** in fees, permits and increased revenues due to higher property values in Ajax.

### Operating Impacts

4. The sustained economic benefits of the operations of Durham College will drive additional spending of **\$ 153 – 159 million** within Ajax.
5. In terms of jobs created, 1,726 – 1,793 person years of work - an average of **345 - 359 jobs - will be created** within Ajax.
6. In terms of revenues collected for the levels of government, the federal government would collect \$ 23.2 – 24.0 million, the provincial government \$16.9 – 17.6 million, and **the local government would collect \$ 4.4 – 4.7 million** within Ajax.

### Total Impacts

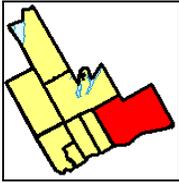
7. Based on the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures, student non-university spending and visitors, the total average economic impact of Durham College through 2011-2015 in Ajax is estimated **at \$ 34.1 – 39.4 million annually.**

Within this estimate, the total **annual indirect economic impacts** of the presence of Durham College to selected sectors of the Ajax economy are as follows:

* Restaurants	\$ 1.3 – 1.4 million
* Retail food industry	\$ 2.2 – 2.9 million
* Housing & rental accommodation	\$ 3.1 – 4.4 million
* Retail clothing	\$ 1.5 – 1.8 million
* Transportation (including autos & public transit)	\$ 2.6 – 3.5 million



## Municipality of Clarington



The Municipality of Clarington, which includes the communities of Bowmanville and Newcastle, which grew at 3.0% annually from 1976 through 2006 to become Durham Region's fifth-largest municipality with a population of 77,820, is forecast to continue to grow at nearly the same rate through 2031, growing to 140,340, and surpassing Ajax to become Durham's fourth largest municipality, with 14.6% of the Region's population.

Clarington will comprise an estimated 13.7% of Durham Region by population in 2011. However, due to proximity, Durham College benefits will be weighted somewhat in favour of Oshawa and Whitby (and secondarily to Uxbridge and Scugog). Adventus estimates that Clarington will receive a weighted average of **10.7% of the total benefits** accruing to Durham Region from Durham College from 2011 - 2015.

Following is the summary of the 2011-2015 Durham College impacts to the Municipality of Clarington.

### Construction Impacts

1. The estimated construction costs for Durham College over 2011 - 2015 will support a temporary increase in income **within Clarington of \$ 3.9 – 11.4 million.**
2. A total of 40 - 118 person years of employment, or **8 - 24 jobs within Clarington**, are estimated to implement the proposed Durham College construction and/or renovation projects.
3. In addition, the federal government would collect \$ 2.1 – 6.4 million, the provincial government \$ 0.9 – 2.5 million and the **local government would collect \$ 0.2 – 0.6 million** in fees, permits and increased revenues due to higher property values in Clarington.

### Operating Impacts

4. The sustained economic benefits of the operations of Durham College will drive additional spending of **\$ 123 - 127 million** within Clarington.
5. In terms of jobs created, 1,379 – 1,432 person years of work - an average of **276 - 286 jobs - will be created** within Clarington.
6. In terms of revenues collected for the levels of government, the federal government would collect \$18.5 – 19.2 million, the provincial government \$13.5 – 14.0 million, and **the local government would collect \$ 3.5 – 3.7 million** within Clarington.

### Total Impacts

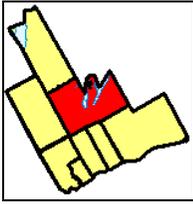
7. Based on the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures, student non-university spending and visitors, the total average economic impact of Durham College through 2011-2015 in Clarington is estimated **at \$ 27.3 – 31.5 million annually.**

Within this estimate, the total **annual indirect economic impacts** of the presence of Durham College to selected sectors of the Clarington economy are as follows:

* Restaurants	\$ 1.0 – 1.1 million
* Retail food industry	\$ 1.8 – 2.3 million
* Housing & rental accommodation	\$ 2.5 – 3.5 million
* Retail clothing	\$ 1.2 – 1.4 million
* Transportation (including autos & public transit)	\$ 2.1 – 2.8 million



## Township of Scugog



The Township of Scugog, which includes the community of Port Perry, is one of three more rural and significantly smaller (in population) municipalities in Durham Region. From 1976 through 2006, it grew at an annualized rate of 2.0% to reach a population of 21,511. It is forecast to grow at a 0.6% rate through 2031, reaching a population of 25,390, which will make it the seventh-largest municipality in Durham Region, with a 2.6% share of the population.

Scugog Township will comprise an estimated 3.5% of Durham Region by population in 2011. However, due to proximity, Durham College benefits will be weighted somewhat in favour of Oshawa and Whitby, and secondarily to Uxbridge and Scugog. Adventus estimates that Scugog will therefore receive a weighted average of **4.5% of the total benefits** accruing to Durham Region from Durham College from 2011-2015.

Following is the summary of the 2011-2015 Durham College impacts to the Township of Scugog.

### Construction Impacts

1. The estimated construction costs for Durham College over 2011-2015 will support a temporary increase in income **within Scugog of \$1.6 – 4.8 million.**
2. A total of 17 - 50 person years of employment, or **3 - 10 jobs within Scugog**, are estimated to implement the proposed Durham College construction and/or renovation projects.
3. In addition, the federal government would collect \$ 0.9 – 2.7 million, the provincial government \$ 0.4 – 1.0 million and the **local government would collect \$ 0.1 – 0.3 million** in fees, permits and increased revenues due to higher property values in Scugog.

### Operating Impacts

4. The sustained economic benefits of the operations of Durham College will drive additional spending of **\$ 51.5 – 53.5 million** within Scugog.
5. In terms of jobs created, 580 - 602 person years of work - an average of **116 -120 jobs - will be created** within Scugog.
6. In terms of revenues collected for the levels of government, the federal government would collect \$ 7.8 – 8.1 million, the provincial government \$ 5.7 – 5.9 million, and **the local government would collect \$ 1.5 – 1.6 million** within Scugog.

### Total Impacts

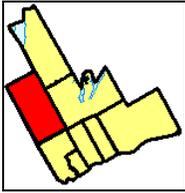
7. Based on the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures, student non-university spending and visitors, the total average economic impact of Durham College through 2011-2015 in Scugog is estimated **at \$ 11.5 – 13.2 million annually.**

Within this estimate, the total **annual indirect economic impacts** of the presence of Durham College to selected sectors of the Scugog economy are as follows:

* Restaurants	\$ 0.4 – 0.5 million
* Retail food industry	\$ 0.7 – 1.0 million
* Housing & rental accommodation	\$ 1.0 – 1.5 million
* Retail clothing	\$ 0.5 – 0.6 million
* Transportation (including autos & public transit)	\$ 0.9 – 1.2 million



## Township of Uxbridge



The Township of Uxbridge, is one of the three more rural and significantly smaller (in population) municipalities in Durham Region. From 1976 through 2006, it grew at an annualized rate of 1.9% to reach a population of 19,169. It is forecast to grow at a 1.3% rate through 2031, reaching a population of 26,965, which will make it the sixth-largest municipality in Durham Region, with a 2.8% share of the population.

Uxbridge Township will comprise an estimated 3.2% of Durham Region by population in 2011. However, due to proximity, Durham College benefits will be weighted somewhat in favour of Oshawa and Whitby, and secondarily to Uxbridge and Scugog. Adventus estimates that Uxbridge will receive a weighted average of **4.0% of the total benefits** accruing to Durham Region from Durham College from 2011 - 2015.

Following is the summary of the 2011 - 2015 Durham College impacts to the Township of Uxbridge.

### Construction Impacts

1. The estimated construction costs for Durham College over 2011-2015 will support a temporary increase in income **within Uxbridge of \$ 1.4 – 4.3 million.**
2. A total of 15 - 44 person years of employment, or **3 - 9 jobs within Uxbridge**, are estimated to implement the proposed Durham College construction and/or renovation projects.
3. In addition, the federal government would collect \$ 0.8 – 2.4 million, the provincial government \$ 0.3 – 0.9 million and the **local government would collect \$ 0.1 – 0.2 million** in fees, permits and increased revenues due to higher property values in Uxbridge.

### Operating Impacts

4. The sustained economic benefits of the operations of Durham College will drive additional spending of **\$ 45.8 – 47.6 million within Uxbridge.**
5. In terms of jobs created, 516 - 535 person years of work - an average of **103 - 107 jobs - will be created within Uxbridge.**
6. In terms of revenues collected for the levels of government, the federal government would collect \$ 6.9 – 7.2 million, the provincial government \$ 5.0 – 5.2 million, and **the local government would collect \$ 1.3 – 1.4 million within Uxbridge.**

### Total Impacts

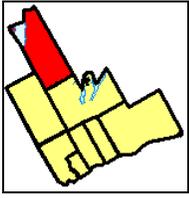
7. Based on the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures, student non-university spending and visitors, the total average economic impact of Durham College through 2011 - 2015 in Uxbridge is estimated **at \$ 10.2 – 11.8 million annually.**

Within this estimate, the total **annual indirect economic impacts** of the presence of Durham College to selected sectors of the Uxbridge economy are as follows:

* Restaurants	\$ 0.4 million
* Retail food industry	\$ 0.7– 0.9 million
* Housing & rental accommodation	\$ 0.9 – 1.3 million
* Retail clothing	\$ 0.4 – 0.5 million
* Transportation (including autos & public transit)	\$ 0.8 – 1.0 million



## Township of Brock



The Township of Brock, which includes the communities of Beaverton and Cannington, is one of the three more rural and significantly smaller (in population) municipalities in Durham Region. From 1976 through 2006, it grew at an annualized rate of 1.0% to reach a population of 11,979. It is forecast to grow at a 0.6% rate through 2031, reaching a population of 14,015, which will make it the seventh-largest (and smallest by population) municipality in Durham Region, with a 1.5% share of the population.

Brock Township will comprise an estimated 1.9% of Durham Region by population in 2011. However, due to proximity, Durham College benefits will be weighted somewhat in favour of Oshawa and Whitby (and secondarily to Scugog and Uxbridge). Adventus estimates that Brock will receive a weighted average of **1.5% of the total benefits** accruing to Durham Region from Durham College from 2011 - 2015.

Following is the summary of the 2011 - 2015 Durham College impacts to the Township of Brock.

### Construction Impacts

1. The estimated construction costs for Durham College over 2011 - 2015 will support a temporary increase in income **within Brock of \$ 0.5 – 1.6 million.**
2. A total of 6 - 17 person years of employment, or **1 - 3 jobs within Brock**, are estimated to implement the proposed Durham College construction and/or renovation projects.
3. In addition, the federal government would collect \$ 0.3 – 0.9 million, the provincial government \$ 0.1 – 0.3 million and the **local government would collect \$ 0.03 – 0.1 million** in fees, permits and increased revenues due to higher property values in Brock.

### Operating Impacts

4. The sustained economic benefits of the operations of Durham College will drive additional spending of **\$ 17.2 – 17.8 million** within Brock.
5. In terms of jobs created, 193 - 201 person years of work - an average of **39 - 40 jobs - will be created** within Brock.
6. In terms of revenues collected for the levels of government, the federal government would collect \$ 2.6 – 2.7 million, the provincial government \$ 1.9 – 2.0 million, and **the local government would collect \$ 0.5 million** within Brock.

### Total Impacts

7. Based on the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures, student non-university spending and visitors, the total average economic impact of Durham College through 2011-2015 in Brock is estimated **at \$ 3.8 – 4.4 million annually.**

Within this estimate, the total **annual indirect economic impacts** of the presence of Durham College to selected sectors of the Brock economy are as follows:

* Restaurants	\$ 0.1 – 0.2 million
* Retail food industry	\$ 0.2 – 0.3 million
* Housing & rental accommodation	\$ 0.3 – 0.5 million
* Retail clothing	\$ 0.2 million
* Transportation (including autos & public transit)	\$ 0.3 – 0.4 million



## 2. BACKGROUND & METHODOLOGY

### 2.1 History & Background

Durham College, founded in 1967, currently has approximately 7,600 post-secondary full-time equivalent students as of November 2010, and is planning to grow over the next five years to approximately 10,000 full-time equivalent students, an increase of 32%.

To accommodate this influx of students Durham College is looking at the possibility of various locations to house the facilities. Future plans include building a new student services building, significant expansion of the Whitby campus facilities, and a possible smaller presence in the City of Pickering.

In the long-term, the increased student and infrastructure growth will have a dramatic positive impact on the local economy of Durham Region. These people will take public transit; support the local eating establishments and purchase goods and services at local retailers. In addition, some may choose to live in the immediate vicinity, thus paying rent and taxes.

### 2.2 Objective

The purpose of this project is to examine the economic impact of these developments at Durham College by examining the comparative impacts of similar projects in other selected Ontario cities, and based on their experience, determine the below items outlined in the scope of work:

### 2.3 Scope of Work

This study encompasses the following components:

#### 1. Comparisons to other similar sized cities showing economic and non-economic factors affected by universities.

In the overall approach of this study, Adventus compares Durham College to similar situations and Adventus projects conducted in Durham Region (UOIT), Kitchener (Wilfrid Laurier University) and Brantford (Laurier Brantford and Mohawk College).

Demographic analysis for all sections of this report (except #6) compares Durham, Kitchener and Brantford information and maps them into an analysis (as listed below) including modeling and forecasting economic impacts separately for Durham Region and its eight Municipalities:

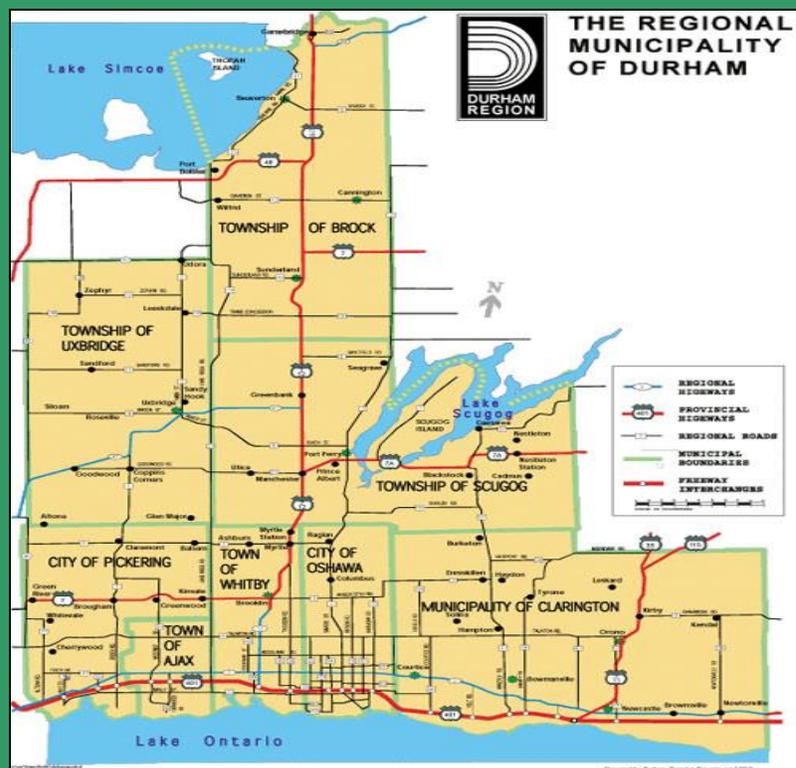
1. Durham Region - as a whole
2. City of Oshawa
3. City of Pickering
4. Town of Whitby
5. Town of Ajax
6. Municipality of Clarington
7. Township of Scugog
8. Township of Uxbridge
9. Township of Brock

#### 2. Implications of economic change for the Durham Region due to the creation and growth of Durham College. For example, are businesses likely to increase or decrease, and will the service mix likely change? What is likely to be the regional "portrait" in about twenty years (i.e. 2031)?

Again, Adventus took a comparative approach, utilizing the information and analysis obtained in the Brantford, Kitchener and UOIT projects.

- 3. Estimation of the likely impact of change in the economic status of individuals within the Region.** Adventus estimated the incremental economic benefit to individuals due to the anticipated growth of Durham College.
- 4. Estimation of the likely impact on the employment picture in Durham Region.** For example, how many jobs have been/will be created or supported by the college and what percentage would be of Oshawa's total employed labour force? Adventus estimated the impact on local employment by reviewing similar data collected in Durham, Brantford and Kitchener projects, and cross referencing and scaling this information against available regional demographic data.
- 5. Estimating how the growth will affect the college's buying power in Durham Region.** (A specific analysis was done on the initial direct cash flow arising from local expenditures of the college, its faculty and staff, students and visitors). Adventus modeled the growth in the college's buying power, based on a comparative analysis of similar calculations performed in Brantford and Kitchener.
- 5. Recommendations** are made coming out of the experience of other cities on how this information can apply to Durham College. Adventus reviewed the experiences of other population centres in similar situations (Durham Region, Metropolitan Brantford and Waterloo Region) to identify relevant recommendations for Durham College and Oshawa.

**Figure 1: The Eight Municipalities of Durham Region**



Source: Durham Regional Profile (2010)



## **2.4 Overview of Study Process**

### **Orientation**

The project was initiated with an orientation session with the Durham College team. The client was given the opportunity to further discuss the project, and review expectations and timelines. Also, the client was given the opportunity to suggest relevant sources of secondary information and primary interviews.

### **Information Collection – Secondary**

The next step was to collect secondary information as necessary (i.e. information already published from other sources) as it relates to benchmarking data on the economic and social impact of the establishment of campuses of post-secondary educational institutions in cities similar to Oshawa in size and/or geographical proximity.

For a list of secondary sources reviewed and/or referenced in this study, please see the Bibliography in section 5.1.

### **Economic Impact Modelling**

Economic impact modelling consists of benchmarking of the comparative Durham Region/Durham College data across relevant Brantford and Kitchener economic and social statistics, with the appropriate analyses and extrapolations to yield an estimate of the economic impacts of Durham College. This is primarily accomplished through standard economic impact modelling, using accepted multipliers and methodologies obtained through similar recent studies, including work performed recently by Adventus Research Inc.

For further information on the economic modelling methodology and assumptions used in this study, please see section 2.5 and 3.1.

### **Analysis and Reporting**

All information was collected and analysed and a written report has been provided to the client within 7 weeks after project commissioning. Subsequent to the issuing of the report, a review meeting shall be held between Adventus and Durham College to discuss the report. During the course of the study, Adventus liaised regularly with the client.



## 2.5 Methodology: Economic Impact Modelling - Factors Affected by Universities

*Based on this analysis and on previous work by Adventus Research on the impacts of post-secondary institutions in Durham Region (UOIT), Brantford (Laurier Brantford and Mohawk College) and Waterloo Region (WLU), we note that the following issues are relevant to the discussion of the economic and non-economic factors affected by colleges and universities.*

Although a university or college is primarily an educational institution, it is also an economic entity. It hires faculty and staff, pays wages and salaries and purchases a variety of goods and services from outside of the university. The incomes earned by those employed by the university/college and those employed by suppliers to the university/college are spent (to a large extent) back in the community, creating further rounds of economic activity. As well, students and visitors create economic activity that ripples through the local economy and generates additional activity in turn.

The total economic impact of an institution is not limited to its direct expenditures. New spending always generates a series of “rounds” of economic activity, the sum total of which is greater than the initial spending amount. For instance, if a college or university engages in a new capital project and spends \$1 million, that amount flows to all of the inputs into the project: architectural services, services for machinery and, mainly, labour services to the people that work on the project. Those payments become, in turn, the income of those who receive it. That income gets distributed several ways. Some of it is taxed away at the source and some of it is saved. But much of it is spent on goods and services. And a small amount leaves the local community when people buy goods from outside sellers or when they travel; a process called “leakage”.

The “**multiplier**” is the technical concept that captures the extent to which the initial spending generates a magnified amount of economic activity. A multiplier of 2, for example, means that new spending of \$1 million in the community will result in \$2 million of total additional income in the community. ***The use of an appropriate multiplier allows for proper estimation of the full impact of an entity or a new spending project in a community.***

A major Canadian post-secondary economic impact study was conducted by McMaster University in 1992<sup>2</sup>. Using an input-output model, the province-wide impacts of university spending were examined and it was found that Ontario Universities as a whole were responsible for a total of \$8.3 Billion in the provincial economy, and a total of 182,000 jobs.

It was also noted that the “value – added” by colleges and universities is high in comparison with other industries, and multipliers are also high, and ranged between 2.15 and 2.4. Nevertheless, the local impacts of university expenditures are “typically consistent and significant. Their non-cyclical pattern shields the local economies and sectors dependant on these expenditures from wide swings characteristic of market-oriented economies and regions with limited economic bases.” More recently, the PricewaterhouseCoopers study conducted for the University of Waterloo in 2001 utilized an overall economic multiplier of 2.35 province-wide and 1.96 for Waterloo Region specifically.

It is also important to remember that the economic impacts of any development are almost never contained within the boundaries of a single municipality. If even one employee lives outside of the municipality, some of the economic benefits will leak beyond the municipal boundaries. For this reason, it is necessary to estimate the proportion of employment and spending that will occur within a given municipality in order to accurately represent what the impact will be.

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<sup>2</sup> Kubursi, A., **The Economic Impact of University Expenditures**, McMaster University, 1992



The following figure summarizes some relatively recent published economic multiplier – total GDP impact information found in recent studies. The Universities selected reflect a range of sizes and regions of institutions across Canada.

**Figure 2**  
**Sustainable Economic Impact Estimates of Some Universities across Canada & Derivation of Multipliers**

University/College	University Expenditure (\$ mil/year)	Multiplier / Impact Ratio (\$ x 1\$ Expenditure)	Total GDP Impact (\$ mil/year)
University of New Brunswick	\$ 173 (00)	1.68 (Province-wide)	\$ 291
University of British Columbia	\$ 806 (98)	1.30 (Province-wide)	\$ 1046
Lakehead University	\$ 72 (98)	2.15 (Province-wide)	\$ 155
University of Windsor	\$ 139 (98)	2.15 (Province-wide)	\$ 299
University of Waterloo	\$ 314 (99)	2.34 (Province-wide)	\$ 735
		1.96 (Waterloo Region)	\$ 615
Wilfrid Laurier University	\$ 92 (98)	2.34 (Province-wide)	\$ 216
		1.96 (Waterloo Region)	\$ 180

*Sources: Council of Ontario Universities Study (2001), Adventus Research*

### Review of Overall Economic Impact Derivation

The calculation of the overall economic impact of monies forecast to be spent on Durham College over the 2011 - 2015 period depends on a number of factors, which can be grouped into four principal areas. The first three (direct, indirect and induced) are quantitative impacts, and are measurable in dollars. The fourth area is the qualitative impacts, concentrating on improvements to various aspects of the quality of a community, and is not usually measured in dollars.

#### Direct impacts

These are the impacts that result from initial expenditures in the local economy (including private sector construction projects planned as a direct result of investments in the College):

- ❑ The costs of ongoing construction and renovation, with the associated wages and materials.
- ❑ The costs of operating expenditures, including:
  - ❑ Salaries (faculty & support staff),
  - ❑ Goods and services.

#### Indirect impacts

These include the subsequent purchases by suppliers of services and materials to sustain the original initiative:

- ❑ Salaries paid or jobs created from producing the supplies to be used in the construction or operation of the project.
- ❑ Spending of full-time and part-time students, faculty and staff (on and off campus):
  - ❑ Local student activity expenditures,
  - ❑ Consumer goods,

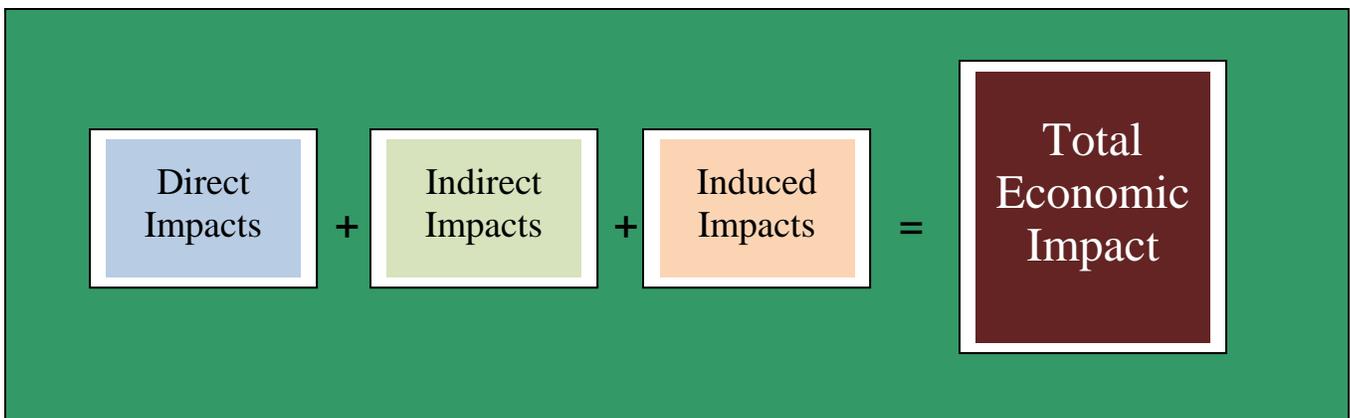


- Recreation,
- Entertainment,
- Housing,
- Miscellaneous goods and services.
  
- Spending of visitors to the institutions to attend functions on campus:
  - Open houses, tours, conferences sponsored by professional associations, societies etc., student and/or faculty events, academic conferences, sporting and cultural events, etc.

### Induced impacts

These are the secondary economic effects that result when workers and suppliers in sectors stimulated by the direct and indirect expenditures spend their additional income on local consumer goods and services:

**Figure 3: Total Economic Impact**



Source: Government of Ontario (2010)

### Qualitative Factors

- Urban revitalization issues
  - Reclaiming derelict or declining buildings and areas,
  - Integrating new buildings with the architectural character of the downtown core,
  - Strengthening pedestrian-friendly neighbourhoods with a mix of activities within walking distance of homes,
  - Expanded entertainment facilities,
  - Buildings not suitable for commercial use that can be used as academic space.
- Business & economic growth issues
  - With respect to local business – have initiatives had impact on the growth and/or sustainability of your company?
- Social issues / Volunteerism
  - Student/staff involvement in charitable activities,
  - Increase in volunteer pool available,
  - High levels of participation in charities, fund raising events and volunteer work,
  - Community involvements, activities and donations.
- Graduate Rates
  - Student graduate rates: Example - How many 1<sup>st</sup> year students complete, withdraw, transfer out to another college or university?



In addition, following are some definitions to assist in the interpretation of the results.

***Initial expenditures***

- The amount of expenditures directly made by the operators of the facility.

***Value Added***

- The net output generated by initial expenditures, typically the sum of wages, rent, interest and profits in addition to indirect business taxes and depreciation minus subsidies.

***Employment***

- The total person-years in full time equivalent jobs, generated by the facility and its sustaining activities.

***Taxes***

- An estimate of the various taxes, including income taxes, HST, liquor, tobacco, etc., each linked with the level of government receiving it.

***Imports***

- The goods and services acquired from outside the province to sustain the activities of the facility and its visitors (i.e. the leakage from the province).

***Multipliers***

- The summary measures representing the division of the total impacts (direct, indirect and induced) by the initial expenditures.



## 3.0 REPORT FINDINGS

### 3.1 Community Profiles – An Overview Comparison

In the overall approach of this study, Adventus Research calculates and models the economic impacts of Durham College using standard economic modelling methodologies utilizing appropriate economic multipliers (see section 3.2), and also compares the impact of Durham College to previous Adventus Research projects on other Ontario-based post-secondary situations, particularly to Durham Region (UOIT – 2010), Waterloo Region (Faculty of Social Work – 2004) and the Brantford – Census Metropolitan Area (Laurier Brantford and Mohawk College – 2005).

Therefore, to set the stage for the analysis and derive some important quantitative benchmarks for use in the regional and municipality calculations that follow in the analysis, section 3.1 of this report provides a quantitative overview of the communities of Durham Region and the communities compared in this analysis, specifically comparing Durham College/Durham Region with UOIT/Durham Region, WLU/Waterloo Region and Laurier-Brantford/Brantford.

#### 3.1.1 Durham Region & Municipalities

In order to map the impact of Durham College into an analysis that includes modelling and economic impact assessments separately for overall Durham Region and its eight separate municipalities, the following figure summarizes the relevant demographic data for Durham Region, and is based on the 2006 Statistics Canada Community Profiles and the 2009 Durham Regional Profile.

**Figure 4**  
**Durham Region & Its Eight Municipalities: Overall Demographic Data**

Municipality	Ave. Annual Growth 1976-2006	Population in 2006	Population in 2016 (Forecast)	Population in 2031 (Forecast)	Ave. Annual Growth 2006-2031	Share of Population in 2031
City of Oshawa	0.9%	141,590	165,390	197,000	1.3%	20.5%
City of Pickering	3.9%	87,838	141,125	225,670	3.8%	23.6%
Town of Whitby	4.7%	111,184	140,625	192,860	2.2%	20.1%
Town of Ajax	5.0%	90,167	126,325	137,670	1.7%	14.3%
Municipality of Clarington	3.0%	77,820	97,050	140,340	2.4%	14.6%
Township of Scugog	2.0%	21,511	23,250	25,390	0.6%	2.6%
Township of Uxbridge	1.9%	19,169	22,545	26,965	1.3%	2.8%
Township of Brock	1.0%	11,979	12,650	14,015	0.6%	1.5%
<b>Durham Region</b>	<b>2.8%</b>	<b>561,258</b>	<b>729,000</b>	<b>960,000</b>	<b>2.2%</b>	<b>100%</b>

Source: Statistics Canada & Durham Regional Profile (2009)



Over the past 30 years, the total population of each municipality in Durham Region has increased by varying degrees.

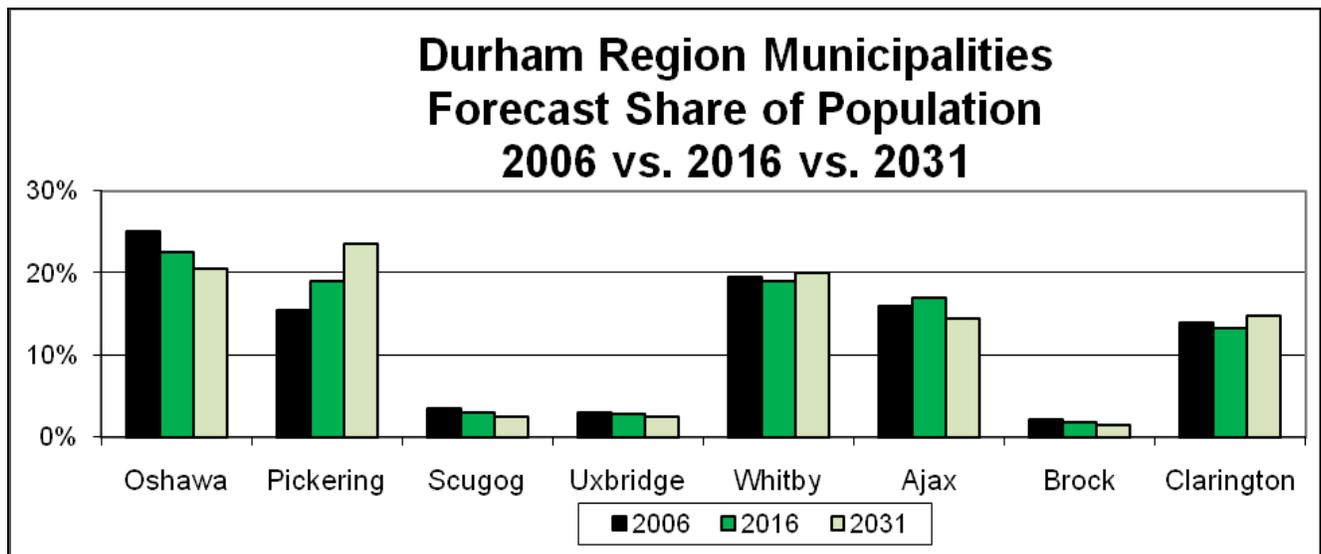
The population of Ajax more than quadrupled between 1976 (20,774) and 2006 (90,167), while Whitby almost quadrupled from 28,173 (1976) to 111,184 (2006). Pickering and Clarington experienced large increases in total population between 1976 and 2006, while the northern Townships of Brock, Scugog and Uxbridge grew more modestly. Oshawa experienced the smallest percentage increase in total population over the past 30 years, but maintained the largest overall population within the Region between 1976 (107,023) and 2006 (141,590). Also, it is important to note that Durham Region is growing faster than the overall population of Ontario, growing from 3.0% of the province's population in 1976 to 4.6% by 2006.<sup>3</sup>

Looking forward to 2031, the overall average growth rate of Durham Region is expected to fall slightly to 2.2% annually, off from the 2.8% average of the 1976-2006 period. Pickering is expected to be the municipality forecast to have the highest rate of growth, growing at 3.8% annually, virtually the same rate as during the 1976-2006 period. On a percentage basis, Clarington is expected to have the second-highest growth rate in Durham Region, at 2.4% annually.

The following figure examines the changing share of population of Durham Region from 2006 census through the 2031 forecast, showing:

- The future growth of share of population of Pickering,
- The relative decline of share of population of Oshawa,
- The relative stability of the shares of population of Scugog, Uxbridge, Whitby, Brock and Clarington.

**Figure 5**



Source: Durham Regional Profile (2009)

<sup>3</sup> Durham Regional Profile, page 1-6



### 3.1.2 Some Comparisons – Durham Region vs. Waterloo Region & Brantford

For comparison purposes, Durham Region is larger in population, faster-growing and more affluent than either Waterloo Region or the Census Metropolitan Area (CMA) of Brantford.

Durham Region is significantly more affluent (+24.7%) in terms of household income than the provincial average, whereas Waterloo Region is marginally more affluent (+6.7%), and Brantford CMA is marginally less affluent (-6.3%) than Ontario as a whole. Durham Region is also expected to grow at a much faster rate over the next 25 years (2.2% annually) than the provincial average (1.2%), and faster than either Waterloo Region (1.7%) or Brantford (1.6%).

By age, citizens of Durham Region are younger than those of Brantford or Ontario as a whole, but slightly older than those of Waterloo Region. By occupational profile, citizens of Durham Region most closely resemble that of Ontario overall, with a greater percentage of the workforce working in business services and a smaller percentage working in manufacturing than in either Waterloo Region or Brantford CMA.

**Figure 6**  
**Comparative Profiles: Durham Region vs. Waterloo Region & Brantford CMA**

Selected Statistics	Durham Region	Waterloo Region	Metropolitan Brantford	Ontario
<b>Population – Selected Statistics</b>				
Median age of population - 2006	37.7	36.4	39.6	39.0
2001 Population	506,901	438,515	118,086	11,410,046
2006 Population	561,258	478,121	124,607	12,160,282
2011 Population - Forecast	644,000	548,000	138,000	13,349,100
2031 Population – Forecast	960,000	729,000	184,000	16,366,200
Annual Forecast Growth Rate: 06-31	2.2%	1.7%	1.6%	1.2%
<b>Income – Selected Statistics</b>				
Median Earnings – Persons 15 & over: worked full year, full time (\$ 2005)	\$ 49,823	\$ 44,281	\$ 41,741	\$ 44,748
Median Income – All Private Households (\$ 2005)	\$ 75,397	\$ 64,522	\$ 56,624	\$ 60,455
<b>Education – Selected Statistics</b>				
Total Population – 15-64	384,765	328,735	82,610	8,263,165
Population 15-64 attaining university degree – Bachelor & above	61,500 16.0%	64,520 19.6%	10,010 12.1%	1,843,455 22.3%
<b>Labour Force – Selected Statistics</b>				
Total labour force: 15 yrs & over - 2006	308,895	269,265	66,660	6,473,730
Business Services	58,945 19.1%	44,485 16.5%	10,915 16.4%	1,274,345 19.7%
Manufacturing	40,535 13.1%	60,375 22.4%	14,210 21.3%	899,670 13.9%
Retail	36,605 11.9%	29,450 10.9%	6,960 10.4%	720,235 11.1%
Educational Services	20,335 6.6%	20,515 7.6%	4,045 6.1%	433,485 6.7%

Sources: Statistics Canada (2010)

In summary, while there are some small differences between Durham Region and the two other jurisdictions used for comparison purposes in this study, Waterloo Region and the Brantford CMA, these **differences are relatively small and a comparative economic impact analysis is therefore valid.**

## 3.2 Durham College – Public & Private Construction & Operations Estimates: 2011-2015

### Introduction

An overall quantitative economic impact analysis of Durham College follows in this section and is provided with low, medium and high estimates, in cumulative five-year format. The low and high estimates use the lowest and highest estimates for enrolment and construction. The medium estimate uses the midpoints of the high and low estimates.

### Calculation of Impacts – Public & Private Construction

In order to calculate the impacts of construction, all significant construction projects must be incorporated into the analysis. The following figure outlines all current construction projects underway, planned or proposed for Durham College, including private developments. It does not include projects that are considered as complete by January 1, 2011.

**Figure 7**  
**Durham College**  
**Current or Planned Significant Public & Private Construction: 2011-2015**

	Project	Public or Private	Purpose	Cost \$Millions	Year Completed	Commitment Status
1	Student Services Building	Public	Student service space & classrooms	\$16.00 M	2011	Committed
2	George Willey Building renovations	Public	Student service space & classrooms	4.0 M	2011	Committed
3	Whitby Campus Expansion – Phase 2	Public	Classrooms and workshops	12.00 M	2011	Committed
4	Whitby Campus renovations	Public	Student service, space, library, classrooms	2.00 M	2011	Committed
5	Food Services renovations	Public	Food service locations	2.00 M	2010	Committed
6	Summer facelift	Public	General renovations	10.00 M	2010-15	Committed (\$ 2M/year)
7	Whitby – Phase 3	Public	Classroom and labs	15.00 M	2012	Likely
8	Simcoe Building	Public	Classroom and labs	65.00 M	2014	Likely
9	Deferred maintenance	Public	Renovations and repairs	5.00 M	2010-2015	Committed (\$ 1M/year)
10	Oshawa South Wing addition	Public	Classroom and labs	20.00 M	2015	Possible
<b>Total Value: Public &amp; Private Construction: 2011 - 2015</b>				<b>\$ 51-151 M</b>		

*Source: Durham College Planning & Budget Documents*

As can be seen from the above figure, there is a relatively wide variance between the low and high construction estimates for Durham College for the 2011-2015 period. The primary reason for the variance in estimates is based on the three larger likely and/or possible proposed projects (Whitby – Phase 3, Simcoe and Oshawa South Wing addition), which could move forward in the 2014-2015 period, but which are not committed projects at present.



The Durham College direct expenditures information in figure 8 is summarized in order to model the economic impacts of a) construction and/or renovation, and b) operating expenditures of Durham College for the 2011-2015 period.

The operating expenditures (salaries and goods and services) forecast is based on the most recent budget data (2010), pro-rated to match the forecast growth in the student body (first line of figure 8), both supplied by Durham College.

**Figure 8**  
**Durham College – Direct Impacts of Construction & Operations**  
**Estimates for 2011-2015**

Item	2011	2012	2013	2014	2015	Spending 5 Year Total
<b>Student Forecast</b>						
Post Secondary Domestic FTEs <sup>4</sup>	7,693	8,146	8,763	9,427	10,141	
Post Secondary International FTEs	225	281	352	439	550	
Total FTEs	7,918	8,427	9,115	9,866	10,691	Ave = 9,203
<b>Direct Impacts</b>						
Construction / Renovation	\$ 39M	\$3 - 18M	\$ 3 M	\$ 3 - 68M	\$3 - 23M	\$51.0-151.0 M
<b>Total Forecast Expenditures – Range of Estimated Construction Costs</b>						<b>\$ 51 - 151 M</b>
<b>Operating Expenditures<sup>5</sup></b>						
Staff/Faculty Salaries	\$ 114.0 M	\$ 570.0 M				
Existing Infrastructure <sup>6</sup>	\$ 40.2 M	\$ 48.3 M	\$ 57.3 M	\$ 67.2 M	\$ 78.2 M	\$ 291.2 M
Expansion Plans <sup>7</sup> 2011-2015	\$ 4.7 M	\$ 5.6 M	\$ 5.7M	\$ 7.9M	\$ 8.8M	\$ 32.7 M
<b>Total Forecast Expenditures – Range of Estimated Operating Costs</b>						<b>\$ 861.2 – 893.9 M</b>

*Sources: Durham College, Adventus Research estimates*

As can be seen from the above figure, while the estimated costs of construction are between \$ 51 and 151 million (with a midpoint calculation of \$ 101 million), this number is only approximately one-eighth the size of the forecasted operating costs of Durham College over the 2011-2015 period, at between \$ 861.2 and 893.9 million.

<sup>4</sup> FTE = Full-time equivalent students

<sup>5</sup> From Durham College Business Plan – includes staff and faculty salaries, averaged out over five years

<sup>6</sup> Includes amortization

<sup>7</sup> The expansion plan forecast is based on extrapolating the existing expansion plan operating budget based on a ratio of the additional square footage requirements for the three possible projects (Whitby – Phase 3, Simcoe & Oshawa South Wing addition)



### 3.3 Economic & Employment Impacts for Durham Region

In this section, we examine the implications of economic change for Durham Region. For example:

- What is the likely portrait of the region in about 20 years? (i.e. in 2031).
- We also estimate the impact on local employment in Durham Region, both in aggregate and for each of the eight municipalities.
- For example, how many jobs have been/will be created or supported by Durham College and what percentage would this represent of the workforce?

#### 3.3.1 Direct, Indirect & Induced Impacts: 2011-2015 – Durham Region

##### Construction Impacts – Durham Region

The construction impact model calculations for Durham College in figure 9 are based on the initial estimated range of expenditures, as summarized in figure 8, of between \$ 51 million and \$ 151 million (together with a midpoint calculation of \$ 101 million).

They are based on multipliers used in the UOIT (2010), and also in the Laurier Brantford / Mohawk College (2005) and University of Waterloo Faculty of Social Work (2004) economic impact studies, which we determined in section 3.1.2 was valid to utilize in Durham Region.

Those models in turn utilized methodology from the recent (2003) Econometric business model for the Region of Waterloo. Specifically, the multipliers used in this study are<sup>8</sup>:

- For **construction impacts**<sup>9</sup>: Ontario multiplier = 1.19; Local multiplier = 0.71
- For **ongoing operating impacts**: Ontario multiplier = 1.67; Local multiplier = 1.33

In addition, job creation is based on an average wage of \$87,000<sup>10</sup> per direct construction job and an average total wage of \$64,700<sup>11</sup>.

<sup>8</sup> These operating multipliers are somewhat more conservative than most, but not all, of the operating multipliers displayed in Figure 2.

<sup>9</sup> Construction impacts are estimated differently than operating impacts, and multipliers are usually significantly lower.

<sup>10</sup> Based on Econometric model estimates of typical wages for these jobs & adjusted for inflation.

<sup>11</sup> Both of these wage levels are relatively high, and would contribute to raising the overall wage levels in the area.



**Figure 9**  
**Durham College: Construction Impacts – 2011-2015**

Initial Expenditure		Ontario			Durham Region		
		Low \$ 51 M	Medium \$ 101.0 M	High \$ 151 M	Low \$ 51 M	Medium \$ 101 M	High \$ 151 M
<b>Value Added</b>	Multiplier	1.19	1.19	1.19	0.71	0.71	0.71
	Direct	\$ 23.7 M	\$ 46.8 M	\$ 70.1 M	\$ 14.1 M	\$ 28.0 M	\$ 41.8 M
	Indirect/Induced	\$ 37.0 M	\$ 73.3 M	\$ 109.6 M	\$ 22.1 M	\$ 43.7 M	\$ 65.4 M
	Total	\$ 60.7 M	\$ 120.1 M	\$ 179.7 M	\$ 36.2 M	\$ 71.7 M	\$ 107.2 M
<b>Wages, Salaries + G &amp; A</b>	Direct	\$ 18.5 M	\$ 36.6 M	\$ 54.8 M	\$ 11.0 M	\$ 21.9 M	\$ 32.6 M
	Indirect/Induced	\$ 21.9 M	43.5 M	\$ 65.1 M	\$ 13.1 M	\$ 25.9 M	\$ 38.9 M
	Total	\$ 40.4 M	\$ 80.1 M	\$ 119.9 M	\$ 24.1 M	\$ 47.8 M	\$ 71.5 M
<b>Employment</b> (person years)	Direct	213	421	630	126	252	375
	Indirect/Induced	411	817	1,223	246	487	730
	Total	624	1,238	1,853	372	739	1,105
<b>Taxes</b>	Federal	\$ 10.5 M	\$ 20.8 M	\$ 31.1 M	\$ 6.3 M	\$ 12.3 M	\$ 18.4 M
	Provincial	\$ 7.7 M	\$ 15.2 M	\$ 22.7 M	\$ 4.6 M	\$ 9.0 M	\$ 13.5 M
	Local	\$ 2.0 M	\$ 4.0 M	\$ 6.0 M	\$ 1.2 M	\$ 2.4 M	\$ 3.5 M
	Total	\$ 20.2 M	\$ 40.0 M	\$ 59.8 M	\$ 12.1 M	\$ 23.7 M	\$ 35.4 M

*Sources: Adventus Research, Durham College*

As has been stated earlier in the analysis, estimated construction and renovation costs for Durham College over the 2011-2015 timeframe will likely total \$ 51 - 151 million. These expenditures will support a temporary increase in income in the province of \$ 60.7 – 179.7 million, of which **\$ 36.2 – 107.2 million** would be retained within Durham Region.

Based on an estimate of an average wage of \$87,000<sup>12</sup> per direct construction job and an average total wage of \$64,700<sup>13</sup>, a total of 624 – 1,853 person years of employment are estimated to implement the proposed projects. Of this amount, an estimated **372 – 1,105 person-years** of employment will come from Durham Region, representing a 5-year average of **74 – 221 jobs**.

In addition, the government will collect taxes at all levels. The federal government would collect \$20.2 – 59.8 million in Ontario, primarily from personal income taxes and HST. The provincial government would collect \$ 7.7-22.7 million. Local government would collect \$ 2.0-6.0 million, in fees, permits and increased revenues due to higher property values.

In terms of employment, the 74 - 221 Durham Region direct and indirect construction and renovation-related jobs estimated to implement the proposed Durham College projects represents **approximately 0.02 – 0.07% of the estimated total Durham Region labour force** of 310,690<sup>14</sup> in 2011.

<sup>12</sup> Based on Econometric model estimates of typical wages for these jobs & adjusted for inflation.

<sup>13</sup> Both of these wage levels are relatively high, and would contribute to raising the overall wage levels in the area.

<sup>14</sup> Based on **Durham Region: 2006 Regional Profile**, and extrapolated to 2011.

## Operations Impacts – Durham Region

The sustainable economic impact estimate of the operations of Durham College following in figure 10 is based on staffing and operational cost data supplied by Durham College<sup>15</sup>, and is presented in cumulative five-year form.<sup>16</sup>

**Figure 10**  
**Durham College: Impacts of Operations – 2011-2015**

Initial Expenditure		Ontario			Durham Region		
		Low \$ 861.2 M	Medium \$ 877.6 M	High \$ 893.9 M	Low \$ 861.2 M	Medium \$ 877.6 M	High \$ 893.9 M
<b>Value Added</b>	Multiplier	1.67	1.67	1.67	1.33	1.33	1.33
	Direct	\$ 747.9 M	\$ 762.1 M	\$ 776.3 M	\$ 595.6 M	\$ 606.9 M	\$ 618.2 M
	Indirect/Induced	\$ 690.3 M	\$ 703.5 M	\$ 716.5 M	\$ 549.4 M	\$ 560.3 M	\$ 570.7 M
	Total	\$ 1,438.2 M	\$ 1,465.6 M	\$1,492.8 M	\$ 1,145.0 M	\$ 1,167.2 M	\$ 1,188.9 M
<b>Wages, Salaries + G &amp; A</b>	Direct	\$ 530.4 M	\$ 540.6 M	\$ 550.6 M	\$ 530.4 M	\$ 540.6 M	\$ 550.6 M
	Indirect/Induced	\$ 428.8 M	\$ 436.9 M	\$ 445.1 M	\$ 282.6 M	\$ 288.0 M	\$ 293.5 M
	Total	\$ 959.2 M	\$ 977.5 M	\$ 995.7 M	\$ 813.0 M	\$ 828.6 M	\$ 844.1 M
<b>Employment</b> (person years) <sup>17</sup>	Direct	5,642	5,751	5,857	5,642	5,751	5,857
	Indirect/Induced	10,995	11,202	11,413	7,246	7,385	7,526
	Total	16,637	16,953	17,270	12,888	13,136	13,383
<b>Taxes</b>	Federal	\$ 249.0 M	\$ 251.4 M	\$ 256.2 M	\$ 172.6 M	\$ 176.1 M	\$ 179.3 M
	Provincial	\$ 182.0 M	\$ 183.7 M	\$ 187.1 M	\$ 126.2 M	\$ 128.7 M	\$ 131.0 M
	Local	\$ 47.9 M	\$ 48.4 M	\$ 49.3 M	\$ 33.2 M	\$ 33.8 M	\$ 34.5 M
	Total	\$ 478.9 M	\$ 483.5 M	\$ 492.6 M	\$ 332.0 M	\$ 338.6 M	\$ 344.8 M

Sources: Adventus Research, Durham College

### Operational Impacts on the Region of Durham

The sustained economic benefits of the operations of Durham College are based on the direct operating expenditures of \$ 861.2 – \$ 893.9 million over the 2011 – 2015 period. This in turn drives expenditures of \$ 1,438.2 – 1,492.8 million in the Province, of which **\$ 1,145.0 – 1,188.9 million will be spent within Durham Region.**

In terms of jobs created, according to this model, an estimated 16,637 – 17,270 person-years of work, or an average of 3,327 – 3,454 jobs, will be sustained by the activities of Durham College in the province. Of this amount, 12,888 – 13,383 person-years - an average of **2,578 – 2,677 jobs** - will be **from Durham Region.** For the purpose of this model, direct full-time jobs are estimated at \$94,000 each and indirect and induced full-time job wages are estimated at \$ 39,000 each.

In terms of revenues derived for the levels of government within Durham Region, total operational impacts are estimated at \$ 172.6 – 179.3 million for the federal government, \$ 126.2 – 131.0 million for the provincial government, and \$ 33.2 – 34.5 million for the local government.

In terms of employment, the 2,578 – 2,677 Durham jobs estimated to be sustained by the activities of Durham College **represents 0.08-0.09% of the estimated total Durham Region labour force of 310,690 in 2011.**

<sup>15</sup> Durham College Business Plan

<sup>16</sup> Multipliers used in these calculations and others in this study are the same used in the 2005 Laurier Brantford study, and are considered conservative.

<sup>17</sup> Average salary calculated at \$ 39,000, direct salaries at \$ 94,000



### 3.3.2 Direct, Indirect & Induced Impacts: 2011-2015 – By Municipality

In order to understand the complete and detailed nature of the impacts of Durham College on Durham Region, it is necessary to examine these impacts on a municipality-by-municipality basis, as follows:

#### Economic Impacts of Durham College – By Municipality

The following figure 11 illustrates the economic impact in the Municipalities of Durham Region due to the planned and proposed construction and renovation projects and general operations of Durham College over the 2011-2015 period.

In this model, we estimate that, on a municipality basis, the economic benefits of Durham College will accrue somewhat more significantly to the City of Oshawa than to the other municipalities of Durham Region, due to the physical location of most of Durham College being within the City of Oshawa itself.

**Figure 11:  
Economic Impact Due to Durham College  
By Municipality**

Municipality	Population in 2011	Share of Regional Population in 2011	Weighted Share of Durham College Economic Impact <sup>18</sup>	Economic Impact Due to <u>Construction</u> Projects of Durham College 2011-2015 (\$ Millions)	Economic Impact Due to <u>Operations</u> of Durham College 2011-2015 (\$ Millions)	Total Economic Impact Due to <u>Construction &amp; Operations</u> of Durham College 2011-2015 (\$ Millions)
City of Oshawa	153,585	23.9%	30.0%	\$ 10.9 – 32.2	\$ 343.5 – 356.7	\$ 354.5 – 388.8
City of Pickering	110,085	17.1%	13.9%	\$ 5.0 – 14.9	\$ 159.1 – 165.2	\$ 164.1 – 180.1
Town of Whitby	124,990	19.4%	22.0%	\$ 8.0 – 23.6	\$ 251.9 – 261.6	\$ 259.9 – 285.2
Town of Ajax	111,355	17.3%	13.4%	\$ 4.9 – 14.4	\$ 153.4 – 159.3	\$ 158.3 – 173.7
Municipality of Clarington	87,980	13.7%	10.7%	\$ 3.9 – 11.5	\$ 122.5 – 127.2	\$ 126.4 – 138.7
Township of Scugog	22,585	3.5%	4.5%	\$ 1.6 – 4.8	\$ 51.5 – 53.5	\$ 53.1 – 58.3
Township of Uxbridge	20,940	3.2%	4.0%	\$ 1.5 – 4.3	\$ 45.8 – 47.6	\$ 47.3 – 51.9
Township of Brock	12,385	1.9%	1.5%	\$ 0.5 – 1.6	\$ 17.1 – 17.8	\$ 17.6 – 19.4
<b>Durham Region Overall</b>	<b>643,905</b>	<b>100%</b>	<b>100%</b>	<b>\$ 36.2 – 107.2</b>	<b>\$ 1,145.0–1,188.9</b>	<b>\$1,181.2-1,296.1</b>

Sources: Durham College, Statistics Canada, Adventus Research

<sup>18</sup> Due to the fact that Durham College is located primarily within the Municipality of Oshawa and the Town of Whitby, and to a lesser extent in Uxbridge and Port Perry (Scugog), although economic benefits will accrue to the Region, due to college proximity such benefits will be weighted primarily in favour of Oshawa and Whitby. The model calculations of this weighting are displayed in this column.



## Jobs Created Due to Durham College – By Municipality

The following figure 12 illustrates the jobs created in the Municipalities of Durham Region due to the planned and proposed construction and renovation projects and general operations of Durham College over the 2011-2015 period.

**Figure 12:  
Jobs Created in Durham Region Due to Durham College  
By Municipality**

Municipality	Population in 2011	Share of Regional Population in 2011	Weighted Share of Durham College Economic Impact <sup>19</sup>	Jobs Created Due to <u>Construction</u> Projects of Durham College (2011-2015)	Jobs Created Due to <u>Operations</u> of Durham College (2011-2015)	Total Jobs Created Due to <u>Construction &amp; Operations</u> of Durham College (2011-2015)
City of Oshawa	153,585	23.9%	30.0%	23 – 65	774 - 804	797 - 869
City of Pickering	110,085	17.1%	13.9%	10 – 31	358 - 372	368 - 403
Town of Whitby	124,990	19.4%	22.0%	16 – 49	567 - 589	583 - 638
Town of Ajax	111,355	17.3%	13.4%	10 – 30	345 - 359	355 - 389
Municipality of Clarington	87,980	13.7%	10.7%	8 – 24	276 - 286	284 - 310
Township of Scugog	22,585	3.5%	4.5%	3– 10	116 - 120	119 - 130
Township of Uxbridge	20,940	3.2%	4.0%	3 – 9	103 - 107	106 - 116
Township of Brock	12,385	1.9%	1.5%	1- 3	39 - 40	40 - 43
<b>Durham Region Overall</b>	<b>643,905</b>	<b>100%</b>	<b>100%</b>	<b>74 - 221</b>	<b>2,578 – 2,677</b>	<b>2,652 – 2,898</b>

Sources: Durham College, Statistics Canada, Adventus Research

From the previous two figures, it can be seen that although **30% of the total economic impact and job creation due to Durham College will be accrued to Oshawa directly** over the 2011-2015 period, all Durham Region municipalities will in fact receive a significant economic benefit, with the remaining **70% of the Durham Region economic impact of Durham College accruing to the seven Municipalities of Pickering, Whitby, Ajax, Clarington, Scugog, Uxbridge and Brock.**

<sup>19</sup> Due to the fact that Durham College is located primarily within the Municipality of Oshawa and the Town of Whitby, and to a lesser extent in Uxbridge and Port Perry (Scugog), although economic benefits will accrue to the Region, due to proximity such benefits will be weighted in favour of Oshawa. The model calculations of this weighting are displayed in this column.



## 3.4 Likely Impact on Economic Status of Individuals in Durham Region & Municipalities

### Introduction

In this section, we examine what the likely impacts of change of economic status of individuals within the region will be due to Durham College. Much of the discussion in this section of the report will be qualitative in nature. Apart from the direct and indirect economic benefits outlined in earlier sections of this report, there are other economic benefits that accrue to a local community based on the presence of a local university and/or college campus.

### The Education Premium – The Private & Public Payback of a College Diploma

Obtaining one or more college diplomas/university degrees is a good investment from the individuals' point of view. In other words, the higher earnings associated with a college diploma more than offset the individual's contribution to their education.

According to the Council of Ontario Universities Study (2001)<sup>20</sup>, over the average working lifetime of a person (approximately 45 years), the holder of a bachelor's degree will earn, before tax, an average of \$ 561,000 more in 2010 dollars<sup>21</sup> than an individual who has graduated from high school (an average of \$ 12,460 annually).

In terms of how Canadian college diplomas compare in this regard to universities, a University of Calgary study (2004) indicated that overall salaries, although lower overall than for university graduates, were higher than their high-school peers and about 80% of that of bachelors-level university graduates. **This translates into an average education premium of \$450,000 more in 2010 dollars – or an average of \$ 11,125 annually** (assuming a 40 year working career).

Clearly, if even only a small increment of graduates of Durham College chose to seek employment locally and begin their careers in Durham Region, there are obvious significant short and long-term benefits to the community based on this education premium. These individuals will have significantly more disposable income over the course of their careers, a large portion of which will be spent in their immediate community.

### The Economic Stimulus of Higher Education

The presence of college/university graduates in a community also stimulates economic activity by attracting businesses seeking to capitalize on the availability of its graduates.

In addition, a study conducted on the status of education in Waterloo Region recently determined that the supply of a skilled and motivated labour force is the principal determinant of economic prosperity in the region.<sup>22</sup> Individuals with a post-secondary degree are essential for the region's export-oriented, knowledge-based economy.

The "accreditation" role of the college/university potentially has the greatest impact. The signals provided to potential employers regarding certain qualities (e.g. ability to accomplish long-term objectives, ability to deal with administrative issues, attainment of a certain level of social skills, etc.) are quite valuable. Without post-secondary designations, the cost to local business of screening candidates would be significantly higher.

<sup>20</sup> Enterprise Canada Research (2000), *The Economic Impact of Ontario's Universities*, *The Council of Ontario Universities*, Pg. 28

<sup>21</sup> According to the Statistics Canada, the Consumer Price Index (CPI), which stood at 100 in 2002, was at 115.1 in January 2010.

<sup>22</sup> Smith, L., (1997), *Regional Municipality of Waterloo: Education in Waterloo*, Essential Economics Corporation



## The Innovation Premium – Economic Benefits of R & D & Spin off Companies

Estimating the economic impact associated with research and innovation emerging from colleges and universities is one of the most difficult factors to measure when attempting to capture the real rate of return on higher education.

Economic activity, which has its much of its origins in post-secondary-based innovation, may show up in a variety of ways. Some examples include: consulting activities by faculty members, new companies created as “spin-offs” from the original research, joint ventures between faculty and off-campus partners, and licensing of innovations to existing firms. Knowledge transfer also takes place as a result of individuals with innovative ideas and capabilities, moving from a college or university environment to a commercial setting where their ideas can be incorporated into product development. The most frequent technology transfer agent is the college or university graduate.

For comparison to a larger institution and the innovation premium, an analysis of the 1999 operating and capital expenditures of 30 University of Waterloo spin-off companies conducted for the PricewaterhouseCoopers study<sup>23</sup> determined that more than \$ 910 million in economic activity was generated within the province, and more than \$ 660 million for Waterloo Region.

It can be successfully argued that the same effect is also applicable to Ontario college graduates.

## The Volunteerism Premium – Additional Volunteer Hours

Data from the National Survey on Giving, Volunteering and Participating<sup>24</sup> reveals that while the total number of volunteer hours for an individual post-secondary graduate are less than that of a high school graduate (139 compared to 177), the participation rate is higher (49% compared to 29%). Therefore, the total number of volunteer hours is greater for the post-secondary group. If one assigns a modest hourly value to this additional volunteer contribution (Ontario minimum wage: \$9.50 per hour), this yields an incremental economic value to Ontario university volunteerism of about \$ 244 million in 2010 dollars.

Given that Durham College has about 1.0% of the enrolment of Ontario colleges and universities in 2010, this amounts to a regional benefit of **\$ 2.4 million annually** (in dollar equivalents).

According to the Council of Ontario Universities, the types of organizations that most benefit from volunteer work are recreational and social clubs (31% of all volunteer hours), social service organizations (20%), religious organizations (15%), health organizations (14%) and educational and research organizations (4%). The “other” category receives 16% of all volunteer hours.

## The Philanthropic Premium

According to a study by the Ontario Council of Universities<sup>25</sup>, university graduates donate to charitable institutions more frequently and at a significantly higher level than do high school graduates.

Although the quantitative information is dated (1998), the study indicated that university graduates donated \$ 420 million more than the equivalent donations would have been if they would have been high school graduates. Adjusted for inflation, this amounts to **\$ 537 million in 2010 dollars.**

This figure would likely be comparable for Ontario College graduates.

<sup>23</sup> PricewaterhouseCoopers (2001), **University of Waterloo: Regional Economic Benefits Study**, *U. of Waterloo*, pg. 30

<sup>24</sup> Enterprise Canada Research (2000), **The Economic Impact of Ontario’s Universities**, *The Council of Ontario Universities*, pg. 36

<sup>25</sup> Enterprise Canada Research (2000), **The Economic Impact of Ontario’s Universities**, *The Council of Ontario Universities*, pg. 35



## Student Spending

Student spending is another factor that impacts the economic status of individuals in Durham Region, and is discussed in detail in section 3.5. Many economic impact studies for individual universities include the estimated value of student spending in the host jurisdiction as one of the components of economic impact.<sup>26</sup> However, tuition fees and other ancillary costs are usually omitted, since they would be included on the revenue side of the calculations and would therefore be expended by the institution.

Except for expenditures such as textbooks and other educational supplies, a young person will have roughly equivalent living expenses whether or not they attend university. Therefore, most analyses do not factor personal student expenditures into calculations for returns to the province for higher education. The exception to this would be out-of-province students. However, on a more local level, there is a clear incremental economic impact to a region, when students from outside of the region enrol at a centre, or when a faculty is relocated to another centre.

## Visitor Spending

Visitor spending is another factor that impacts the economic status of individuals in Durham Region, and discussed in detail in section 3.5 – Figure 18. In summary, the following figure briefly summarizes some of the likely impacts in economic status of Durham College on the citizens of Durham Region:

**Figure 13**  
**Some Likely Impacts of Durham College on Economic Status of Individuals in Durham Region & Municipalities**

Factor	Benefit to Durham Region & Municipalities
<b>Education Premium</b>	<ul style="list-style-type: none"> <li>○ An Ontario college diploma holder earns on average <b>\$450,000</b> more over a career than a high school graduate.</li> </ul>
<b>Economic Stimulus of Higher Education</b>	<ul style="list-style-type: none"> <li>○ <b>Businesses tend to locate closer</b> to supplies of college and university graduates.</li> </ul>
<b>Innovation Premium</b>	<ul style="list-style-type: none"> <li>○ Research and development leads to <b>spin-off companies</b>, usually located in proximity to colleges and universities.</li> </ul>
<b>Volunteerism Premium</b>	<ul style="list-style-type: none"> <li>○ College student volunteerism produces an economic benefit estimated at <b>\$ 2.4 million</b> in Durham Region annually.</li> </ul>
<b>Philanthropic Premium</b>	<ul style="list-style-type: none"> <li>○ College and university graduates tend to <b>donate more often and in larger amounts</b> than do high school graduates.</li> <li>○ Estimated (1998) at \$ 537 province-wide in 2010 dollars.</li> </ul>
<b>Student Spending</b>	<ul style="list-style-type: none"> <li>○ Estimated at <b>\$ 49.0 million</b> in Durham Region annually (see Section 3.5).</li> </ul>
<b>Visitor Spending</b>	<ul style="list-style-type: none"> <li>○ Estimated at <b>\$ 6.0 million</b> in Durham Region annually (see Section 3.5).</li> </ul>
<b>Alumni in Durham Region</b>	<ul style="list-style-type: none"> <li>○ There are currently approximately <b>23,000</b> Durham College alumni residing within Durham Region.</li> </ul>

<sup>26</sup> Enterprise Canada Research (2000), *The Economic Impact of Ontario's Universities*, *The Council of Ontario Universities*, p. 16-17



### 3.5 How Growth will Affect Durham College's Buying Power

In this section, we will examine how the growth of Durham College will affect the college's buying power in Durham Region and its municipalities. A specific analysis is performed on the initial direct cash flow arising from local expenditures of the college, its faculty and staff, students and visitors.

#### 3.5.1 How Growth will Affect Durham College's Buying Power: Durham Region

The following figure 14 reviews the average estimated annual direct and indirect impacts of operations, students and visitors of Durham College over the 2011 – 2015 period, with low, medium and high estimates. The figures following (15-18) detail the base data and modelling assumptions used to calculate the estimates following in figure 14.

**Figure 14**  
**Review of Major Estimated Indirect Impacts of Durham College**  
**Average Annual Impacts to Durham Region: 2011-2015**

Average Annual Impacts	Summary of Spending Details	Indirect Impacts (\$ Millions)		
		Low	Medium	High
Full Time & Part Time Faculty & Staff	Restaurants	\$ 632,000	\$ 743,000	\$ 905,000
	Food	5,926,000	6,967,000	8,488,000
	Housing	11,459,000	13,472,000	16,411,000
	Clothing	2,952,000	3,470,000	4,228,000
	Transportation	7,814,000	9,187,000	11,191,000
	Other	38,897,000	35,360,000	29,495,000
	<b>Total Faculty &amp; Staff Spending</b>		<b>\$ 67,680,000</b>	<b>\$ 69,199,000</b>
Students	Restaurants	\$ 4,488,000	\$ 4,488,000	\$ 4,488,000
	Food	5,930,000	5,930,000	5,930,000
	Housing	3,239,000	3,239,000	3,239,000
	Clothing	4,942,000	4,942,000	4,942,000
	Transportation	5,930,000	5,930,000	5,930,000
	Other	25,389,000	25,389,000	25,389,000
	<b>Total Non-University Student Spending</b>		<b>\$ 49,918,000</b>	<b>\$ 49,918,000</b>
Construction Related Jobs	Restaurants	\$ 96,000	\$ 192,000	\$ 287,000
	Food	601,000	1,203,000	1,796,000
	Housing	1,163,000	2,326,000	3,474,000
	Clothing	299,000	599,000	895,000
	Transportation	793,000	1,586,000	2,369,000
	Other	1,784,000	3,566,000	5,323,000
	<b>Total Construction Job Spending</b>		<b>\$ 4,736,000</b>	<b>\$ 9,472,000</b>
Visitors	Restaurants	\$ 2,107,000	\$ 2,107,000	\$ 2,107,000
	Other Retail Spending	2,218,000	2,218,000	2,218,000
	Hotel Accommodations	1,663,000	1,663,000	1,663,000
	<b>Total Visitor Spending</b>		<b>\$ 5,988,000</b>	<b>\$ 5,988,000</b>
<b>Totals</b>	Restaurants	\$ 7,323,000	\$ 7,530,000	\$ 7,787,000
	Food	12,457,000	14,100,000	16,214,000
	Housing	17,524,000	20,700,000	24,787,000
	Clothing	8,193,000	9,011,000	10,065,000
	Transportation	14,537,000	16,703,000	19,490,000
	Other	68,288,000	66,533,000	62,425,000
	<b>Total Spending: All major sources</b>		<b>\$ 128,332,000</b>	<b>\$ 134,577,000</b>

*Sources: Durham College, Adventus Research estimates*



## Indirect Impacts: Faculty and Staff

With respect to Durham College faculty and staff expenditures, the primary analytical factor that needs to be considered is what percentage of the faculty is based locally in the Region of Durham.

Most expenditures, with the exception of some day-time expenditures like restaurants, will be made locally only by those faculty based in the region. Also, as in some other studies of this type, taxes, EI and CPP premiums are deemed to be outflows from the local region as well.

The following figure 15 thus estimates local indirect benefits to the community accruing from faculty spending in the region:

**Figure 15**  
**Durham College – Indirect Impacts of Faculty & Staff: 2011-2015**  
**Base Data & Assumptions**

Base Data / Assumption	Data – Staff Impacts		
	Low	Medium	High
Faculty Full-Time Equivalents (FTEs) <sup>27</sup> Average annual low, medium and high estimates 2011-2015	355	418	509
Staff Full-Time Equivalents (FTEs) Average annual low, medium and high estimates 2011-2015	374	439	535
Wages/Salaries: Annual Total 5-Year Average <sup>28</sup>	\$ 94,001,027	\$96,110,796	\$ 98,220,566
Percentage of Faculty located in Durham Region	80%		
Percentage of Staff located in Durham Region	80%		
Modelling Estimates			
Restaurants – 2.5 visits/week @ \$10 each for faculty & staff (8 months)	\$ 632,000	\$ 743,000	\$ 905,000
Food – Average 2010 Durham – per household = \$ 8,130 <sup>29</sup>	\$ 5,926,000	\$ 6,967,000	\$ 8,488,000
Shelter – Average 2010 Durham – per household = \$ 15,720 <sup>30</sup>	\$ 11,459,000	\$ 13,472,000	\$ 16,411,000
Clothing – Average 2010 Durham – per household = \$ 4,050	\$ 2,952,000	\$ 3,470,000	\$ 4,228,000
Transportation –Average 2010 Durham–per household = \$ 10,720	\$ 7,814,000	\$ 9,187,000	\$ 11,191,000
Other (including health, personal care, recreation, taxes)	\$ 38,897,000	\$ 35,360,000	\$ 29,495,000
<b>Total Annual Expenditures from Local Faculty/Staff<sup>31</sup></b>	<b>\$ 67,680,000</b>	<b>\$ 69,199,000</b>	<b>\$ 70,718,000</b>

*Sources: Durham College, Statistics Canada, Adventus Research estimates*

<sup>27</sup> Consisting of core, complimentary, definite-term and part-time faculty.

<sup>28</sup> Source: Durham College: Blended average, staff and faculty

<sup>29</sup> Statistics Canada: All household expenditure statistics except shelter are for Toronto CMA 2008 and adjusted for inflation. This assumes that each faculty member represents a primary family income. Calculations are for local faculty/staff only.

<sup>30</sup> Durham Regional Profile, page 3-19, adjusted for inflation

<sup>31</sup> Local wages are based on 80% of faculty and staff being local and 10% salary savings rate



## Indirect Impacts: Students (Non-University Expenditures)

If Durham College did not exist, most full-time students would attend other colleges or universities and take their spending with them. It is only the student's non-college spending that is relevant to the matter of local area impact.

The student's college expenditures on tuition fees, parking, room and board in college residences, etc. are part of the college's income and have already been counted.

**Figure 16**  
**Durham College – Indirect Impacts of Students: 2011-2015**  
**Base Data & Assumptions**

Base Data & Assumptions	Data			
<b>Average number of FTE students</b> – Undergraduate and graduate: 2011-2015	9,203 <sup>32</sup>			
<b>Percentage of students:</b> at home in Durham / Commuting to & from GTA / in residence / off-campus rental accommodation	59%	20%	10%	11%
<b>Commuter student</b> spending in local economy – including clothing, restaurants, entertainment <sup>33</sup>	\$ 3,240 over 8 months \$ 12/day			
<b>Local student</b> spending in local economy – including clothing, restaurants, entertainment <sup>34</sup>	\$ 5,400 over 8 months \$ 22/day			
<b>Students in Residence</b> spending in local economy – including clothing, restaurants, entertainment	\$ 4,800 over 8 months \$ 20/day			
<b>Students in non-university rental accommodation:</b> spending in local economy – including clothing, restaurants, entertainment	\$ 9,600 over 8 months \$ 40/day			
<b>Total average annual student spending =</b> # students x ((% commuter)(\$ spent by commuter students) + (% local)(\$ spent by local students) + (% residence)(\$ spent by residence students) + (% renting)(\$ spent by renting students))	\$ 5,963,000 (Commuters) + \$ 29,320,000 (Local) + \$ 4,417,000 (Residence) + \$ 9,718,000 (Rental) = \$ 49,418,000 total			
Estimates <sup>35</sup>				
<b>Restaurant Spending</b> (2 times/week \$7 each x 8 months)	\$ 4,488,000			
<b>Food</b> – Percentage of average Durham Spending = 12.2%	\$ 5,930,000			
<b>Clothing</b> – 10% of total (Average Durham spending = 5%)	\$ 4,942,000			
<b>Housing</b> – 11% of students off-campus @ 400/month	\$ 3,239,000			
<b>Transportation</b> – Average spending = 12%	\$ 5,930,000			
<b>Other</b>	\$ 25,389,000			
<b>Total</b>	<b>\$ 49,918,000</b>			

*Sources: Durham College, Statistics Canada, Adventus Research*

<sup>32</sup> From Durham College

<sup>33</sup> Adventus Research estimates, based on a 60% of spending of a local student in the local economy

<sup>34</sup> Source: Adventus Research: From Laurier Brantford study (originally from Statistics Canada), adjusted for inflation

<sup>35</sup> Source: Adventus Research: From Laurier Brantford study (originally from Statistics Canada), adjusted for inflation



## Indirect Impacts: Construction Job Expenditures

The following figure models the expenditures created within Durham Region annually by the 74-221 construction jobs that will be created to implement the proposed Durham College projects.

**Figure 17**  
**Durham College – Indirect Impacts of Construction Jobs: 2011-2015**  
**Base Data & Assumptions**

Base Data / Assumptions	Data - Construction Jobs		
	Low	Medium	High
Construction Jobs / Ave. per year Average annual low, medium & high estimates 2011-2015	74	148	221
Wages/Salaries: Annual Total 5-Year Average <sup>36</sup>	\$ 4,736,000	\$ 9,472,000	\$ 14,144,000
Modelling Estimates			
Restaurants – 2.5 visits/week @ \$10 each (12 months)	\$ 96,000	\$ 192,000	\$ 287,000
Food – Average 2010 Durham – per household = \$ 8,130 <sup>37</sup>	\$ 601,000	\$ 1,203,000	\$ 1,796,000
Shelter – Average 2010 Durham – per household = \$ 15,720 <sup>38</sup>	\$ 1,163,000	\$ 2,326,000	\$ 3,474,000
Clothing – Average 2010 Durham – per household = \$ 4,050	\$ 299,000	\$ 599,000	\$ 895,000
Transportation –Average 2010 Durham–per household = \$ 10,720	\$ 793,000	\$ 1,586,000	\$ 2,369,000
Other (including health, personal care, recreation, taxes)	\$ 1,784,000	\$ 3,566,000	\$ 5,323,000
<b>Total Expenditures from Construction-related personnel</b>	<b>\$ 4,736,000</b>	<b>\$ 9,472,000</b>	<b>\$ 14,144,000</b>

The economic impact of these jobs is relatively temporary (in comparison to the economic impacts of operating expenditures – which presumably will be ongoing beyond the 2011-2015 period), and will effectively cease shortly after the planned construction projects, upon which these impact estimates are made, are completed.

<sup>36</sup> Based on an estimated average total wage of \$ 64,700 (pg 17)

<sup>37</sup> Statistics Canada: All household expenditure statistics except shelter are for Toronto CMA 2008 and adjusted for inflation. This assumes that each faculty member represents a primary family income. Calculations are for local faculty/staff only.

<sup>38</sup> **Durham Regional Profile**, page 3-19, adjusted for inflation



## Indirect Impacts: Visitors

Colleges attract out-of-town students and other out-of-town visitors for attractions that include sporting events, theatrical, music or arts presentations, conferences and public lectures.

### Visitors to Durham College

Durham College hosts open houses, conferences and formal/informal tours of the campus on a regular basis, of which some 2010 baseline data is available. Also, we have conservatively estimated informal and unorganized visitors for all purposes to the Durham College campus for various meetings, seminars, cultural/athletic/other programs as well.

Based on some spending assumptions consistent with other Ontario college and university impact studies, figure 18 summarizes estimated annual average visitor spending for the 2011-2015 period, based on low, medium and high estimates.

**Figure 18**  
**Durham College**  
**Indirect Impact of Visitors: 2011-2015: Base Data & Assumptions**

Base Data Parameters	Data
2010 Student Population (FTE's)	7,447 people
2010 Open House and Tours	5,090 people
2010 – Unorganized and informal visitors (492 per day)	179,500 people
2010 ratio of total visitors/year to students	24.1 to 1
Average number of FTEs: 2011-2015	9,203 people
Annual visitor average (Average FTEs x 24.1)	221,800 people
Modelling Assumptions	
Percentage of visitors overnight (\$ 75/night & 2 meals @ \$ 20)	10%
Percentage of visitors that stay for at least 1 meal	75%
Average price per meal per visitor	\$ 10
Average other spending per visitor (incl. gas, parking, goods)	\$ 10
Total visitor restaurant spending: (.75 x 10 x 221,800) + (.1 x 20 x 221,800)	\$ 2,107,000
Total visitor other spending:	\$ 2,218,000
Total visitor accommodation spending:	\$ 1,663,000
<b>Total Annual Visitor Spending: Estimated</b>	<b>\$ 5,988,000</b>

*Sources: Durham College, Adventus Research*

From the assumptions in the preceding figure, we estimate the impact of visitors to Durham Region to be almost \$ 6 million annually. Given that the nature of visitors is to centre their visits on campus and the immediate campus vicinity, we estimate that, on a municipality basis, most of the Durham College visitor impact will be in Oshawa and secondarily, in Whitby.

### 3.5.2 How Growth will Affect Durham College Buying Power: by Durham Municipality

Figure 19 shows the breakdown, by municipality, of how the planned growth of Durham College will affect the college’s buying power in Durham Region and its municipalities, including the annual direct cash flow through the 2011- 2015 period, arising from local expenditures of the college, its faculty and staff, students and visitors.<sup>39</sup>

It should be noted that in regard to the modelled visitor impacts, that given that the nature of visitors is to centre their visits on campus and the immediate campus vicinity, we estimate that, on a municipality basis, most of the Durham College visitor impact will be in Oshawa, and secondarily in Whitby.

**Figure 19  
Durham College’s Buying Power in Durham Region: By Municipality  
Average Annual Impacts: 2011-2015**

Municipality	Population in 2011 % of Durham Weighted % of Economic Impact <sup>40</sup>	Category	Total Annual Faculty Spending (Millions)	Total Annual Student Spending (Millions)	Total Annual Construction Related (Millions)	Total Annual Durham College Visitor Spending (Millions)	Total Annual Spending/ Durham College Buying Power (Millions)
<b>City of Oshawa</b>	153,585 23.9% <b>30.0%</b>	Restaurants	\$ 0.2 – 0.3 M	\$ 1.4 M	\$ 0.0 – 0.1 M		\$ 3.2– 3.4 M
		Food	1.8 – 2.6 M	1.8 M	0.2 – 0.5 M		3.8 – 5.3 M
		Housing	3.5 – 4.9 M	1.0 M	0.4 – 1.1 M	1.3 M	6.2 – 8.3 M
		Clothing	0.9 – 1.2 M	1.5 M	0.1 – 0.3 M		2.5 – 3.0 M
		Transportation	2.3 – 3.4 M	1.8 M	0.2 – 0.7 M		4.3 – 5.9 M
		Other	11.9 – 9.1 M	7.6 M	0.5 – 1.6 M	1.7 M	21.7– 20.0 M
		<b>Total</b>		<b>\$ 20.6-21.5 M</b>	<b>\$ 15.1 M</b>	<b>\$ 1.4 -4.3 M</b>	<b>\$ 4.6 M</b>
<b>City of Pickering</b>	110,085 17.1% <b>13.9%</b>	Restaurants	\$ 0.1 – 0.1 M	\$ 0.6 M	\$ 0.0 – 0.0 M		\$ 0.7 – 0.7 M
		Food	0.8 – 1.2 M	0.8 M	0.1 – 0.2 M		1.7 – 2.2 M
		Housing	1.6 – 2.3 M	0.4 M	0.2 – 0.5 M		2.2 – 3.2 M
		Clothing	0.4 – 0.6 M	0.7 M	0.0 – 0.1 M		1.1 – 1.4 M
		Transportation	1.1 – 1.6 M	0.8 M	0.1 – 0.3 M		2.0 – 2.7 M
		Other	5.4 – 4.1 M	3.5 M	0.2 – 0.7 M		9.1 – 8.3 M
		<b>Total</b>		<b>\$ 9.4 – 9.9 M</b>	<b>\$ 6.9 M</b>	<b>\$ 0.6 – 1.8 M</b>	
<b>Town of Whitby</b>	124,990 19.4% <b>22.0%</b>	Restaurants	\$ 0.1 – 0.2 M	\$ 1.0 M	\$ 0.0 – 0.1 M	\$ 0.5 M	\$ 1.6 – 1.8 M
		Food	1.2 – 1.9 M	1.3 M	0.1 – 0.4 M		2.6 – 3.6 M
		Housing	2.5 – 3.6 M	0.7 M	0.3 – 0.8 M	0.4 M	3.9 – 5.5 M
		Clothing	0.6 – 0.9 M	1.1 M	0.1 – 0.2 M		1.8 – 2.2 M
		Transportation	1.7 – 2.5 M	1.3 M	0.2 – 0.5 M		3.2 – 4.3 M
		Other	8.8 – 6.7 M	5.6 M	0.4 – 1.2 M	0.5 M	15.3 – 14.0 M
		<b>Total</b>		<b>\$14.9–15.8 M</b>	<b>\$ 11.0 M</b>	<b>\$ 1.1 – 3.2 M</b>	<b>\$ 1.4 M</b>
<b>Town of Ajax</b>	111,355 17.3% <b>13.4%</b>	Restaurants	\$ 0.1 – 0.1 M	\$ 0.6 M	\$ 0.0 – 0.0 M		\$ 0.7 – 0.7 M
		Food	0.8 – 1.1 M	0.8 M	0.1 – 0.2 M		1.7 – 2.1 M
		Housing	1.5 – 2.2 M	0.4 M	0.2 – 0.5 M		2.1 – 3.1 M
		Clothing	0.4 – 0.6 M	0.7 M	0.0 – 0.1 M		1.1 – 1.4 M
		Transportation	1.0 – 1.5 M	0.8 M	0.1 – 0.3 M		1.9 – 2.6 M
		Other	5.2 – 4.0 M	3.4 M	0.2 – 0.7 M		8.8 – 8.1 M
		<b>Total</b>		<b>\$ 9.0 – 9.5 M</b>	<b>\$ 7.7 M</b>	<b>\$ 0.6 – 1.8 M</b>	

<sup>39</sup> Numbers may not add up due to rounding

<sup>40</sup> Due to the fact that Durham College is located within the Municipality of Oshawa, although economic benefits will accrue to the Region, due to proximity such benefits will be weighted in favour of Oshawa, and secondarily to Whitby. The model calculations of this weighting are displayed in this column.



Municipality	Population in 2011 % of Durham Weighted % of Economic Impact <sup>40</sup>	Category	Total Annual Faculty Spending (Millions)	Total Annual Student Spending (Millions)	Total Annual Construction Related (Millions)	Total Annual Durham College Visitor Spending (Millions)	Total Annual Spending/Durham College Buying Power (Millions)
<b>Municipality of Clarington</b>	87,980 13.7% 10.7%	Restaurants	\$ 0.1 – 0.1 M	\$ 0.5 M	\$ 0.0 – 0.0 M		\$ 0.6 – 0.6 M
		Food	0.6 – 0.8 M	0.6 M	0.1 – 0.2 M		1.3 – 1.6 M
		Housing	1.1 – 1.6 M	0.3 M	0.1 – 0.4 M		1.5 – 2.3 M
		Clothing	0.3 – 0.4 M	0.5 M	0.0 – 0.1 M		0.8 – 1.0 M
		Transportation	0.8 – 1.1 M	0.6 M	0.1 – 0.2 M		1.5 – 1.9 M
		Other	3.9 – 3.1 M	2.6 M	0.2 – 0.5 M		6.7 – 6.2 M
		<b>Total</b>	<b>\$ 6.8 – 7.1 M</b>	<b>\$ 4.1 M</b>	<b>\$ 0.5 – 1.4 M</b>		<b>\$ 11.4 -12.6 M</b>
<b>Township of Scugog</b>	22,585 3.5% 4.5%	Restaurants	\$ 0.0 – 0.0 M	\$ 0.2 M	\$ 0.0 – 0.0 M		\$ 0.2 – 0.2 M
		Food	0.3 – 0.4 M	0.3 M	0.1 – 0.1 M		0.7 – 0.8 M
		Housing	0.5 – 0.7 M	0.1 M	0.1 – 0.2 M		0.7 – 1.0 M
		Clothing	0.1 – 0.2 M	0.2 M	0.0 – 0.0 M		0.3 – 0.4 M
		Transportation	0.4 – 0.5 M	0.3 M	0.0 – 0.1 M		0.7 – 0.9 M
		Other	1.8 – 1.3 M	1.1 M	0.1 – 0.2 M		3.0 – 2.6 M
		<b>Total</b>	<b>\$ 3.1 – 3.1 M</b>	<b>\$ 2.2 M</b>	<b>\$ 0.3 – 0.6 M</b>		<b>\$ 5.6 – 5.9 M</b>
<b>Township of Uxbridge</b>	20,940 3.2% 4.0%	Restaurants	\$ 0.0 – 0.0 M	\$ 0.2 M	\$ 0.0 – 0.0 M		\$ 0.2 – 0.2 M
		Food	0.2 – 0.3 M	0.2 M	0.0 – 0.0 M		0.4 – 0.5 M
		Housing	0.5 – 0.7 M	0.1 M	0.0 – 0.1 M		0.6 – 0.9 M
		Clothing	0.1 – 0.2 M	0.2 M	0.0 – 0.0 M		0.3 – 0.4 M
		Transportation	0.3 – 0.4 M	0.2 M	0.0 – 0.1 M		0.5 – 0.7 M
		Other	1.6 – 1.2 M	1.0 M	0.1 – 0.2 M		2.7 – 2.4 M
		<b>Total</b>	<b>\$ 2.7– 3.4 M</b>	<b>\$ 1.9 M</b>	<b>\$ 0.1 – 0.4 M</b>		<b>\$ 4.7 – 5.1 M</b>
<b>Township of Brock</b>	12,385 1.9% 1.5%	Restaurants	\$ 0.0 – 0.0 M	\$ 0.1 M	\$ 0.0 – 0.0 M		\$ 0.1 M
		Food	0.1 – 0.1 M	0.1 M	0.0 – 0.0 M		0.2 M
		Housing	0.2 – 0.2 M	0.0 M	0.0 – 0.1 M		0.2 – 0.3 M
		Clothing	0.0 – 0.1 M	0.1 M	0.0 – 0.0 M		0.1 – 0.2 M
		Transportation	0.1 – 0.2 M	0.1 M	0.0 – 0.0 M		0.2 – 0.3 M
		Other	0.6 – 0.4 M	0.4 M	0.0 – 0.1 M		1.0 – 0.9 M
		<b>Total</b>	<b>\$ 1.0 -1.0 M</b>	<b>\$ 0.8 M</b>	<b>\$ 0.0 – 0.3 M</b>		<b>\$ 1.4 – 2.0 M</b>
<b>Durham Region Overall</b>	643,905 100% 100%	Restaurants	\$ 0.6 – 0.9 M	\$ 4.5 M	\$ 0.1 – 0.3 M	\$ 2.1 M	\$ 7.3 – 7.8 M
		Food	5.9 – 8.5 M	5.9 M	0.6 – 1.8 M		12.4 – 16.2 M
		Housing	11.5 – 16.4 M	3.2 M	1.2 – 3.5 M	1.7 M	17.5 – 24.8 M
		Clothing	3.0 – 4.2 M	4.9 M	0.3 – 0.9 M		8.2 – 10.1 M
		Transportation	7.8 – 11.2 M	5.9 M	0.8 – 2.4 M		14.5 – 19.5 M
		Other	38.9 – 29.5 M	25.4 M	1.8 – 5.3 M	2.2 M	68.3 – 62.4M
		<b>Total</b>	<b>\$67.7 – 70.7 M</b>	<b>\$ 49.9 M</b>	<b>\$4.7 – 14.1 M</b>	<b>\$ 6.0 M</b>	<b>\$ 128-141 M</b>

Sources: Durham College, Statistics Canada, Adventus Research

The modelling in the preceding figure of the economic impacts in the various Durham Region municipalities displays the calculations before multipliers. The municipal impacts including multipliers are displayed in the municipal economic impact profiles located in the Executive Summary.



## 4.0 CONCLUSIONS

### 4.1 Durham College Economic Impact Summary: 2011-2015: Durham Region

Figure 20 below summarizes the direct spending as well as the total economic impact of Durham College on the Durham Region economy by category for the 2011-2015 period, using low, medium and high capital construction, operating and indirect estimates.<sup>41</sup>

**Figure 20: Forecast Annual Average Economic Impact of Durham College on Durham Region: 2011-2015**

Category	Annual Spending			Multiplier	Total Annual Economic Impact		
	Low	Medium	High		Low	Medium	High
Capital Construction	\$ 10.2 M	\$ 20.2 M	\$ 30.2 M	0.71	\$ 7.2 M	\$ 14.3 M	\$ 21.4 M
Operating – General & Admin.	\$ 58.2 M	\$ 61.5 M	\$ 64.8 M	1.33	\$ 77.4 M	\$ 81.8 M	\$ 86.1 M
Faculty & Staff Expenditures	\$ 67.7 M	\$ 69.2 M	\$ 70.7 M	1.33	\$ 90.0 M	\$ 92.0 M	\$ 94.0 M
Student Non-college Spending	\$ 49.9 M	\$ 49.9 M	\$ 49.4 M	1.33	\$ 66.4 M	\$ 66.4 M	\$ 66.4 M
Visitor Spending	\$ 6.0 M	\$ 6.0 M	\$ 6.0 M	1.33	\$ 8.0 M	\$ 8.0 M	\$ 8.0 M
<b>Total</b>	<b>\$ 192.0 M</b>	<b>\$ 200.8 M</b>	<b>\$ 221.1 M</b>		<b>\$ 255.4 M</b>	<b>\$ 267.0 M</b>	<b>\$ 294.3 M</b>

#### Summary of All Economic Impacts of Durham College from 2011-2015:

Based on all the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures and visitors, the total average economic impact of Durham College through the 2011-2015 time period in Durham Region is estimated at **\$ 255 - 294 million annually**.<sup>42</sup> Within this estimate, the total annual economic impact of the presence of Durham College to the local Durham Region economy in some of the larger categories is estimated as follows:

* Restaurants	\$ 9.7 – 10.4 million
* Retail food industry	\$ 16.5 – 21.5 million
* Housing and rental accommodation	\$ 23.3 – 33.0 million
* Retail clothing	\$ 10.9 – 13.4 million
* Transportation	\$ 19.3 – 26.0 million

This is an estimate of the total economic impact of Durham College on the economy of the Region of Durham, and is also an assessment of the loss of economic activity that would occur if Durham College did not exist.

Over the five-year period of 2011 to 2015, the expenditure of between \$ 861.2 – 893.9 million on Durham College operations and planned construction and renovation projects over the 2011-2015 period is estimated to produce **an overall economic impact of \$ 1,277 - \$ 1,472 million over that period.**

<sup>41</sup> It should be noted that the impacts of student non-college spending noted in section 3.6.1 and summarized here are an additional indirect economic impact not noted in the model calculations in section 3.4.1.

<sup>42</sup> While this number may appear large, it should be remembered that this includes all direct and indirect impacts, including the indirect impact of student housing costs off-campus.



## 4.2 Durham College Economic Impact Summary: 2011-2015: By Municipality

Figure 21 below summarizes the direct spending as well as the total economic impact of Durham College on the Durham Region economy, by municipality, for the 2011-2015 period, using low, medium and high capital construction, operating and indirect estimates:

**Figure 21**  
**Forecast Annual Average Economic Impact of Durham College**  
**On Durham Region: By Municipality: 2011-2015**

Region	Weighted Economic Impact % (2011-2015)	Overall Annual Economic Impact		
		Low	Medium	High
Oshawa	30.0%	\$ 76,620,000	\$ 80,100,000	\$ 88,290,000
Pickering	13.9%	35,500,000	37,113,000	40,908,000
Whitby	22.0%	56,188,000	58,740,000	64,745,000
Ajax	13.4%	34,224,000	35,778,000	39,436,000
Clarington	10.7%	27,328,000	28,569,000	31,490,000
Scugog	4.5%	11,493,000	12,015,000	13,244,000
Uxbridge	4.0%	10,216,000	10,680,000	11,772,000
Brock	1.5%	3,831,000	4,005,000	4,415,000
<b>Durham Region</b>	<b>100%</b>	<b>\$ 255,400,000</b>	<b>\$ 267,000,000</b>	<b>\$ 294,300,000</b>

In conclusion, Adventus Research estimates that **all Municipalities in Durham Region significantly benefit from the economic impact of Durham College** proportionally to their population, with the exception of Oshawa, Whitby, Scugog and Uxbridge, whose benefits are enhanced by its immediate proximity to Durham College.



## 5.0 APPENDICES

### 5.1 Bibliography

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## 5.2 Brief Summary of Brantford & Kitchener Economic Impact Studies

Given that this study is a comparative analysis based on studies conducted previously looking at the impacts of university campuses on the cities of Brantford and Kitchener, it is useful to review the relevant results of these two studies in this section.

### 5.2.1 City of Brantford – Impact of Laurier Brantford & Mohawk College (2005)

#### A) Introduction and Background

This report was commissioned by the Grand Valley Educational Society to examine the impacts of Laurier Brantford and Mohawk College campuses in Brantford on the downtown of Brantford, the City of Brantford, Brant County and its communities. This report included the following:

- a) *A historical review* of the state of the economy in Brantford in the years leading up to the establishment of Laurier Brantford in 1998.
- b) *A baseline assessment survey* of the current economic and social impacts of Laurier Brantford on the City of Brantford and its downtown core.
- c) *Economic impact modeling* of the impacts of anticipated construction/renovation and ongoing operations of Laurier Brantford and Mohawk College over the next 5 years – 2006-2010. This analysis includes an estimation of the direct, indirect and induced impacts over this period.
- d) *A qualitative discussion* of various issues of relevance to the impact of Laurier Brantford and Mohawk College on the downtown and the City of Brantford, including urban revitalization, business issues, economic growth issues, social issues, volunteerism and graduate rates.

#### B) Results and Conclusions

##### Future Economic Impacts of Post-Secondary Institutions on Brantford – Construction Impacts

1. Estimated construction costs for Laurier Brantford and Mohawk College over 2006-2010 were estimated to likely total in the range of \$6.5– 24.2 million (including public and private sector development). These expenditures will support a *temporary increase in income in the province of \$8–29 million, of which \$5-17 million would be retained within the City of Brantford and Brant County region.*
2. A total of 65 - 243 person years of employment were estimated to implement the proposed construction and/or renovation projects. Of this amount, *an estimated 39 - 145 person-years will come from City of Brantford/Brant County region.*
3. In addition, government would collect additional taxes at all levels. The federal government would collect \$1.3 – 5.0 million, primarily from personal income taxes and GST. The provincial government would collect \$1.0 – 3.7 million. *Local government would collect \$0.4 – 1.0 million in fees, permits and increased revenues due to higher property values.*

##### Future Economic Impact of Laurier Brantford on Brantford – Operating Impacts

1. The sustained economic benefits of the operations of Laurier Brantford were based on operating expenditures of \$28–34 million over 2006-2010. These expenditures in turn would drive additional spending of \$47–57 million in the Province, *of which \$37–45 million will be spent within the Region.* (Not including student non-university (i.e. off campus rent, etc.) and visitor spending).
2. In terms of jobs created, according to this model, 881-1,063 person-years of work, or an average of 176 to 213 jobs, would be sustained by the activities of Laurier Brantford in the province. *Of this amount, 763 – 940 person years (an average of 153 – 188 jobs annually) will be from the local area.*



3. In terms of revenues derived for the levels of government, total operational impacts were estimated at \$8.1-9.8 million for the federal government, \$5.4-6.5 million for the provincial government *and* \$1.1-1.3 million for the local government.
4. Based on all the information provided regarding forecasts for student enrolment, faculty and staff expenditures, operating expenses, capital expenditures, student non-university spending and visitors, the total average economic impact of Laurier Brantford through the 2006-2010 time period is estimated at *between \$ 20 million and \$27 million annually*. (This is comparable to the economic impacts of other similar Ontario universities).

Within this estimate, the total annual indirect economic impacts of the presence of Laurier Brantford to selected sectors of the local Brantford economy is estimated as follows:

* Restaurants	\$1.1 – 1.5 million
* Retail food industry	\$1.7 – 2.4 million
* Housing and rental accommodation	\$4.2 - 5.6 million
* Retail clothing	\$1.2 - 1.6 million
* Transportation (including autos & public transit)	\$1.8 - 2.4 million

**Future Economic Impact of Mohawk College on Brantford – Operating Impacts**

5. The sustained economic benefits of the operations of Mohawk College were based on the direct operating expenditures of \$44-51 million over 2006-2010. This in turn drives additional expenditures of \$73-86 million in the Province, *of which \$58–68 million will be spent within the Region*. (Not including student non-university (i.e. off campus rent, etc.) and visitor spending).
6. In terms of jobs created, according to this model, 1,336-1,600 person-years of work, or an average of 267-320 jobs annually, would be sustained by the activities of Mohawk College in the province. *Of this amount, 1,182-1,385 person years (an average of 236 - 277 jobs annually) will be from the local area*.
7. In terms of revenues derived for the levels of government, total operational impacts were estimated at \$12.3 – 14.9 million for the federal government, \$8.2 – 9.4 million for the provincial government *and* \$1.8 - 2.1 million for the local government.
8. Based on all the information provided regarding forecasts for student enrolment, faculty and staff expenditures, operating expenses, capital expenditures, student non-university spending and visitors, the total average economic impact of Mohawk College through the 2006-2010 time period was estimated at *between \$ 19 million and \$22 million annually*.

Within this estimate, the total annual average indirect economic impacts of the presence of Mohawk College to selected sectors of the local Brantford economy is estimated as follows:

* Restaurants	\$0.9 – 1.0 million
* Retail food industry	\$1.4 – 1.6 million
* Housing and rental accommodation	\$3.2 – 3.7 million
* Retail clothing	\$0.9 - 1.1 million
* Transportation (including autos & public transit)	\$1.3 – 1.6 million



## 5.2.2 City of Kitchener – Impact of Laurier School of Social Work (2004)

### Introduction and Background

In 2004, the City of Kitchener was engaged in discussions with Wilfrid Laurier University aimed at exploring the feasibility of relocating WLU's School of Social Work into the St. Jerome's College Building, adjacent to Kitchener City Hall and vacant since 1990. The proposed costs of such a move included the purchase of the building and necessary renovations by the City of Kitchener.

In order to perform its necessary due diligence, the City of Kitchener required information demonstrating the economic and social impact of similar past initiatives in other centres in North America, with the appropriate comparisons and analysis. Following are the relevant conclusions and recommendations of this study.

### Conclusions

1. The proposed relocation of the WLU School of Social Work should result in an estimated incremental economic benefit to the City of Kitchener of \$1.48 million annually.
2. In terms of the payback on the initial investment, based on estimated relocation costs of approximately \$6.0 million, the cost of relocation will be balanced by incremental revenue derived from economic benefits within approximately 4 years.
3. In terms of construction impacts, the estimated renovation expenditures will support a temporary increase in income in the Province of \$5.4 million, of which \$3.2 million will be retained by the local area (Waterloo Region). An estimated 73 person-years of employment are estimated from the proposed renovations, 40 of which would come from the local area. Wages and salaries would increase by \$3.6 million in the Province and \$2.3 million in the local area.
4. In terms of sustainable economic impacts, the School of Social Work drives annual expenditures of \$4.1 million in the Province and \$3.3 million in the local area. An estimated \$306,000 in mostly incremental annual revenues will be realized from spending in downtown Kitchener-based restaurants. In terms of job creation, an estimated 71 full-time jobs will be sustained in the Province, of which 53 are from the local area.
5. Direct city investment in such ventures significantly impacts ultimate success. Examination of two local case studies of the establishment of local university campuses shows that direct financial support by both cities (\$8.9 million by Cambridge and \$10 million by Brantford) was a key element in successfully launching both initiatives.
6. In addition to the direct economic benefits to the City of Kitchener of the proposed relocation of the WLU School of Social Work, there are a number of indirect economic benefits as well.
  - a) An "education premium", which would be the result of the incremental income that locally based university graduates of the program would spend in the community.
  - b) An "economic stimulus of higher education" would result from the presence of a university campus in the community attracting businesses seeking to capitalize student availability.
  - c) Student spending, estimated at about \$8,000 per capita to the local economy, would shift significantly to Kitchener with the proposed relocation.
  - d) Visitor spending of visitors associated with the School of Social Work, would likely shift primarily to the City of Kitchener.
  - e) The "volunteerism premium", the benefit of which is currently centred in Waterloo, would also shift significantly to Kitchener.
  - f) The "innovation premium", which captures the indirect benefit of R&D spin-offs into the community, would be of lesser significance.



7. The study also found that there are a large number of direct and indirect benefits associated with the proposed relocation of the School into the historic building of St. Jerome's College, in downtown Kitchener.
  - a) The rehabilitation of older buildings is generally less expensive, uses more local resources, and creates more local jobs than new construction.
  - b) Irreplaceable quality exists in the fabric and architecture of older buildings.
  - c) Preserving older buildings allows greater activity in the City core, in concert with the major strategic initiatives of the City of Kitchener.
  - d) Retaining older buildings allows a city to remain visually richer and socially more diversified.
  - e) Using the existing structure would minimize the addition of public infrastructure to service the facility.
  - f) Re-using historic buildings instead of creating new construction minimizes the creation of construction waste, which accounts for one-quarter of all landfill on average.
  - g) Vacant and underused land is brought back as a tax-generating asset for the community.
  - h) Historic preservation promotes neighbourhood stability.
  - i) Property values increase in historic neighbourhoods.
8. The decision to propose housing the WLU School of Social Work in the old St. Jerome's College building is clearly an innovative use of historic space, and would be poised to provide the benefits of the most environmentally sensitive relocation option. It is also the most economically sound relocation option as well, maximizing the number of jobs created during the renovation phase.
9. In order to build on the benefits of downtown revitalization, universities and cities must work more closely together. Cities can take the initiative in the following areas:
  - a) By incorporating universities into both their short-term and long-term economic development strategies.
  - b) By convening university presidents and business leaders regularly to identify and further economic development partnerships and opportunities.
  - c) By establishing a university liaison office to advance collaboration and economic development.
10. The proposed relocation of the WLU School of Social Work represents a significant strategic initiative that will allow the City of Kitchener to more fully participate in the economic and downtown revitalization benefits of a closer city-university relationship in the future.
11. Social work in particular represents a source of research and expertise that is of special relevance to the needs of a downtown core. For example, very few business advisory services focus on inner-city companies or the inner-city business environment. The School of Social Work is ideally suited to focus on exactly these important "downtown" issues.
12. In terms of the effect of the establishment of a university campus upon the city's prestige and reputation, this study found that businesses are attracted to cities that have university campuses. In addition, it found that personal safety and the overall quality of life in those cities improves in a measurable way as well.
13. The reputation of the City of Kitchener will be enhanced with the proposed relocation of the WLU School of Social Work.



### 5.2.3 The University of Ontario Institute of Technology (2010)

#### Introduction and Background

In early 2010, University of Ontario Institute of Technology (UOIT) was completing a five year business plan and is projecting steady growth in several of its programs. To accommodate this student influx, UOIT is looking at the possibility of various locations to house the facilities. Two faculties, Education and Criminology, Justice and Policy Studies, will be housed in close proximity in downtown Oshawa by 2010, with the possibility of a third faculty moving downtown in 2011. The current total enrolment of UOIT is over 6,300.

In the long term, increased student growth on the original campus and moving as many as 5,500 additional university students and faculty to downtown Oshawa will have a dramatic impact on the local economy. These people will take public transit; support local eating establishments and purchase goods and services at local retailers. In addition, some may choose to live in the immediate vicinity, thus paying rent and taxes.

This study was conducted in January through March 2010 by the consulting firm Adventus Research Inc. of Guelph, Ontario to examine the economic impact of these developments at the University of Ontario Institute of Technology (UOIT) by examining the comparative impacts of similar projects in other selected Ontario cities.

#### Conclusions

Based on all the information provided regarding forecasts for student enrolment, faculty and staff expenditures, capital expenditures and visitors, the total average economic impact of UOIT through the 2010-2015 time period in Durham Region is estimated at **\$ 227 - 272 million annually.**<sup>43</sup>

Within this estimate, the total annual economic impact of the presence of UOIT to the local Durham Region economy in some of the larger categories is estimated as follows:

* <b>Restaurants</b>	<b>\$ 7.8 – 8.9 million</b>
* <b>Retail food industry</b>	<b>\$ 22.0 – 26.5 million</b>
* <b>Housing and rental accommodation</b>	<b>\$ 39.6 – 48.0 million</b>
* <b>Retail clothing</b>	<b>\$ 13.8 – 16.2 million</b>
* <b>Transportation</b>	<b>\$ 26.1 – 31.7 million</b>

This is an estimate of the total economic impact of UOIT on the economy of the Region of Durham, and is also an assessment of the loss of economic activity that would occur if UOIT did not exist.

In summary, over the five-year period of 2010 to 2015, the expenditure of between \$ 857.9 – 1,055.7 million on UOIT operations and planned construction and renovation projects over the 2010-2015 period is estimated to produce **an overall economic impact of \$ 1,135 - \$ 1,360 million over that period.**

<sup>43</sup> While this number may appear large, it should be remembered that this includes all direct and indirect impacts, including the indirect impact of student housing costs off-campus.



The following figure summarizes the direct spending as well as the total economic impact of UOIT on the Durham Region economy, by municipality, for the 2010-2015 period, using low, medium and high capital construction, operating and indirect estimates:

Region	Weighted Economic Impact % (2010-2015)	Overall Annual Economic Impact		
		Low	Medium	High
Oshawa	35.0%	\$ 79,550,000	\$ 87,430,000	\$ 95,200,000
Pickering	14.6%	33,180,000	36,470,000	39,710,000
Whitby	16.6%	37,730,000	41,470,000	45,150,000
Ajax	14.8%	33,640,000	36,970,000	40,260,000
Clarington	11.7%	26,590,000	29,230,000	31,820,000
Scugog	3.0%	6,820,000	7,490,000	8,160,000
Uxbridge	2.7%	6,130,000	6,750,000	7,340,000
Brock	1.6%	3,630,000	4,000,000	4,350,000

In conclusion, Adventus Research estimates that **all Municipalities in Durham Region will benefit from the economic impact of UOIT** proportionally to their population, with the exception of Oshawa whose benefits are enhanced by its immediate proximity to UOIT.