

# Competitive Advantage Analysis



## 1. Introduction:

The Competitive Advantage Analysis (CAA) tool generates charts and graphs showing the relative size and performance of industries in selected municipalities in Ontario. Like the other tools in this suite of spreadsheet tools for Local Economic Analysis, the data and formulae for CAA are built into *Microsoft Excel*.



The tool is designed to be user-friendly, especially for community selection and formatting of results. However, to be able to use the tool effectively, it is critical to understand the concepts and methods involved in the analysis, as well as how to interpret results and understand the limitations of the analysis. This guide is a companion to hands-on training, which will help ensure that you are comfortable using the tool to better understand economic conditions and trends.



## 2. What is Competitive Advantage Analysis?



Competitive Advantage Analysis (CAA) is an assessment of the structure and performance of the economy of an area, to identify local strengths (“competitive advantages”) and potential for economic development. Actually, a full competitive advantage analysis would include an examination of local infrastructure, markets, labour force, amenities, access to transportation routes, etc. The CAA approach outlined here doesn’t go that far. Instead, it focuses on examining local industries/sectors to identify leading and lagging sectors and their prospects for employment growth.

CAA classifies sectors according to their *concentration of employment*, which can indicate a sector’s capacity to meet local needs. It also assesses their *growth/decline* compared to provincial trends. CAA can provide insights for industry targeting or niche marketing strategies, workforce development, as well as broad community strategic planning.

## 3. Data

The CAA tool is based entirely on *employment data* from the 2001 and 2006 *Statistics Canada Census of Population*. The data is collected through the Census long form (20% of the total population) and then processed to only include those people who were employed at the time of the Census.



The industries in this analysis are classified according to the *North American Industrial Classification System (NAICS)*.

The North American Industry Classification System (NAICS) is an industry classification system developed by the statistical agencies of Canada, Mexico and the United States. Created against the background of the North American Free Trade Agreement, it is designed to provide common definitions of the industrial structure of the three countries. It has a hierarchical structure. At the highest level, it divides the economy into 20 sectors. At lower levels, it further distinguishes the different economic activities in which businesses are engaged.

The CAA tool contains *Place of Work* and *Place of Residence* employment data.

Having both is preferable, since the *Place of Work* data indicates the number of people who are employed by local establishments, while *Place of Residence* data reflects the resident labour force, regardless of where they work. These represent two important dimensions of the employment story in a community.

#### 4. How to use the “CAA” Tool:

There are two versions of the CAA file, one for Census Sub-Divisions or “**CSDs**” (lower tier municipalities and single tier municipalities), and the other for Census Divisions or **CDs** (single tier municipalities and upper tier municipalities).

When you open the CAA file, you will see a screen similar to what appears in Figure 1, below. At the top of the sheet are buttons for selecting communities and clearing filters (explained below). At the bottom of the sheet you will see three tabs marking each “sheet” in the tool: Communities 2006, Analysis, and Graph of Division % Employment. You are starting in the “Analysis” sheet.

The spreadsheet has many columns, which you can view by moving the sliding bar at the bottom of your window. The table, below, lists all column headings and associated functions:

<b>COLUMN HEADINGS</b>	<b>FUNCTION</b>
Sectors (North American Industrial Classification- (NAICS))	<i>Sectors / Industries</i>
Provincial Employment '01	<i>Provincial Sector % Growth Calculations</i>
Provincial Employment '06	
% Employment Growth (Ontario)	
Employment '01 ( <i>community</i> )	<i>Local Sector % Growth Calculations</i>
Employment '06 ( <i>community</i> )	
% Employment Growth ( <i>community</i> )	
Actual Change (# jobs) ( <i>community</i> )	<i>Absolute Local Growth</i>
Provincial Effect	<i>Shift Share Analysis values</i>
Industrial Effect	
Regional Effect	
% Employment (Ontario)	<i>Location Quotient Calculations</i>
% Employment ( <i>community</i> )	
Location Quotient 2006 ( <i>community</i> )	
Provincial Sector Relative Growth	<i>Leading-Lagging Classification</i>
Local Sector Relative Growth	
Carvalho Classification	<i>Combined Classification Systems</i>
Industry Targeting Classification	

Microsoft Excel - Competitive Advantage CSD(PoW)NAICS2006v1.xls [Read-Only]

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Reply with Changes... End Review...

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1	<div style="display: flex; justify-content: space-around;"> <span>Select Community</span> <span>Division Level Data</span> <span>Clear Filters</span> </div>		Ontario	Selected Community >	Kitchener C							
2												
3												
4	<b>competitive advantage analysis (CSD)</b> <i>Place of Work</i>		<b>Employment Growth</b>									
5	Sectors (NAICS)		# jobs 01 Ontario	# jobs 06 Ontario	Employment Growth Ontario	# jobs 01 Kitchener C	# jobs 06 Kitchener C	Employment Growth Kitchener C	Actual Change (# jobs) Kitchener C	Provincial Effect	Industrial Effect	Regi Effect
6	Total - Industry - North American Industry Classification System 2002		5247720	5570870	6.16%	81,555	87,860	7.73%	6,305	5,822		
7	11 Agriculture, forestry, fishing and hunting		109610	99825	-8.93%	225	305	35.56%	80	14	-33.94	
8	1110 Farms (1111 to 1129)		100725	90460	-10.19%	200	225	12.50%	25	12	-32.70	
9	1131 Timber tract operations		125	55	-56.00%	0	0	na	-	-	-	
10	1132 Forest nurseries and gathering of forest products		245	370	51.02%	0	15	na	15	-	-	
11	1133 Logging		3710	3710	0.00%	0	20	na	20	-	-	
12	1141 Fishing		585	680	16.24%	0	0	na	-	-	-	
13	1142 Hunting and trapping		215	95	-55.81%	0	10	na	10	-	-	
14	1150 Support activities for farms (1151 to 1152)		2135	2670	25.06%	25	35	40.00%	10	2	4.73	
15	1153 Support activities for forestry		1860	1780	-5.32%	0	0	na	-	-	-	
16	21 Mining and oil and gas extraction		18155	21485	18.34%	50	80	60.00%	30	3	6.09	
17	2111 Oil and gas extraction		455	2150	372.53%	10	0	-100.00%	-10	1	36.64	
18	2121 Coal mining		20	120	500.00%	0	0	na	-	-	-	
19	2122 Metal ore mining		9755	9850	0.97%	0	0	na	-	-	-	
20	2123 Non-metallic mineral mining and quarrying		5170	5015	-3.00%	35	85	142.86%	50	2	-3.20	
21	2131 Support activities for mining and oil and gas extraction		2320	3860	66.38%	0	0	na	-	-	-	
22	2199 Mining - Unspecified		475	480	1.05%	0	0	na	-	-	-	
23	22 Utilities		41940	43900	4.67%	270	440	62.96%	170	17	-4.01	
24	2211 Electric power generation, transmission and distribution		31855	32190	1.05%	175	215	22.86%	40	11	-8.94	
25	2212 Natural gas distribution		5120	5675	10.84%	0	60	na	60	-	-	
26	2213 Water, sewage and other systems		5100	6040	18.43%	90	160	77.78%	70	6	11.05	
27	23 Construction		162610	176115	8.31%	2,825	3,165	12.04%	340	174	60.66	
28	31-33 Manufacturing		909470	826440	-9.13%	19,005	17,195	-9.52%	-1,810	1,170	-2,905.37	
29	3111 Animal food manufacturing		3700	3260	-11.89%	35	40	14.29%	5	2	-6.32	
30	3112 Grain and oilseed milling		4920	3265	-33.23%	0	15	na	15	-	-	
31	3113 Sugar and confectionery product manufacturing		7275	7375	1.37%	40	20	-50.00%	-20	2	-1.91	
32	3114 Fruit and vegetable preserving and specialty food manufacturing		7610	7575	-0.46%	10	10	0.00%	-	1	-0.66	

Ready NUM

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1	<div style="display: flex; justify-content: space-around;"> <span>Select Community</span> <span>Division Level Data</span> <span>Clear Filters</span> </div>		
2			
3			
4	<b>competitive advantage analysis (CSD)</b> <i>Place of Work</i>		
5	Sectors (NAICS)		# jobs 01 Ontario
6	Total - Industry - North American Industry Classification System 2002		524772
7	11 Agriculture, forestry, fishing and hunting		10961



## Step #1: Select Community & Generate Results

Click on the box marked **“Select Community”**, which will take you to a pick list of all municipalities in the province. The list organizes municipalities by their geographic location in the province, but you can see an alphabetical list by clicking on the “filter button” (small inverted triangle) at the top of the column.



To select a municipality, click on its name and then click on the box at the top of the sheet, as indicated. The results for the municipality will be automatically generated and you will be taken back to the main sheet.



## Step #2: Adjust Tabular results

You can manipulate the table in many ways, depending on the type of information desired. Two of the main functions you will likely find useful are:

- 
- **Sorting / Filtering Columns:** at the top of each column are small boxes with inverted arrows that enable you to filter out information. If you click on one of these buttons, you will see a pick list that has at the top “All”, then “Top Ten”, then “Custom”. “All” is the default and gives you the values for every industry and sub-sector. “Top Ten” gives you the option of selecting the top ten, or bottom ten. You can even change the number from 10 to any desired number. “Custom” lets you select parameters for any of the variable (i.e. column heading). This would include choices as specific as *“Employment Growth is less than or equal to 10%”*.

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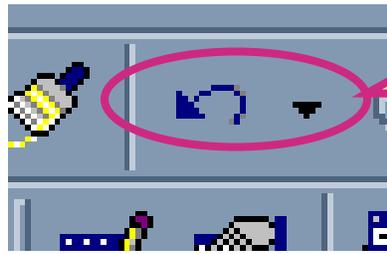
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	E	F	G
1			
2	Select Community	Division Level Data	Clear Filters
3			Ontario
4	competitive advantage analysis (CSD) <i>Place of Work</i>		
5	Sectors (NAICS)		
6		# Jobs	
7	(All)	524772	
8	(Top 10...)		
9	(Custom...)		
10	11 Agriculture, forestry, fishing and hunting	100610	99825
11	1110 Farms (1111 to 1129)		
12	1131 Timber tract operations	100725	90460
13	1132 Forest nurseries and gathering of forest products	125	55
14	1133 Logging	245	370
15	1141 Fishing		
16	1142 Hunting and trapping	3710	3710
17	1150 Support activities for farms (1151 to 1152)	585	680
18	1153 Support activities for forestry	215	95
19	21 Mining and oil and gas extraction	2135	2670
20	2111 Oil and gas extraction	1880	1780
21	2121 Coal mining	18155	21485
22	2122 Metal ore mining	455	2150
23	2123 Non-metallic mineral mining and quarrying	20	120
24	2131 Support activities for mining and oil and gas extraction	9755	9850
25	2199 Mining - Unspecified		
26	22 Utilities		
27	2122 Metal ore mining		

**Filter Button** at the top of every column for selecting “top ten” (or any number), for custom filtering (e.g. you choose parameters) and for selecting an individual value or variable in a column; **Clear the filter** by clicking on the button again and selecting “all” from the top of the pick list; or click on the “clear filters” box, if available.

- **EXAMPLE:** You can use this feature for reducing the number of sectors shown to only higher-level major groups or divisions. Click on the inverted triangle at the top of the *Sector* column. Select “custom” then choose “contains” from the scroll down pick list in the left hand window and then type in “Division” in the right hand window. The program would then only show the industry Divisions, like manufacturing and construction.
- **Clear Filters:** when you want to return to the original table with all rows included, you can click on the box at the top of the sheet marked “clear filters”. You can also clear filters by clicking on the filter button (inverted triangle) at the top of the column you filtered, and then select “all”.
- **Hide Columns:** there are many columns in the CAA file. To reduce the number of columns, you can “hide” them by clicking on the appropriate column letter at the top of the sheet, right clicking and then choosing “hide” from the pick list. If you want the columns to re-appear,

DO NOT use the un-hide function...you should use the Un-Do button



**USE THE UN-DO BUT-  
TON TO UN-HIDE COL-  
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THE "UN-HIDE" FEAT-  
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### Step #3: to print

The print area has been set for you to print the table. If you would like fewer columns, you can "hide" columns as explained above.

### Step #4 (Optional): Graph

A graph has been included in the CAA tool. It is formatted to take the % local employment by sector from the main worksheet. If all sectors are showing in this main sheet, the graph will be crowded and too hard to read. You will need to filter the "sector" column in the main sheet to only show the highest level sectors, as explained above under Step #2. You can change the community results that are shown by using the "Select Community" button on the main sheet. The graph will automatically change.

## 5. Methods & Interpretation

Three types of analysis underlie CAA:

- **location quotients** (for employment concentration)
- **shift share analysis** (for relative sector growth assessment)
- **leading - lagging analysis**

## 5.1 Location Quotients

The formula for **Location Quotients (LQ)** is:

$$\frac{\% \text{ of local employment in sector A,}}{\% \text{ of provincial (Ontario) employment in sector A}}$$

The result is a ratio, called “location quotient” that indicates the level of specialization of the selected geographic area (i.e. municipality), in the selected sector. LQs are also used to indicate the extent to which the local economy is importing, self-sufficient, or exporting good and services in different sectors. A municipalities export industries are its economic base.

The formula used here compares local % employment to **provincial** % employment, because it assumes that the province is a **complete economy**, with every sector represented. It is therefore a good standard to which the local economy is compared.

### 5.1.1. Interpretation of LQs:

Interpreting a location quotient starts with seeing where it fits into the following ranges:

- LQs < 0.75** (“low”) indicate that local needs are not being met by the sector and the municipality is importing goods and services in that sector.
- LQs between 0.75 and 1.25** (“medium”) indicate the community is self-sufficient in that sector. LQs of 1.0 result if local % employment is equal to provincial % employment in the sector.
- LQs > 1.25** (“high”) indicate that the sector is serving needs that extend beyond the boundaries of the municipality. The sector is likely “exporting” goods and services.



**LQs of 5 and over** are very high and suggest a high level of local dependence on the sector.



Your interpretation should include looking at the LQs for the industry “Division” (highest level – 1 digit), “Major Group/Sector” (2 digit) and specific “industry” (3-4 digit NAICS). You may find, for example, that manufacturing has a relatively low location quotient, since it does not represent a high percentage of local employment. Meanwhile, however, you may find that some manufacturing sub-sectors (e.g. wood products manufacturing) have high location quotients, since the percentage they represent of local employment is high compared to the average for the province, suggesting a specialization in that type of manufacturing for the community.



### 5.1.2 Limitations of LQs:

A *Location Quotient is not “Rocket Science”*: LQs tell us about the mix and relative significance of local sectors using Census employment values as indicators of productive capacity. No indicator is perfect, however, and it’s important to understand the limitations of using Census employment data:

- 
- First, employment is not necessarily a good indicator of productivity. A local sector may have relatively high employment, but be quite inefficient compared to its provincial counterparts. Similarly, another local sector may employ very few people, simply because it uses a highly efficient and capital-intensive production process.
  - Second, the Census employment data is based on Census respondents’ subjective answer about their employment on the long questionnaire that only 1 in 5 Canadians have to fill in. In other words, the employment figures should not be assumed to be totally accurate.

## 5.2. Shift Share Analysis

**Shift Share Analysis (SSA)** compares local growth/decline of a sector with provincial growth/decline in that sector, as well as provincial growth overall. It separates the growth occurring locally in a sector that could be explained by the influence of provincial growth for all sectors combined, the influence of growth in the sector at the provincial level and the influence of local factors. **SSA** does this by

Three values are produced through SSA: Provincial Effect, Industrial Effect and Regional Effect. In the economic analysis literature, you may find that different terms are used. Regional effect, for instance, is often called the “differential shift effect” or “competitive effect”. *The results obtained from Regional effect contribute to the identification of those sectors and industries that possess a local “competitive advantage”.*

This is how the three effects are calculated:

*Provincial Effect* = Local employment 2001 x Provincial % Growth Rate Overall 2001-2006 (all industries combined)

*Industrial Effect* = Local employment 2001 x (Provincial Sector % Growth – Provincial % Growth Overall)

*Regional Effect* = Local employment 2001 x (Local Sector % Growth – Provincial Sector % Growth)

When added together, the three effects should equal the actual or absolute change in # jobs in the sector.

### 5.2.1 Interpretation of shift share analysis

The easiest way to interpret SSA results is to look at each effect in terms of the number of local jobs lost or gained that could be attributed to each effect:

*Provincial Effect:* the number of local jobs lost or gained due to the influence of provincial growth overall

*Industrial Effect:* the number of local jobs lost or gained due to the influence of growth in the sector at provincially

*Regional Effect:* the number of local jobs lost or gained due to local factors.

Another way of interpreting SSA results is to simply note which of the effects is positive or negative.

- If *industrial effect* is **positive**, this indicates that the sector's growth provincially was above provincial trends overall. If **negative**, the sector's growth provincially was below provincial trends.
- if *regional effect* is **positive**, the local sector's growth was above the rate of growth in the sector provincially. If **negative**, the local sector's growth was below the provincial rate for the sector.

Example:

<b>Selected Community:</b>	Carleton Place
<b>Sector:</b>	822-827 Provincial and territorial government service industries
<b>Provincial Growth Overall 2001-2006:</b>	12.5%
<b>Provincial Sector Growth:</b>	-6.84%
<b>Local Employment in Sector 2001:</b>	20
<b>Local Employment in Sector 2006:</b>	35
<b>Local Employment Growth:</b>	75%
<b>Actual (absolute) Growth:</b>	15 jobs
<b>Provincial Effect:</b>	3 jobs
<b>Industrial Effect:</b>	-4 jobs
<b>Regional Effect:</b>	16 jobs

**Interpretation:** In Carleton Place, employment in provincial government services grew from 20 to 35 jobs, or by a rate of 75% between 2001 and 2006. Of the 15 jobs gained, 3 can be attributed to provincial growth (which was 12.5%). This sector declined by about 7% provincially, which accounts for the *industrial effect* of (-4), suggesting that 4 jobs would have been lost locally in the sector if the community's economy had followed provincial trends. Meanwhile, a large proportion of the jobs gained can be attributed to favourable local factors, as reflected in the value of 16 for *regional effect*.



## 5.2.2. Limitations of SSA

Where SSA stops short is in explaining why these various relationships occurred. SSA only describes the dynamics of growth in the sector.

Furthermore, the SSA used for the CAA tool is based on employment data. This has limitations based on the subjective nature of the information, as it is based on the answers provided by the 20% of Ontarians who filled out the long questionnaire in the Census. Respondents are required to describe their employment, which can be tricky for some professions (e.g. consulting).

Using employment growth as an indicator also does not account for the internal dynamics of each sector, for which a decline in employment is not necessarily a negative or worrying sign. For example, primary agriculture has become increasingly mechanized, which means the sector has been shedding labour for the past two decades.

A further limitation is the lack of annual data available at the municipal level between Census years. Although historical trends do tend to reflect current trends, it is possible that the trends occurring since 2006 are different from those between 2001 and 2006.

## 5.3 “Leading – lagging” analysis

This analysis uses sector employment growth rates to produce two key values: **Provincial Sector Relative Growth (PSRG)** and **Local Sector Relative Growth (LSRG)**:

**Provincial Sector Relative Growth (PSRG)**: is calculated by:

$$\text{Provincial employment growth in a sector} - \text{Provincial employment growth overall}$$

The result indicates if the selected sector’s growth (e.g. for 2001-2006) at the provincial level was higher or lower than provincial growth overall. Three possible values result:

**“Leading”**: sector growth exceeded provincial growth, while

**“Lagging”**: the sector either declined in employment or grew at a slower rate than provincial growth overall.

**“Even”**: the sector’s growth equals provincial growth overall.

A (+) sign beside the descriptor indicates that the sector grew in employment.

(-) sign indicates that the sector declined in employment.

(0) indicates that employment stayed constant during the period of the analysis.

**Local Sector Relative Growth (LSRG)**: is calculated by:

$$\text{Local employment growth in the sector} - \text{Provincial employment growth in the sector}$$

**“Leading”**: the local sector grew faster or declined at a slower rate than the provincial sector.

**“Lagging”**: the local sector grew at a slower rate, or declined at a greater rate, than the provincial sector.

**“Even”**: local sector growth equalled growth in the sector provincially.

A (+) sign beside leading, lagging or even means the local sector gained jobs.

(-) sign means the local sector lost jobs.

(0) means employment was constant over the time period of the analysis.

### 5.3.1 Interpretation of leading/lagging

The PSRG and LSRG classification is merely a way of describing the relative growth dynamics of the provincial and local sectors. It is provided to complement the shift share analysis numerical results, by describing the dynamics in words (i.e. leading, lagging, even). You can quickly see how each sector performed compared to provincial trends, as well as whether the sector grew or declined, by the PSRG and LSRG values.

The PSRG and LSRG values should be considered when you look at the Carvalho and Industry Targeting (i.e. McLean & Voytek) classifications.

## 5.4 CAA Classification Systems

The right hand side of the CAA chart shows two types of classification:

- Carvalho Classification
- Industry Targeting (McLean & Voytek)

### 5.4.1 Carvalho Classification

Three values (LQ, PRSG, and LRSG) are combined in the Carvalho Classification, which is a model developed in 2000 by Dr. Emanuel Carvalho from the University of Waterloo in collaboration with OMAFRA CED Unit staff. There are twelve classifications, from “driving” (for sectors that were “leading” provincially and locally and had high location quotients) to “marginal” (for sectors that were “lagging” provincially and locally and had low location quotients).

The categories are descriptive, not prescriptive. They may indicate the sectors that may need some attention or further investigation, such as through a Business Retention & Expansion (BR+E) survey, or through industry focus groups, to identify the specific issues/needs of businesses in those sectors.

Interpretation:

Each term is comprised of a combination of the three values for provincial sector relative growth (PSRG), local sector relative growth (LSRG) and location quotient (LQ). There are four groups of categories:

1. If PSRG and LSRG are both “leading”
  - “**Driving**” if LQ > 1.25 (high)
  - “**Accelerating**” if LQ: 0.75-1.25 (medium)
  - “**Rising**” if LQ < 0.75 (low)
2. If PSRG is “lagging” but LSRG is “leading”:
  - “**Evolving**” if LQ > 1.25 (high)
  - “**Transitional**” if LQ 0.75-1.25 (medium)
  - “**Moderate**” if LQ < 0.75 (low)
3. If PSRG is “leading” but LSRG is “lagging”:
  - “**Promising**” if LQ > 1.25 (high)
  - “**Yielding**” if LQ 0.75-1.25 (medium)
  - “**Modest**” if LQ < 0.75 (low)

4. If PSRG and LSRG are both “lagging”:

“Challenging”	if LQ > 1.25 (high)
“Vulnerable”	if LQ 0.75-1.25 (medium)
“Marginal”	if LQ < 0.75 (low)

Example #1:

**Selected Community:** Greater Napanee

**Sector:** 337 Furniture and Related Product Manufacturing

**PSRG (Provincial Sector Relative Growth):** Leading (+)

**LSRG (Local Sector Relative Growth):** Lagging (-)

**LQ:** 8.25 (Very High)

**Carvalho Classification:** “*Promising*”

**Explanation:** The furniture and related product manufacturing industry in Greater Napanee employed 140 in 2001 and 130 in 2006, representing a decline of -7%. During the same period, provincial employment growth in the sector grew was 50%, well above overall provincial growth of 12.5%. So, LSRG is lagging and PSRG is leading. The industry has a very high location quotient in Greater Napanee because it represents a relatively high percentage (2%) of local employment compared to the provincial average of 0.23%. Despite local job loss, the industry is classified as “*promising*”, because the provincial trends in the industry between 2001 and 2006 were positive, indicating that the market for furniture and related products is growing.

Example #2:

**Selected Community:** Greater Napanee

**Sector:** 313 Textile Mills

**PSRG (Provincial Sector Relative Growth):** Lagging (+)

**LSRG (Local Sector Relative Growth):** Lagging (-)

**LQ:** 26.23 (Very High)

**Carvalho Classification:** “*Challenging*”

*Explanation:* The Textile Mills in Greater Napanee employed 140 in 2001 but only 95 in 2006, representing a sharp decline of -32%. During the same period, provincial employment in the industry grew marginally by 0.5%, well below the overall provincial growth rate of 12.5%. So, both PSRG and LSRG are lagging. This industry has an extremely high location quotient in Greater Napanee because it represents a relatively high percentage (1.4%) of local employment compared to the provincial average of 0.05% (only slightly over 3000 people are employed in this sector in Ontario). Based on local and provincial trends in this sector in 2001-2006, the prospects for employment growth in this sector are low in Greater Napanee. It is therefore a “*challenging*” sector.

## 5.4.2 Industry Targeting Classification

At the far right hand side of the CAA spreadsheet is the Industry Targeting Classification.

This classification system is similar to the Carvalho model in that it is based on a combination of the location quotient, PSRG and LSRG values, and it is expressed verbally not numerically. It is somewhat different, however, in the way it classifies sectors. The categories are phrases that suggest the kind of prospects for growth that one could expect, and in some cases, whether the sector should be a retention target.

## Interpretation of industry targeting classification

There are eight categories in this classification system:

Industry Targeting Classification	LQ	Provincial Industry Growth	Local Sector Relative Growth
Current Strength	$\geq 0.75$	+	+
Emerging Strength	$< 0.75$	+	+
Prospects limited by external trends	$\geq 0.75$	-	+
Prospects limited by weak base & external trends	$< 0.75$	-	+
High priority retention target	$\geq 0.75$	+	-
Prospects limited by weak base & declining competitiveness	$< 0.75$	+	-
Prospects limited by external trends & declining competitiveness	$\geq 0.75$	-	-
Prospects limited overall	$< 0.75$	-	-

**Hint:** to identify sectors most likely needing attention, look for sectors that grew locally, but declined provincially. This could indicate that the local economy has a competitive advantage for this sector to thrive, but it could also be an indicator of trends in the external economy, which could spell challenges for the local sector in the future

### Caution:

It is important to consider the nature of each sector before drawing any conclusions from this analysis. Remember that this analysis is based on employment growth as an indicator of sector performance. Other criteria, which may be equally significant, are not part of this particular analysis.



For instance, primary agriculture (NAICS 111-112) is an industry that has evolved to become more capital-intensive or more “efficient” in terms of the volume of labour required for the same output. Employment has declined steadily in primary agriculture over the past 20 years (although it may have increased in agriculturally related sectors). Consequently, competitive advantage analysis, which is based on employment levels, would typically classify primary agriculture as a “challenging” or “vulnerable” sector. However, this does not mean that this sector is not important or worth preserving in certain areas, particularly those in which the land base (i.e. soils) is suited to agriculture. This sector may also have a significant economic impact in the region due to purchases by agricultural operators of equipment, professional services and other necessary inputs involved in agricultural production.

## 6. Other Information Needed

The information you can obtain through CAA can help inform your understanding about the dynamics and structure of the economy of a specific municipality or region. However, to get a complete picture of the economic potential of an area, it is critical that the results be weighed against information obtained through a variety of sources. This involves compiling extensive information pertaining to areas such as:

- demographic profile;
- labour market trends;
- sector composition;
- physical infrastructure;
- education, health care and other community organizations;
- political structure and support;
- social and cultural fabric;
- quality of life.

In addition, the competitive advantage analysis should include information obtained from research initiatives conducted for the community, including sector studies, trade research, planning or environmental studies and other relevant documents that highlight major trends, competitive advantages or challenges.



It is also vital that any analysis be grounded by what is known intuitively and experientially by the people living and working in the area. The data may serve to quantify local economic trends and structure, but it will not explain why certain changes are occurring, or tell you what you need to do in terms of appropriate economic development strategies. This is where local intelligence comes in. Individuals and groups from within and outside the community represent an invaluable source of information and guidance to advance the well being of the community. The consultation process is designed to assess opportunities and challenges related to the development and growth of local industries.



Consultations involve meetings with individuals and groups representing a wide spectrum of the community including:

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- local industry leaders;
  - business and professional associations;
  - labour groups;
  - government (municipal, regional, provincial, and national);
  - community, cultural and social organizations;
  - institutional representatives.



Community consultations can be approached in various ways. Participation generally involves focus group meetings or discussion sessions with homogeneous groups. For example, local industry leaders would be invited exclusively to a consultation. Most importantly, community consultations should involve individuals who are willing to actively contribute in a meaningful way to the process..

