



**ECONOMIC BASE ANALYSIS
2000 - 2004**

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EXECUTIVE SUMMARY

This report documents a statistical analysis of the economy of the Windsor Census Metropolitan Area during the five year period 2000 to 2004 inclusive. For the purposes of this report the word “region” will denote the Windsor CMA.

We find that after a decade of steady employment growth (27% growth between 1991 and 2001) the economy of the region reached a plateau in the 2000 to 2004 period growing only 3.6% (compared to the provincial employment growth of 8.6%). During this period the population of the region continued to grow, resulting in high unemployment rates (9.9%) for the region compared to the rest of the province.

It comes as no surprise that the region’s economy is dominated by the Manufacturing sector which employs 48,500 persons - more than one out of every four jobs (28%).

To put this into context we calculated the Location Quotients for each industry which compares the local ratio of employment in each industry sector to that of the province.

Location Quotient Analysis

Significant Industries

- Manufacturing 1.60
- Tourism
 - Accommodation & Food 1.34
 - Information, Culture & Recreation 1.20
(- includes casino gaming)
- Education 1.13

Under-Represented Industries

- Finance, Insurance & Real Estate 0.61
- Professional, Scientific & Technical Services 0.58
- Business, Building & Other Support Services 0.69

A Shift/Share Analysis measures the relative growth or decline of each industry considered in the context of three factors:

- Economic Growth Component – that portion of the net change in employment attributed to the state of the provincial economy.
- Industry Proportional Shift – that portion attributable to whether the industry is a “sunrise” or “sunset” industry.

- *Differential Shift* – the differential attributable to local growth factors. It shows whether locally the sector is growing relative to the province or whether it is losing share.

Table 10
Shift/Share Analysis – Windsor CMA

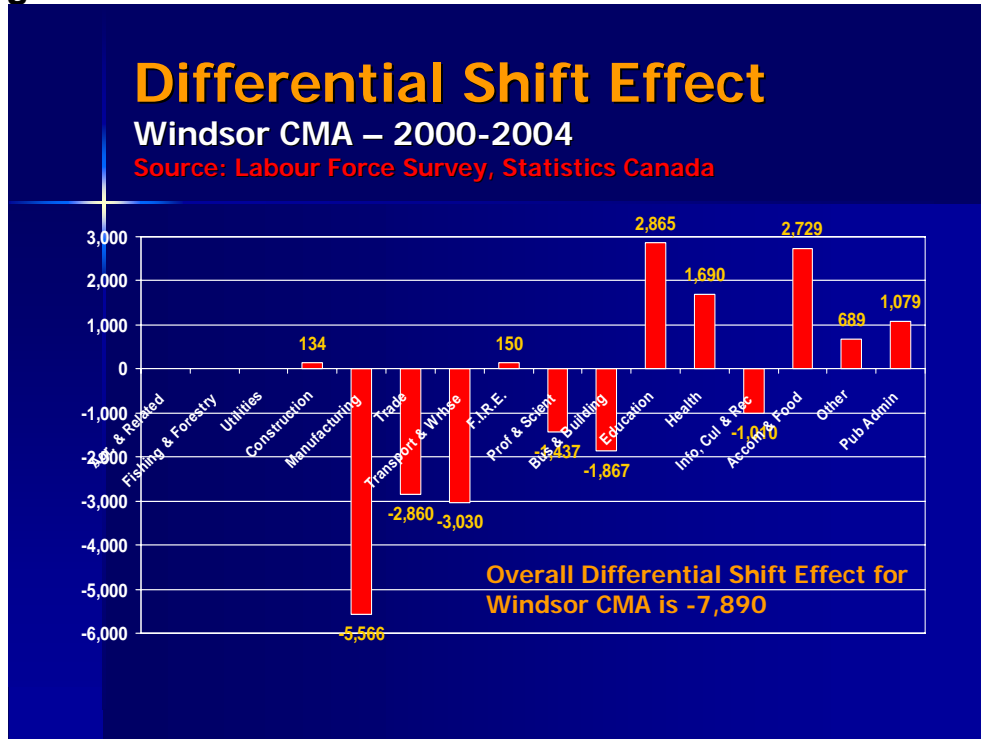
NAICS Category	Net Change 00/04	Economic Growth Component	Industry Proportional Shift	Differential Shift Effect
Agriculture				
Forestry, Fishing, Mining				
Utilities				
Construction	1,100	562	405	134
Manufacturing	-4,200	4,320	-2,953	-5,566
Wholesale & Retail Trade	-700	1,901	259	-2,860
Transport & Warehousing	-2,300	665	64	-3,030
Finance, Insurance & Real Estate	900	510	241	150
Professional, Scientific & Technical	-1,100	657	-320	-1,437
Business, Building & Other Support Services **	-1,100	518	249	-1,867
Education	3,400	691	-157	2,865
Health Care & Social Services	3,900	1,045	1,175	1,680
Information, Culture & Recreation	-300	838	-129	-1,010
Accommodation & Food	3,500	786	-15	2,729
Other Services	800	484	-373	689
Public Administration	1,600	397	124	1,079
Total Employment	5,700	13,590	0	-7,890

Note: Blank cells represent data suppressed by Statistics Canada due to confidentiality
Source: Labour Force Survey – Statistics Canada

The following graph (Figure 7) shows the Differential Shift for each industry in the region, highlighting the relative growth of each sector compared to the Province.

Note the substantial decline in the Manufacturing sector (- 5,566) which accounted for the bulk of the overall decline in the region's Differential Shift (-7,890).

Figure 7



Under-Performing Sectors

- Manufacturing - 5,566
- Wholesale & Retail Trade Sector - 2,860
- Transportation & Warehousing - 3,030
 - (*likely reflecting a weaker manufacturing sector*)
- Professional, Scientific & Technical Services - 1,437
- Business, Building & other Support Services - 1,867
- Information, Culture & Recreation - 1,010

High-Performing Sectors

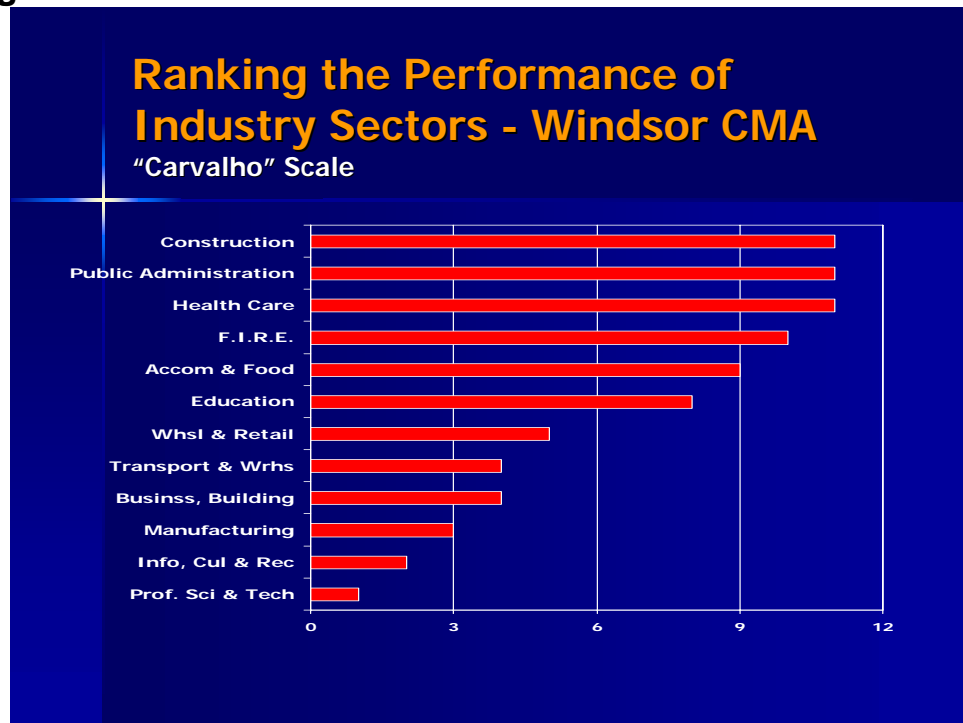
- Education + 2,865
- Health Care + 1,690
- Accommodation & Food + 2,729
- Public Administration + 1,079

The remaining sectors of the economy performed at or near Provincial levels.

The overall result of the Shift/Share Analysis shows that in the context of the provincial economy, **the region had the equivalent loss of 7,890 jobs between 2000 and 2004** in spite of posting an absolute increase of 5,700 jobs.

To wrap up the analysis we use a performance classification system developed by Dr. Emanuel Carvalho, Associate Professor of Economics at the University of Waterloo. The following graph shows the results of the application of the Carvalho Scale to the results of this analysis.

Figure 8



Based on the Carvalho performance ranking system, the driving sectors of the region's economy are now Construction, Pubic Administration, Health Care and the Finance, Insurance and Real Estate sectors, which is a dramatic departure from a reliance on the core industry, Manufacturing.

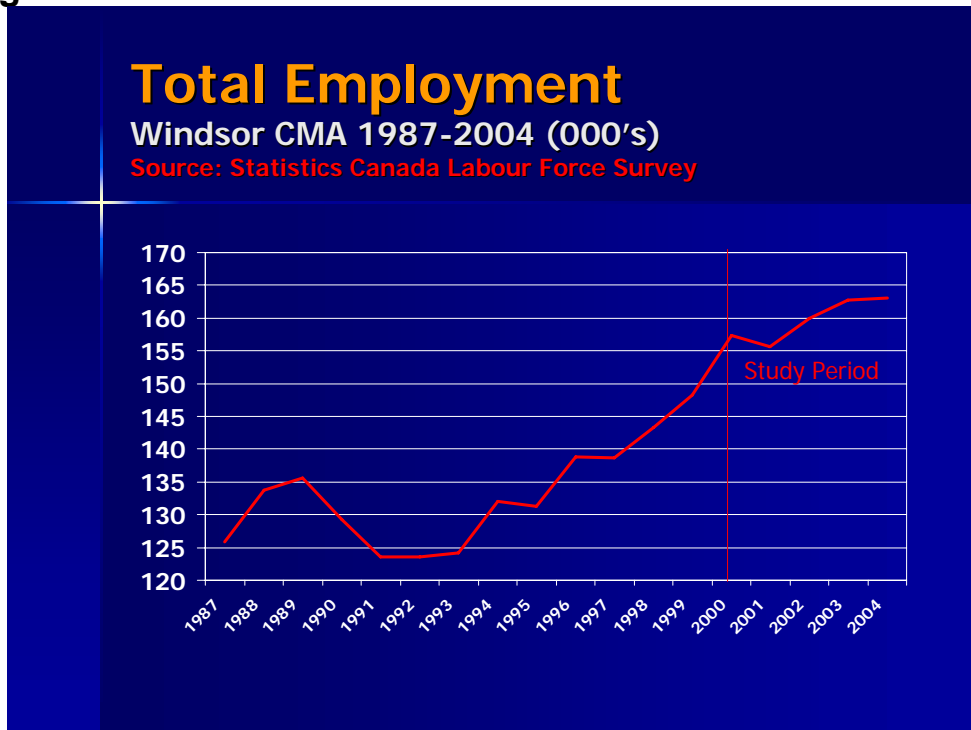
Using the results of the Economic Base Analysis, we recommend the following sectors be targeted for attention in the economic development strategies that are to be developed for Windsor and Essex County

Recommended Targets

- Manufacturing
- Financial Services
- Health Care
- Post-Secondary Education
- Tourism Development

The region has enjoyed a long sustained growth trend since the recession of 1989/1990. It has only flattened in the last five years as seen in Figure 10 which shows total employment in the Windsor CMA from 1987 to 2004.

Figure 10



We feel confident that recent announcements of major capital investments by the “Big Three” automakers and the Windsor Casino will lead to a return to buoyant growth rates for the region.



REPORT



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INTRODUCTION

For a regional economic development plan to be successful it must first enjoy broad support from the people of the community, especially the business and community leaders who provide much of the impetus for growth and development.

This is one of the principal reasons why economic development organizations incorporate community consultations into the strategic planning process. They want input from as many stakeholders as practical into the overall direction of the plan, to draw out ideas for specific economic development initiatives and to gauge the pulse of different interest groups respecting growth in the community. It is to be expected that different community groups will have differing views about the desired form of growth. These must be considered in the development of the economic development plan.

Secondly, there will inevitably be too many opportunities to pursue with the resources available and therefore decisions have to be made to prioritize the community's development programs.

To do this effectively requires a firm grounding in the reality of the local economy. Many communities are functioning on a set of assumptions about the local economy that are based more on the 1970s than the current economic environment. An analysis of the local economy helps stakeholders better understand the current strengths and weaknesses of the local economy. It is necessary background information for the creation of an economic development strategy. It is essential to making informed decisions about the focus of the community's economic development programs. Without this the economic development efforts of the community can be misdirected.

An *Economic Base Analysis* is a well-accepted tool for measuring the contribution of each industry sector to the local economy and for comparing the performance of each industry sector to the overall performance of that sector across the rest of the Province.

This report updates an earlier analysis entitled "*Preliminary Economic Base Analysis for Windsor & Essex County*" prepared by the staff of the Windsor-Essex County Development Commission using 2001 census data and borrowing extensively from reports by Matthew Fischer & Assoc. Inc. which had been provided to the Commission.



In the previous report it was noted that:

“... between 1996 and 2001, Windsor-Essex’s core industries, Agriculture, Manufacturing and Other (Gaming) all posted strong positive numbers. However lagging performance in Construction, Finance Insurance & Real Estate, Business Services and Health & Social Services contributed to an overall employment decline equivalent to 1,371 jobs as measured in relative terms (Differential Shift Effect). ... During this period Ontario’s overall growth rate was 12.53%. The growth rate for Windsor-Essex was 11.70%.”

- from the report “Preliminary Economic Base Analysis for Windsor & Essex County”

In this new report we update the economic base analysis of Windsor’s *Census Metropolitan Area (CMA)* for the period 2000 to 2004 inclusive, using the most recent data available from Statistics Canada.

We trust this report contributes to a better understanding of the factors affecting the growth and development of the Windsor and Essex County region.

ECONOMIC BASE THEORY

Before launching into a description of the analysis, it would be helpful for the reader to be acquainted with some basic concepts in economics that help explain how local markets function.

One of the most commonly used economic models to describe the functioning of local markets is *Economic Base Theory*. In this model all businesses in the local economy are described as either “*Basic*” or “*Non-Basic*” industries.

- ✓ “***Basic***” industries are exporting companies, those businesses and industries producing goods and services for sale in markets outside the local economy. For example they include agricultural operations, resource industries, manufacturing and tourism. The sales revenue generated by these industries represents “new money” to the local economy adding to the wealth already circulating in the community. Through wages and salaries and the purchase of goods and services locally this new money is distributed throughout the community stimulating the growth and development of other businesses in the local economy.

- ✓ “***Non-Basic***” industries are those companies that serve primarily local customers. They include most retail, personal and business services as well as health care providers, elementary and secondary education, etc. They are important to the local economy because they act to redistribute wealth throughout the community.

We often find “*Basic*” elements in “*Non-Basic*” industries. For example, to the extent that a local retailer (or any other business for that matter) is able to attract customers from outside the community, for instance a tourist boutique, “big box” retailer, or a large agricultural equipment dealer, a portion of their business is “*Basic*”.

Why is the *basic/non-basic* distinction important? Economic base theory asserts that the way to strengthen and grow the local economy is to develop and enhance the “basic” sector. The “basic” sector is therefore identified as the “engine” of the local economy.

"The economic base technique is based on a simple causal model that assumes that the basic sector is the prime cause of local economic growth, that it is the economic base of the local economy." Klosterman, Richard E. (1990).

Economic Base Theory also posits that the local economy is strongest when it develops those economic sectors that are not closely tied to the local economy. By developing businesses and industries that rely primarily on external markets, the local economy can better insulate itself from economic downturns because, it is hoped, these external markets will remain strong even if the local economy experiences problems. In contrast, a local economy wholly dependent upon local factors will have great trouble responding to economic slumps.

For this reason economic development programs have traditionally focused on "*Basic*" industries.

From the standpoint of the community's economic development program, the growth of "*Basic*" industries is not constrained by the size of the local marketplace because these industries export most if not all of their production. Assuming there is sufficient labour to meet production demands, there is no limit to how big a basic industry can become.

Under the traditional interpretation of Economic Base Theory we needn't concern ourselves with the community's retail and service businesses because - all other things being equal - they will develop naturally to match the size (population) of the local marketplace.

However the noted economist Thomas Power offers an important counter point to that view:

"A standard interpretation of the economic base model is that exports and the income they inject into the local economy are all that really matter - they cause or enable all other economic activities. Income earned in export-oriented activities circulates through the local economy, putting people to work in locally oriented economic activities that provide the vast majority of jobs.

The standard interpretation of the economic base model would dismiss a restaurant or recreational facility as derivative or secondary, [t]he alternative interpretation

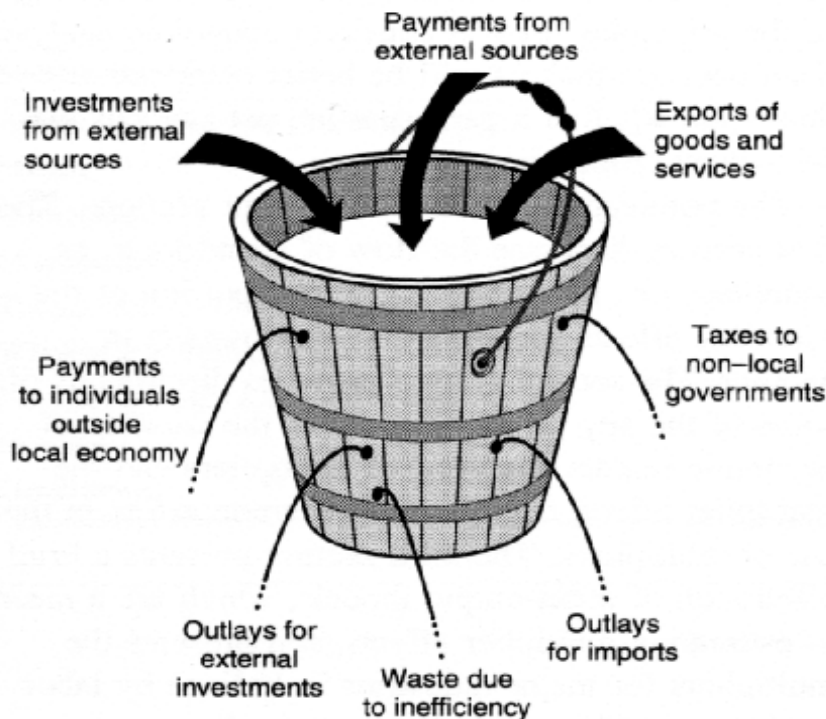
would say that such local economic activity absorbs and holds dollars longer in the local economy, increasing jobs and income. ...

The economic base model should not be interpreted as meaning that only exports matter. Rather, export earnings interact with a particular local economy to determine the overall level of local economic activity. Both export earnings and the local economic structure matter. The internal logic of the economic base model has simply been misinterpreted. (Emphasis Added)

*Power, Thomas Michael, (1996)
Lost Landscapes and Failed Economies.
Washington DC, Island Press*

A good model for the function of a local economy is the “Leaky Bucket”. The local marketplace is likened to a bucket with holes in it through which wealth leaks out to other markets.

FIGURE 1
“Leaky Bucket” Model for the Local Economy



In this model the revenues generated by the community's exporting businesses (along with other payments from external sources such as government transfers, investment income, etc.) raise the water level (wealth) in the bucket.

The water in the bucket is stirred by economic activity. It swirls around to every part of the bucket. It goes from person to person, business to business, person to business and is constantly moving.

One person purchases a house and the realtor makes a deposit at the bank. The banker makes a loan to another person who buys a car. The car salesman buys a new shirt. The storeowner pays a life insurance premium. The insurance agent pays his school tax. The teacher pays the water bill. The money moves on and on. The process is dynamic and is in constant motion.

However there are holes in the bucket through which water leaks out. Every region experiences leakage to some degree. A manufacturer purchases raw materials from suppliers outside the local marketplace. Retailers import the bulk of the items that stock their shelves. Income taxes and sales taxes leave the local economy. Even the funds invested by individuals for their retirement leaves the community. The list goes on and on.

For a local economy to be healthy, vibrant and growing, the inflow of new money must exceed the outflow of money leaking out. As Powers points out it is important that economic developers work to plug as many of the bucket's holes as possible - through programs of "import substitution". In the extreme the leaks in the bucket will prevent the community from growing to its full potential.

The goal of a local economic development program therefore is to raise the water level (wealth) in the bucket. There are effectively two ways to do this:

1. Increase the flow of new wealth (water) into the community by increasing exports and attracting additional investment in *Basic Industries*.
2. Plug leaks in the bucket through import substitution and by stimulating the development in new businesses to fill gaps in the mix of retail and service businesses that cause consumers to go elsewhere for products and services.

DEFINITIONS

NAICS Code

This analysis uses the most recent data available from Statistics Canada's "Labour Force Survey". It consists of "Employment by Industry" in the Windsor CMA (Census Metropolitan Area) for 2000 to 2004 inclusive.

The data is organized according to the *North American Industrial Classification System (NAICS)*, the new standard for all of North America. The NAICS Code has nineteen major categories and replaces the former *Standard Industrial Classification (SIC)* with its sixteen categories. It is a superior system in that it expands on the range of business services that were previously grouped in one category.

A complete outline of NAICS code categories is included in the appendix.

Census Metropolitan Area

A CMA (Census Metropolitan Area) is Statistic Canada's designation for a large urban area (known as urban core) together with the adjacent urban and rural areas (known as urban and rural fringe) that have a high degree of social and economic integration with the urban core. The CMA does not include all the communities represented by the Windsor Essex County Development Commission.

Table 1

Communities included in the Windsor CMA

	2001 Census Population	% Total
Communities in the Windsor CMA		
City of Windsor	208,402	55.5%
Town of LaSalle	25,285	6.7%
Town of Amherstburg	20,339	5.4%
Town of Lakeshore	28,746	7.6%
Town of Tecumseh	25,105	6.6%
Total	307,877	82.1%
Communities Outside Windsor's CMA		
Town of Essex	20,085	5.3%
Town of Kingsville	19,619	5.2%
Town of Leamington	27,138	7.2%
Total	66,842	17.8%
Total Windsor-Essex County.	374,975	100.0%

Note: The numbers don't add precisely due to portions of communities being included or excluded.

Source: Statistics Canada – 2001 Census Community Profiles

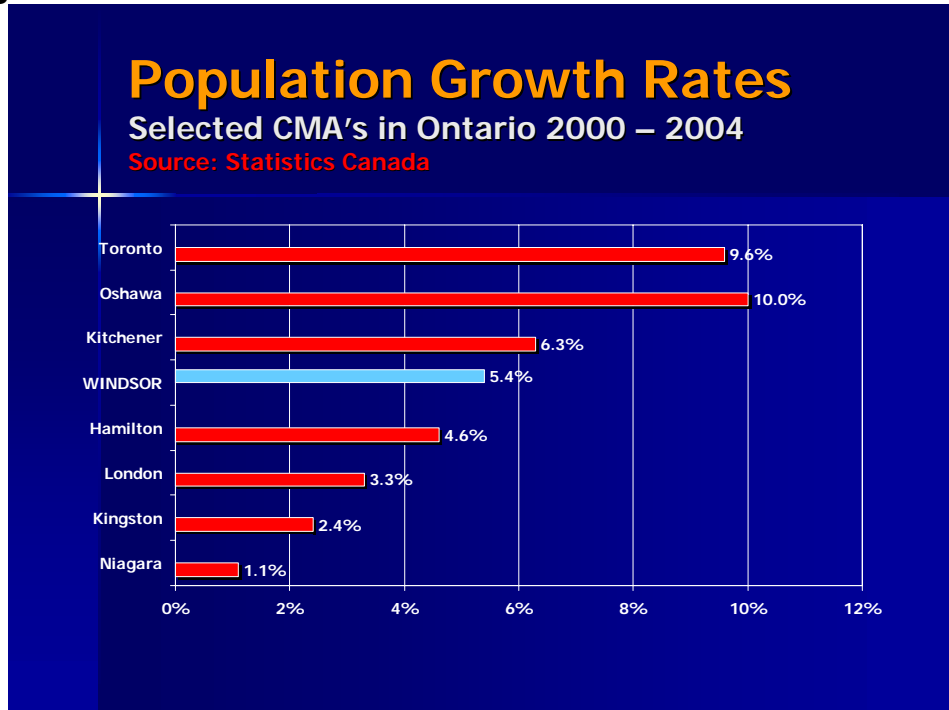
Between 2000 and 2004 the population of the Windsor CMA rose 16,500 from 313,700 to 330,200. This represents a 5.4% increase and compares favourably with the growth rates of other CMA's in Southern Ontario.

Table 2
Population of Selected CMA's in Ontario (000's)

	2000	2001	2002	2003	2004
Toronto	4,747.2	4,883.8	5,020.4	5,114.5	5,203.6
Hamilton	678.8	689.2	697.9	704.8	710.3
London	445.0	449.6	454.5	457.6	459.7
Kitchener	423.4	431.3	438.7	444.7	450.1
Niagara	390.3	391.7	393.2	394.4	394.9
Windsor	313.7	320.8	325.9	328.6	330.9
Oshawa	301.8	308.5	315.8	324.0	332.0
Kingston		152.7	154.4	155.7	156.5

Source: Statistics Canada – Population of CMA's (2001 Census Boundaries)

Figure 3





During this same period, employment in Windsor rose 5,700 from 157,300 to 163,000 (see Table 4), representing an increase of 3.62%.

Because Windsor's population was growing faster (5.4%) than the job market we found rising unemployment in the region. The *Labour Market Bulletin* for the 3rd quarter of 2004, by Human Resources & Skills Development Canada, reported that the region had the highest unemployment rate of the 10 CMA's in Ontario.

Table 3
Labour Force Indicators – January 2005

	Windsor CMA	Ontario
Participation Rate (<i>September 2004</i>)	66.9%	67.9%
Employment Rate	60.3%	63.4%
Unemployment Rate	9.9%	6.7%

EMPLOYMENT BY INDUSTRY

Table 4

Employment by Industry – Windsor CMA (000's)

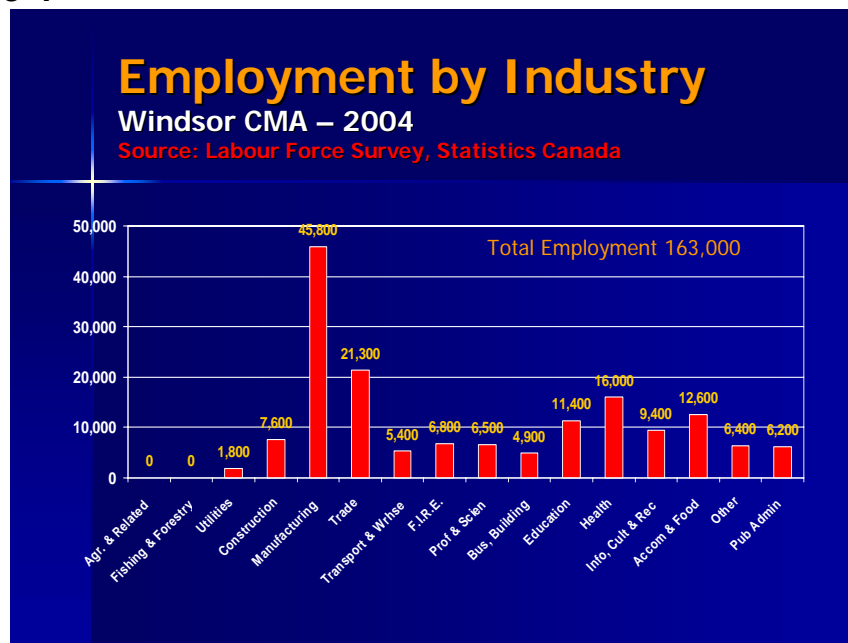
NAICS Category	2000	2001	2002	2003	2004
Agriculture					
Forestry, Fishing, Mining					
Utilities					1.8
Construction	6.5	6.9	8.2	7.7	7.6
Manufacturing	50.0	46.5	49.1	48.3	45.8
Wholesale & Retail Trade	22.0	19.8	19.9	24.5	21.3
Transport & Warehousing	7.7	6.2	5.3	5.9	5.4
Finance, Insurance & Real Estate	5.9	4.2	4.9	6.0	6.8
Professional, Scientific & Technical	7.6	6.6	7.1	6.4	6.5
Business, Building & Other Support Services **	6.0	4.8	4.7	4.4	4.9
Education	8.0	10.1	8.8	11.7	11.4
Health Care & Social Services	12.1	16.3	18.1	16.5	16.0
Information, Culture & Recreation	9.7	10.3	9.2	8.4	9.4
Accommodation & Food	9.1	10.9	11.2	10.7	12.6
Other Services	5.6	6.0	6.8	6.5	6.4
Public Administration	4.6	4.6	5.0	3.6	6.2
Total Employment	157.3	155.6	160.0	162.7	163.0

** Formerly called "Management of Companies, Administration & Other Support Services"

Note: Blank cells are data suppressed by Statistics Canada due to confidentiality

Source: Labour Force Survey – Statistics Canada

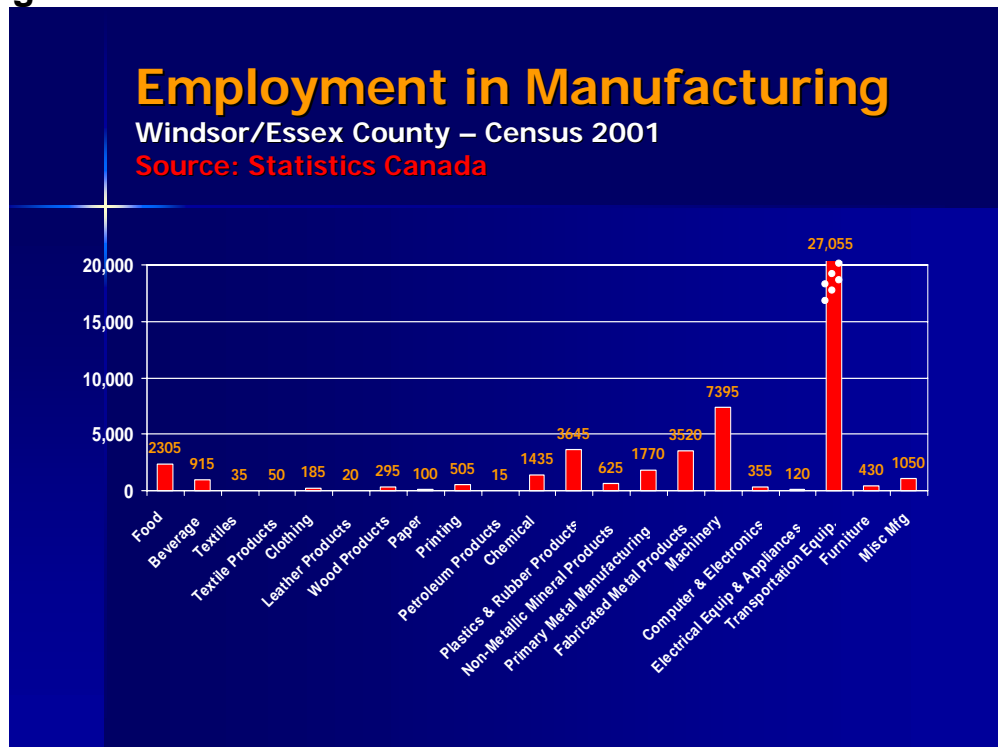
Figure 4



In 2004, total employment in the region was 163,000. More than ¼ of those jobs (28% or 45,800) were in the *Manufacturing Sector*. We note however that employment in Manufacturing was down 8.4% from 2000 when employment in the sector was 50,000.

While the databases are not directly comparable, the 2001 Census (Figure 5) shows that approximately 80% of those employed in Manufacturing were in “*Transportation Equipment*” and its related industries, *Machinery*, *Fabricated Metal Products*, *Rubber & Plastic Products*.

Figure 5



Other significant employer groups in the region were the *Retail Sector* employing 21,300 persons, *Health & Social Services* employing approximately 16,000, *Education* (included St. Clair College and the University of Windsor) employed 11,400 persons.

The significance of the Windsor Casino to the local economy is clear when you consider the *Accommodation & Food* sector (12,600 employees) combined with *Information, Culture and Recreation* (9,400 employees).

ECONOMIC BASE ANALYSIS

An “Economic Base Analysis” is a set of calculations used to profile the local economy and compare it to a Reference Area. In this case the Reference Area will be the Province of Ontario.

Components of an Economic Base Analysis

- Location Quotient Analysis measures the relative concentration of each industry in the community (and its’ contribution) compared to a Reference Area. It employs a simple ratio of “sector employment” to “total employment” to compare the study area and the reference area.

- Shift/Share Analysis consists of three calculations that attribute portions of the “net change in employment” to the following factors:
 - Economic Growth Component – that portion of the net change in employment that is attributed to the state of the provincial economy. This measurement adjusts the analysis for the business cycle in the province.
 - Industry Proportional Shift – that portion attributable to the growth or decline of the industry sector across the entire reference area. This measure adjusts the analysis based on whether the industry as a whole could be characterised as a “sunrise” or “sunset” industry.
 - Differential Shift – the differential attributable to local growth (or decline) of the industry compared to the performance of the industry across the rest of reference area. The *Differential Shift Effect* (DSE) is the key measurement in the Shift/Share Analysis. It shows whether the sector in the local economy is growing relative to the province or whether it is losing share.

The Differential Shift Effect can distinguish between “real” and “apparent” growth in a local industry. Often modest increases in employment for a given industry are masking the fact that the industry is not growing locally as fast as it is across the rest of the province. In this instance the DSE will be negative, despite the sector showing an increase in employment.

Conversely a high DSE shows that the community has a “Competitive Advantage” for that industry. This makes the Shift/Share Analysis a powerful tool for targeting the community’s economic development programs.

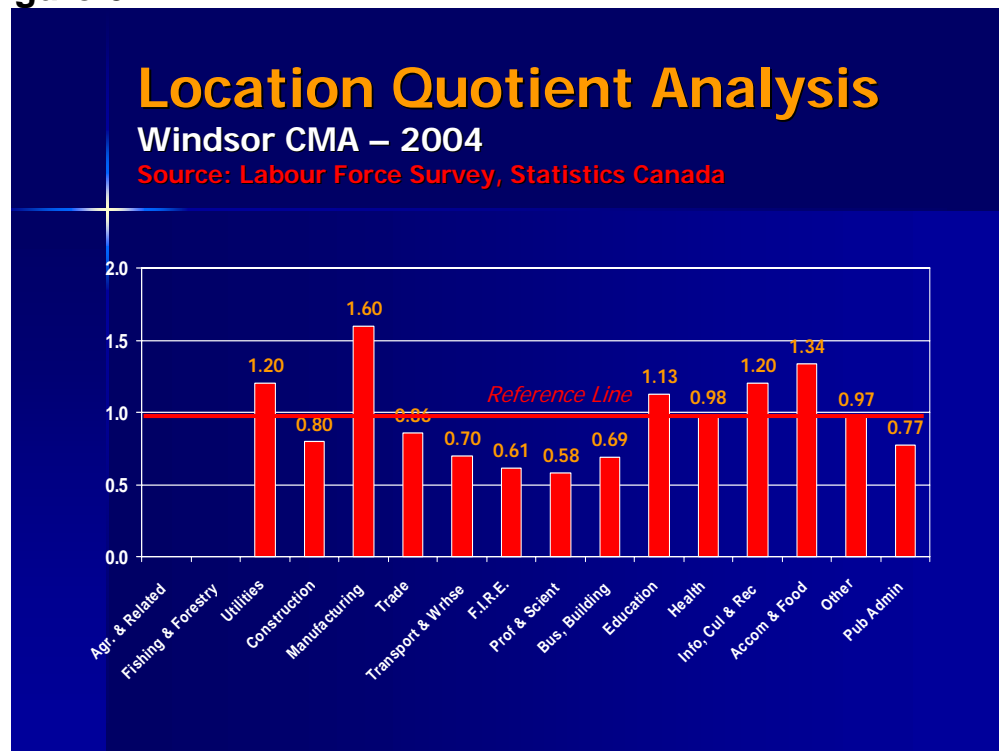
LOCATION QUOTIENT ANALYSIS

To appreciate the significance of each industry in the local economy, we need to look at employment figures in the Provincial context. A **Location Quotient Analysis** calculates the ratio of “*employment by industry*” to “*total employment*” in the community and compares it to the Province.

A Location Quotient (LQ) equal to 1.0 means the employment ratio in that industry sector is the same as the Province’s. An LQ greater or less than 1.0 shows the degree to which industries are over or under represented in the community and highlights their contribution to the local economy.

Using the most recent data available for 2004 we see that the *Manufacturing* sector, as expected, is the largest contributor to the local economy. It has an LQ of 1.60. The second most significant industry in this analysis is the *Tourism* sector with *Accommodation & Food Services* posting an LQ of 1.34 and the *Information, Culture & Recreation* sector (the Windsor Casino represents approximately 85% of the employment in this sector) with an LQ of 1.20.

Figure 6





The *Retail* and *Health & Social Services* industries both fall in the normal range compared to the Province, with LQ's of 0.85 and 0.98 respectively.

Note the low LQ's for all of the commercial services, notably *Finance, Insurance & Real Estate* (LQ 0.61), *Professional, Scientific & Technical Services* (LQ 0.58) and *Business, Building and Other Support Services* (LQ 0.69).

These low LQ's suggest that businesses in the region either have in-house expertise (which would be expected in large companies) or that they use professional advisors outside the region for their legal, accounting, architectural, engineering, marketing and other business services. The latter scenario would represent a signal significant leakage from the region's economy.

We suspect the LQ for the *Utility* sector is an anomalous reading due to small sample size and survey errors in the Labour Force Survey. In all but one of the years in the study period (2004) the employment number for the Utility sector was suppressed by Statistics Canada to meet the confidentiality requirements of the Statistics Act.

It is important to note that because this analysis uses data for the Windsor CMA it only reflects the urban core of Windsor and its adjacent communities. As a result, the significance of the *Agricultural Sector* in Essex County is not reflected in this analysis.

According to 2001 Census data for Essex County (Table 5), the *Agriculture Sector* employed 6,325 persons and had an LQ of 1.91 - centered in the rural parts of the region. We also see that there is a small but significant Fishery in Essex County.

However in terms of both absolute employment and the Location Quotient Analysis, the manufacturing sector is by far the largest contributor to the local economy, directly employing more than one quarter of the labour force and generating substantial wealth for the community.

Table 5
Employment in Agriculture - Essex County
2001 Census

	Employment	LQ
11 Agriculture forestry fishing and hunting (Sector)	6,680	1.83
111-112 Farms	6,325	1.91
1110 Farms (1111 to 1129)	6,325	1.91
113 Forestry and logging	40	0.30
1131 Timber tract operations	0	0.00
1132 Forest nurseries and gathering of forest products	20	1.85
1133 Logging	25	0.17
114 Fishing hunting and trapping	190	2.62
1141 Fishing	175	2.86
1142 Hunting and trapping	10	1.75
115 Support activities for agriculture and forestry	135	1.16
1150 Support activities for farms (1151 to 1152)	125	2.13
1153 Support activities for forestry	10	0.16

Manufacturing industries are highly prized in economic development not only for the wages and salaries paid but because manufacturers are “*Basic*” industries that ship their products to customers outside the local marketplace. Their revenues add to the wealth of the local economy and stimulate growth in other sectors, notably the personal and business services in the community.

SHIFT/SHARE ANALYSIS

Following a decade of steady growth, the regional economy slowed considerably between 2000 and 2004. While it still generated a net increase of 5,700 jobs (see Table 7) it was running at about ¼ the pace of growth experienced between 1996 and 2001.

Table 6 shows total employment growth for both the region and the Province during the period 1996 to 2001 (source StatsCan Census Data). Note that the region's rate of employment growth exceeded that of the province.

Table 7 shows the current period (2000 to 2004) using Labour Force Survey data. While the two data sets are not directly comparable, the slowing of the economy is clearly evident.

Table 6
Total Experienced Labour Force – Ontario & Windsor CMA

	1996 Census	2001 Census	Net Change	% Change
Ontario	5,401,400	6,086,815	685,415	12.6%
Windsor	138,580	159,850	21,270	15.3%

Source: Statistics Canada – 1996 & 2001 Census

Table 7
Total Experienced Labour Force – Ontario & Windsor CMA

	2000 LFS	2004 LFS	Net Change	% Change
Ontario	5,814,000	6,316,300	502,300	8.64%
Windsor	157,300	163,000	5,700	3.62%

Source: Statistics Canada – Labour Force Survey

Tables 8 & 9 on the following page show the net change in employment for each industry sector during the 2000 to 2004 period. From this we are able to calculate the Economic Growth Component, the Industry Proportional Shift and the Differential Shift for the Shift/Share Analysis which is shown in Table 10.

Tables 8 & 9
Net Change in Employment – Windsor CMA

NAICS Category	2000	2004	Net Change	% Change
Agriculture				
Forestry, Fishing, Mining				
Utilities		1,800		
Construction	6,500	7,600	1,100	16.92%
Manufacturing	50,000	45,800	-4,200	-8.40%
Wholesale & Retail Trade	22,000	21,300	-700	-3.18%
Transport & Warehousing	7,700	5,400	-2,300	-29.87%
Finance, Insurance & Real Estate	5,900	6,800	900	15.25%
Professional, Scientific & Technical	7,600	6,500	-1,100	-14.47%
Business, Building & Other Support Services **	6,000	4,900	-1,100	-18.33%
Education	8,000	11,400	3,400	42.50%
Health Care & Social Services	12,100	16,000	3,900	32.23%
Information, Culture & Recreation	9,700	9,400	-300	-3.09%
Accommodation & Food	9,100	12,600	3,500	38.46%
Other Services	5,600	6,400	800	14.29%
Public Administration	4,600	6,200	1,600	34.78%
Total Employment	157,300	163,000	5,700	3.62%

Note: Blank cells represent data suppressed by Statistics Canada due to confidentiality

Net Change in Employment – Ontario

NAICS Category	2000	2004	Net Change	% Change
Agriculture	98,700	78,600	-20,100	-20.36%
Forestry, Fishing, Mining	34,900	34,500	-400	-1.15%
Utilities	44,700	58,300	13,600	30.43%
Construction	320,800	368,500	47,700	14.87%
Manufacturing	1,079,500	1,109,000	29,500	2.73%
Wholesale & Retail Trade	877,100	963,200	86,100	9.82%
Transport & Warehousing	274,400	300,400	26,000	9.48%
Finance, Insurance & Real Estate	381,300	429,800	48,500	12.72%
Professional, Scientific & Technical	417,300	435,800	18,500	4.43%
Business, Building & Other Support Services **	245,600	277,000	31,400	12.79%
Education	365,200	389,600	24,400	6.68%
Health Care & Social Services	537,300	635,900	98,600	18.35%
Information, Culture & Recreation	283,000	303,700	20,700	7.31%
Accommodation & Food	336,400	364,900	28,500	8.47%
Other Services	251,700	256,700	5,000	1.99%
Public Administration	278,900	310,500	31,600	11.33%
Total Employment	5,814,000	6,316,300	502,300	8.64%

Source: Labour Force Survey – Statistics Canada

Table 10
Shift/Share Analysis – Windsor CMA

NAICS Category	Net Change 00/04	Economic Growth Component	Industry Proportional Shift	Differential Shift Effect
Agriculture				
Forestry, Fishing, Mining				
Utilities				
Construction	1,100	562	405	134
Manufacturing	-4,200	4,320	-2,953	-5,566
Wholesale & Retail Trade	-700	1,901	259	-2,860
Transport & Warehousing	-2,300	665	64	-3,030
Finance, Insurance & Real Estate	900	510	241	150
Professional, Scientific & Technical	-1,100	657	-320	-1,437
Business, Building & Other Support Services **	-1,100	518	249	-1,867
Education	3,400	691	-157	2,865
Health Care & Social Services	3,900	1,045	1,175	1,680
Information, Culture & Recreation	-300	838	-129	-1,010
Accommodation & Food	3,500	786	-15	2,729
Other Services	800	484	-373	689
Public Administration	1,600	397	124	1,079
Total Employment	5,700	13,590	0	-7,890

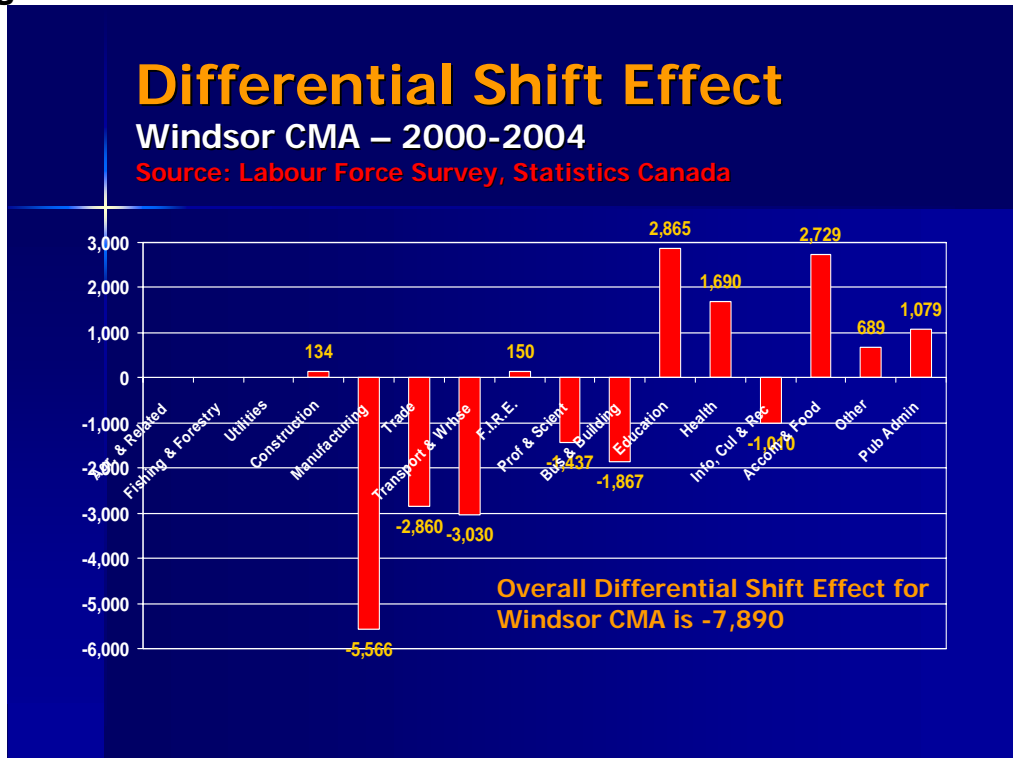
Note: Blank cells represent data suppressed by Statistics Canada due to confidentiality
Source: Labour Force Survey – Statistics Canada

The following graph (Figure 7 on the following page) shows the Differential Shift for each industry in the region, highlighting the relative growth of each sector compared to the Province.

Note the substantial decline in the Manufacturing sector (- 5,566) which accounted for the bulk of the overall drop in the Differential Shift for the region (-7,890).

Because the automotive industry is so dominant - representing an estimated 80% of the all manufacturing jobs (which in turn account for 28% of all jobs) - the impact of a slow down in the automotive industry is felt by virtually every business in the region.

Figure 7



As the graph shows, between 2000 and 2004, the *Manufacturing* sector in the region took a terrible hit. When considered in the context of the relatively strong Provincial growth, the actual loss of 4,200 jobs in the region's *Manufacturing* sector has the same effect as losing 5,566 jobs.

Sectors which were under-performing and therefore lost share in the provincial context (negative DSE) according to the analysis were:

Under-Performing Sectors

- Manufacturing - 5,566
- Wholesale & Retail Trade Sector - 2,860
- Transportation & Warehousing - 3,030
 - (likely reflecting a weaker manufacturing sector)
- Professional, Scientific & Technical Services - 1,437
- Business, Building & other Support Services - 1,867
- Information, Culture & Recreation - 1,010



Sectors out-performing the provincial economy (positive DSE) and therefore gaining share in the region include:

High-Performing Sectors

- Education + 2,865
- Health Care + 1,690
- Accommodation & Food + 2,729
- Public Administration + 1,079

The remaining sectors of the economy performed at or near Provincial levels.

The overall result of the Shift/Share Analysis shows that in the context of the provincial economy, the region lost the equivalent of 7,890 jobs between 2000 and 2004 in spite of having an absolute increase of 5,700 jobs.

RANKING THE PERFORMANCE OF THE REGION'S INDUSTRIES

To wrap up the analysis we use a performance classification system developed by Dr. Emanuel Carvalho, Associate Professor of Economics at the University of Waterloo.

Dr. Carvalho is well known to economic developers as the assistant director of the professional development program offered at the University of Waterloo on behalf of the Economic Developers Association of Canada.

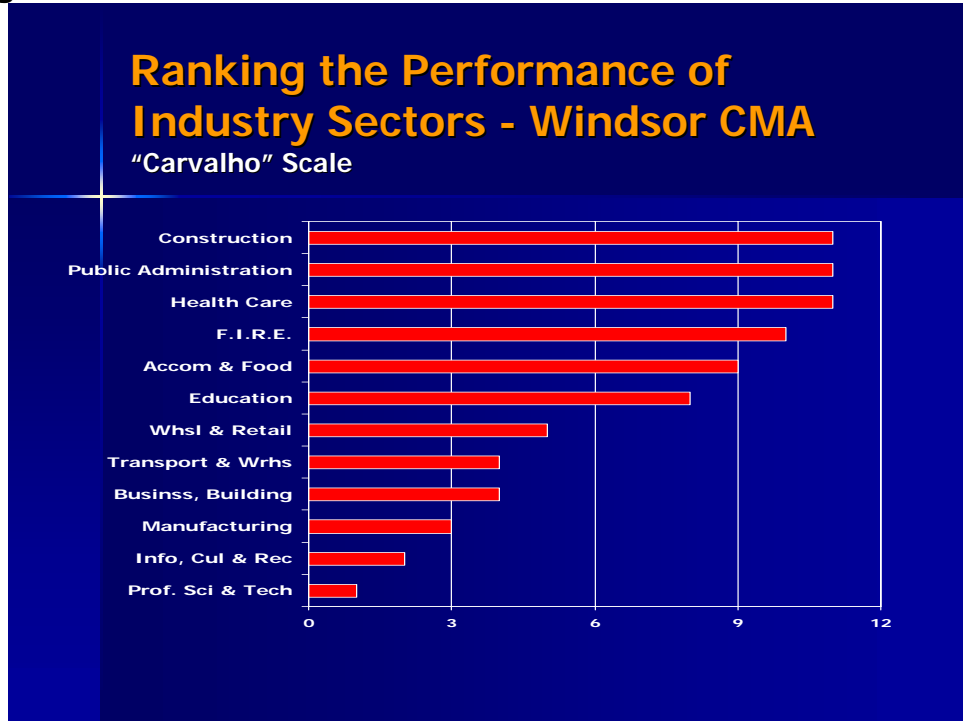
Dr. Carvalho's classification system combines three separate measures generated in the Economic Base Analysis. The first is the degree of concentration of each industry sector as measured by the *Location Quotient*. The second is the overall growth or decline of the industry across the reference area as indicated by the *Industrial Mix Effect*. The third is the relative growth or decline of the industry in the local economy based on the *Differential Shift Effect*. The classification system ranks these factors into 12 categories divided into High, Medium and Low divisions.

Economic Performance Classification System

Classification	Location Quotient	Industry Proportional Shift	Differential Shift
High			
12. Driving	>1.25	Positive	Positive
11. Accelerating	0.75-1.25	Positive	Positive
10. Rising	<0.75	Positive	Positive
Medium			
9. Evolving	>1.25	Negative	Positive
8. Transitional	0.75-1.25	Negative	Positive
7. Moderate	<0.75	Negative	Positive
6. Promising	>1.25	Positive	Negative
5. Yielding	0.75-1.25	Positive	Negative
4. Modest	<0.75	Positive	Negative
Low			
3. Challenging	>1.25	Negative	Negative
2. Vulnerable	0.75-1.25	Negative	Negative
1. Marginal	<0.75	Negative	Negative

The following graph shows the results of the application of the Carvalho Scale to the analysis.

Figure 8



TARGET SECTORS FOR PRIORITY ATTENTION

We recommend the following sectors be targeted for attention in the economic development strategies that are to be developed for Windsor and Essex County

Recommended Targets

- Manufacturing
- Financial Services
- Health Care
- Post-Secondary Education
- Tourism Development

Manufacturing

The Manufacturing sector in the region should be a “**High Priority Retention & Expansion Target**” in any economic development strategy for the community. With employment of 45,800 and an LQ of 1.60 the sector dominates the local economy, driving the performance of virtually every other business in the region.

Finance, Insurance & Real Estate

Financial services in the region offer great promise as an “**Emerging Industry Target**” and should be a priority in the economic development programs of Windsor and Essex County. The industry is currently under-represented in the region (LQ of 0.61) although it employs 6,800 persons. The industry is a growth industry in Ontario (it posted a 12.72% increase in employment provincially) and locally the sector out-performed the province (15.25% growth in the Windsor CMA).

HealthCare

The Health sector is often over looked in economic development programs despite the fact that the hospitals are among the largest employers in every community. We believe the sector is worthy of closer study as an “**Expansion Target**”. The Health Sector employs approximately 16,000 persons in the region with an LQ of 0.98 - in balance with the provincial ratio. There has been significant employment growth in the Health Sector both provincially and locally (18.35% and 32.23% respectively) over the last five years and locally the sector is outperforming the province with a strong the Differential Shift Effect of 1,680.

While health spending is determined by provincial policies and there is not much local control, local officials should offer political support to hospital management in their financial petitions to the province.



Education

Due to the presence of both a university and a community college, the Education sector in Windsor is well-represented employing 11,400 persons and having a Location Quotient of 1.13. Although enrollment in the elementary and secondary school systems is dictated by population levels, post-secondary institutions attract students from outside the local area and therefore are considered “Basic Industries”. They can be targeted as an “**Expansion Target**” in the region’s economic development programs.

The employment growth recorded in the last five years (3,400 new jobs for a 42.5% increase) suggests that St. Clair College and the University of Windsor are enjoying success in attracting students. An economic development strategy for the region should include support for the continued growth of these institutions.

Tourism Development

(Accommodation & Food and Information Culture & Recreation combined)
Since the opening of Casino Windsor, the hospitality sector in Windsor Essex has taken on a new significance. The LQ’s for the *Accommodation & Food* and the *Information, Culture & Recreation* sectors are quite high (LQ 1.34 and 1.20 respectively) and although there was a dip in the employment in the latter, there has been strong employment growth (3,500 new jobs or 38.46% increase) in the *Accommodation & Food* side of the industry.

The announcement of a major capital investment at the Casino is welcome news as it will stimulate development in the rest of the industry.

We believe the sector merits inclusion as a “**Business Attraction Target**”

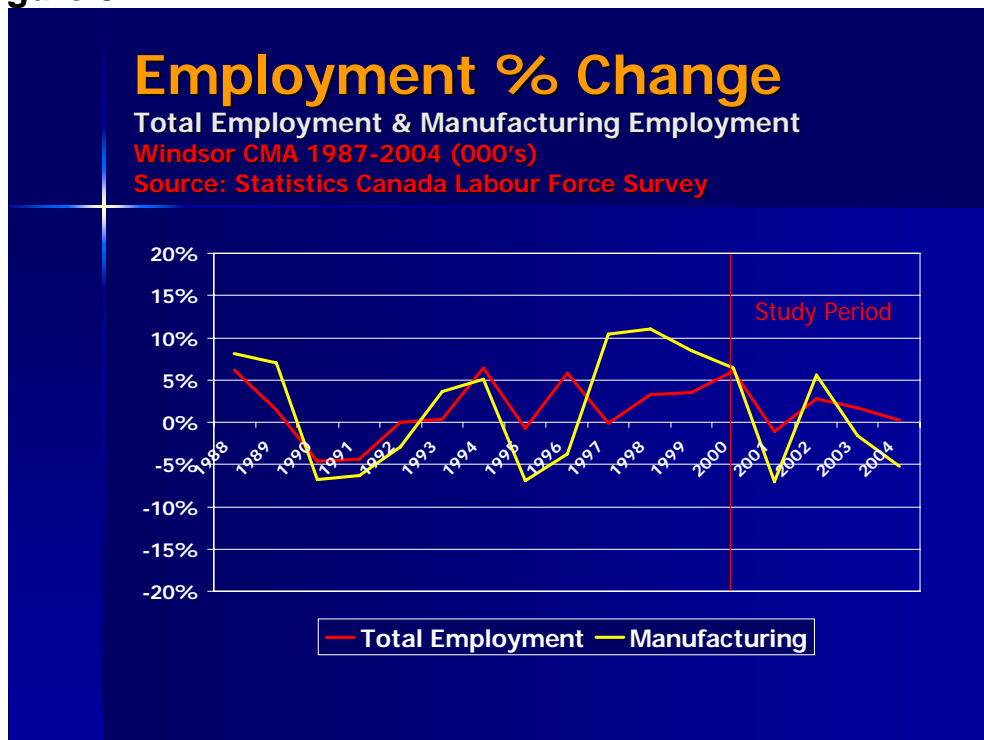
OBSERVATIONS FROM THE ANALYSIS

Long Term Outlook

Because of its' prominence in the regional economy, the automotive sector tends to drive the economic performance of the entire region - not unlike many other jurisdictions in Ontario with dominant industries.

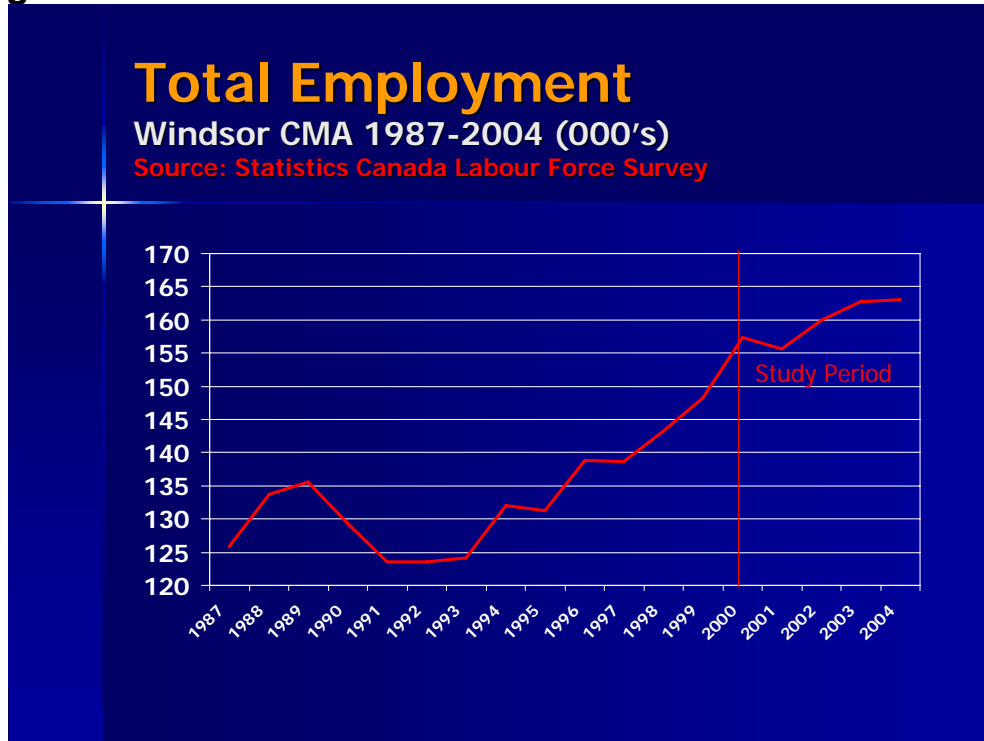
The following graph (Figure 9) traces the changes in employment (% Change) of both the *Manufacturing* sector and *Total Employment* for the region from 1987 to 2004. Note how the two have tended to move in concert over the years.

Figure 9



Despite the apparent cyclical economy shown in Figure 9, the region has enjoyed a long sustained period of growth since the recession of 1989/1990. It has only flattened in the last few years, as shown in Figure 10 on the following page.

Figure 10



We are confident that recent announcements by the “Big Three” automakers and the Windsor Casino will lead to a return to the buoyant growth rates the region has seen over the past decade.



Appendices

Table 11
Employment in Manufacturing Windsor/Essex County – 2001 Census
Labour Flow Analysis – 4 digit NAICS

Manufacturing Sub-Sectors (NAICS classification)	Jobs in Essex County	Employed Resident Labour Force Essex County	Net export (-) or import (+) of labour	Location Quotient (LQ) Local Jobs
31-33 Manufacturing (Sector)	49,265	51,825	-2,560	1.70
311 Food manufacturing	2,105	2,305	-200	0.85
3111 Animal food manufacturing	45	40	5	0.38
3112 Grain and oilseed milling	245	245	0	1.56
3113 Sugar and confectionery product manufacturing	20	35	-15	0.09
3114 Fruit & vegetable preserving & specialty food manufacturing	1,155	1,190	-35	4.77
3115 Dairy product manufacturing	35	40	-5	0.15
3116 Meat product manufacturing	70	85	-15	0.12
3117 Seafood product preparation and packaging	135	250	-115	5.18
3118 Bakeries and tortilla manufacturing	320	355	-35	0.53
3119 Other food manufacturing	75	70	5	0.26
312 Beverage and tobacco product manufacturing	890	915	-25	2.22
3121 Beverage manufacturing	890	915	-25	2.48
3122 Tobacco manufacturing	0	0	0	0.00
313 Textile mills	35	35	0	0.16
3131 Fibre yarn and thread mills	15	15	0	0.32
3132 Fabric mills	15	15	0	0.14
3133 Textile and fabric finishing and fabric coating	10	0	10	0.15
314 Textile product mills	40	50	-10	0.16
3141 Textile furnishings mills	10	0	10	0.09
3149 Other textile product mills	35	45	-10	0.25
315 Clothing manufacturing	185	185	0	0.22
3151 Clothing knitting mills	0	0	0	0.00
3152 Cut and sew clothing manufacturing	60	65	-5	0.09
3159 Clothing accessories and other clothing manufacturing	115	115	0	2.01
316 Leather and allied product manufacturing	25	20	5	0.24
3161 Leather and hide tanning and finishing	0	0	0	0.00
3162 Footwear manufacturing	10	0	10	0.18
3169 Other leather and allied product manufacturing	20	20	0	0.48
321 Wood product manufacturing	250	295	-45	0.27
3211 Sawmills and wood preservation	25	20	5	0.09
3212 Veneer plywood and engineered wood product manufacturing	40	35	5	0.21
3219 Other wood product manufacturing	185	235	-50	0.41
322 Paper manufacturing	90	100	-10	0.09
3221 Pulp paper and paperboard mills	0	0	0	0.00

	Jobs in Essex County	Employed Resident Labour Force Essex County	Net export (-) or import (+) of labour	Location Quotient (LQ) Local Jobs
3222 Converted paper product manufacturing	95	100	-5	0.18
323 Printing and related support activities	490	505	-15	0.39
3231 Printing and related support activities	485	505	-20	0.39
324 Petroleum and coal products manufacturing	10	15	-5	0.06
3241 Petroleum and coal products manufacturing	10	10	0	0.06
325 Chemical manufacturing	1,310	1,435	-125	0.89
3251 Basic chemical manufacturing	400	410	-10	1.63
3252 Resin synthetic rubber and artificial and synthetic fibres and filaments manufacturing	25	30	-5	0.12
3253 Pesticide fertilizer and other agricultural chemical manufacturing	35	40	-5	0.92
3254 Pharmaceutical and medicine manufacturing	355	400	-45	0.96
3255 Paint coating and adhesive manufacturing	230	255	-25	1.47
3256 Soap cleaning compound and toilet preparation manufacturing	35	40	-5	0.15
3259 Other chemical product manufacturing	230	260	-30	1.06
326 Plastics and rubber products manufacturing	3,605	3,645	-40	1.86
3261 Plastic product manufacturing	3,485	3,510	-25	2.17
3262 Rubber product manufacturing	120	130	-10	0.36
327 Non-metallic mineral product manufacturing	550	625	-75	0.79
3271 Clay product and refractory manufacturing	80	100	-20	0.95
3272 Glass and glass product manufacturing	40	45	-5	0.21
3273 Cement and concrete product manufacturing	330	370	-40	1.26
3274 Lime and gypsum product manufacturing	0	0	0	0.00
3279 Other non-metallic mineral product manufacturing	100	110	-10	0.85
331 Primary metal manufacturing	1,725	1,770	-45	1.16
3311 Iron and steel mills and ferro-alloy manufacturing	65	80	-15	0.09
3312 Steel product manufacturing from purchased steel	275	280	-5	1.29
3313 Alumina and aluminum production and processing	45	50	-5	0.40
3314 Non-ferrous metal (except aluminum) production and processing	10	10	0	0.08
3315 Foundries	1,330	1,350	-20	4.07
332 Fabricated metal product manufacturing	3,345	3,520	-175	1.19
3321 Forging and stamping	430	460	-30	2.11
3322 Cutlery and hand tool manufacturing	150	160	-10	1.49
3323 Architectural and structural metals manufacturing	725	765	-40	1.23
3324 Boiler tank and shipping container manufacturing	65	75	-10	0.30
3325 Hardware manufacturing	35	40	-5	0.16
3326 Spring and wire product manufacturing	360	385	-25	2.23
3327 Machine shops turned product and screw nut and bolt manufacturing	650	690	-40	1.01

	Jobs in Essex County	Employed Resident Labour Force Essex County	Net export (-) or import (+) of labour	Location Quotient (LQ) Local Jobs
3328 Coating engraving heat treating and allied activities	560	585	-25	1.85
3329 Other fabricated metal product manufacturing	375	355	20	1.00
333 Machinery manufacturing	7,255	7,395	-140	3.43
3331 Agricultural construction and mining machinery manufacturing	65	75	-10	0.28
3332 Industrial machinery manufacturing	100	120	-20	0.45
3333 Commercial and service industry machinery manufacturing	65	75	-10	0.37
3334 Ventilation heating air-conditioning and commercial refrigeration equipment manufacturing	135	145	-10	0.70
3335 Metalworking machinery manufacturing	5,445	5,500	-55	8.04
3336 Engine turbine and power transmission equipment manufacturing	300	305	-5	3.38
3339 Other general-purpose machinery manufacturing	1,140	1,175	-35	2.18
334 Computer and electronic product manufacturing	295	355	-60	0.15
3341 Computer and peripheral equipment manufacturing	50	65	-15	0.13
3342 Communications equipment manufacturing	0	0	0	0.00
3343 Audio and video equipment manufacturing	10	15	-5	0.23
3344 Semiconductor and other electronic component manufacturing	15	30	-15	0.03
3345 Navigational measuring medical and control instruments manufacturing	215	240	-25	0.57
3346 Manufacturing and reproducing magnetic and optical media	0	10	-10	0.00
335 Electrical equipment appliance and component manufacturing	100	120	-20	0.10
3351 Electric lighting equipment manufacturing	0	10	-10	0.00
3352 Household appliance manufacturing	10	15	-5	0.06
3353 Electrical equipment manufacturing	75	80	-5	0.25
3359 Other electrical equipment and component manufacturing	10	15	-5	0.02
336 Transportation equipment manufacturing	25,600	27,055	-1,455	4.72
3361 Motor vehicle manufacturing	11,620	12,305	-685	7.29
3362 Motor vehicle body and trailer manufacturing	65	55	10	0.31
3363 Motor vehicle parts manufacturing	13,850	14,600	-750	4.73
3364 Aerospace product and parts manufacturing	35	60	-25	0.08
3365 Railroad rolling stock manufacturing	0	10	-10	0.00
3366 Ship and boat building	15	20	-5	0.26
3369 Other transportation equipment manufacturing	15	20	-5	0.98
337 Furniture and related product manufacturing	415	430	-15	0.33
3371 Household and institutional furniture and kitchen cabinet manufacturing	310	325	-15	0.46

	Jobs in Essex County	Employed Resident Labour Force Essex County	Net export (-) or import (+) of labour	Location Quotient (LQ) Local Jobs
3372 Office furniture (including fixtures) manufacturing	85	80	5	0.18
3379 Other furniture-related product manufacturing	25	20	5	0.25
339 Miscellaneous manufacturing	950	1,050	-100	0.91
3391 Medical equipment and supplies manufacturing	95	110	-15	0.41
3399 Other miscellaneous manufacturing	855	940	-85	1.06

Source: Special Compilation by Ontario Ministry of Municipal Affairs & Housing – Rural Economic Development Division – from 2001 Census Data



NORTH AMERICAN INDUSTRIAL CLASSIFICATION SYSTEM SECTOR DESCRIPTIONS

Agriculture, Forestry, Fishing and Hunting (Code 11)

This sector comprises establishments primarily engaged in growing crops, raising animals, harvesting timber, harvesting fish and other animals from their natural habitats and providing related support activities.

Establishments primarily engaged in agricultural research or that supply veterinary services are not included in this sector.

Mining and Oil and Gas Extraction (Code 21)

This sector comprises establishments primarily engaged in extracting naturally occurring minerals. These can be solids, such as coal and ores; liquids, such as crude petroleum., and gases, such as natural gas. The term "mining" is used in the broad sense to include quarrying, well operations, milling (for example, crushing, screening, washing, or flotation) and other preparation customarily done at the mine site, or as a part of mining activity. Establishments engaged in exploration for minerals, development of mineral properties mining operations are included in this sector. Establishments performing similar activities, on a contract or fee basis, are also included.

Utilities (Code 22)

This sector comprises establishments primarily engaged in operating electric, gas and water utilities. These establishments generated, transmit, control and distribute electric power; distribute natural gas; treat and distribute water; operate sewer systems and sewage treatment facilities; and provide related services, generally through a permanent infrastructure of lines, pipes and treatment and processing facilities.

Construction (Code 23)

This sector comprises establishments primarily engaged in constructing, repairing and renovating buildings and engineering works, and in subdividing and developing land. These establishments may operate on their own account or under contract to other establishments. They may produce complete projects or just parts of projects. Establishments often subcontract some or all of the work involved in a project. Establishments may produce new construction, or undertake repairs and renovations to existing structures.

A construction establishment may be the only establishment of an enterprise, or one of several establishments of an integrated real estate enterprise engaged in the land assembly, development, financing, building and sale of large projects.



Establishments classified in this sector are known by a variety of trade designations depending on the scope of the projects they undertake, the degree of responsibility and risk that they assume, and the type of structure that they produce. Prime contractors are primarily engaged in the construction of complete works, while trade contractors primarily undertake a component of a project, under contract to a prime contractor or a principal.

There are two main types of construction produced-buildings and engineering works. Buildings are distinguished by their primary function, such as residential, commercial and industrial. Engineering works include dams; non-building industrial works such as refineries, highways, roads and streets; bridges; sewers; power and communications transmission lines; and similar structures and works.

Exclusion(s): Establishments primarily engaged in:

- manufacturing and installing building equipment, such as power boilers; manufacturing pre-fabricated buildings (31-33, Manufacturing);
- operating highways, streets and bridges (48-49, Transportation and Warehousing); and
- project management (56, Administrative and Support, Waste Management and Remediation Services)

Manufacturing (Code 31 - 33)

This sector comprises establishments primarily engaged in the physical or chemical transformation of materials or substances into new products. These products may be finished, in the sense that they are ready to be used or consumed, or semi-finished, in the sense of becoming a raw material for an establishment to use in further manufacturing. Related activities, such as the assembly of the component parts of manufactured goods; the blending of materials; and the finishing of manufactured products by dyeing, heat-treating, plating and similar operations are also treated as manufacturing activities. Manufacturing establishments are known by a variety of trade designations, such as plants.

Manufacturing establishments may own the materials they transform or they may transform materials owned by other establishments. Manufacturing may take place in factories or in workers' homes, using either machinery or hand tools.

Certain activities involving the transformation of goods are classified in other sectors. Some examples are post-harvest activities of agricultural establishments, such as crop drying; logging; the beneficiating of mineral ores; the production of structures by construction establishments; and various activities conducted by retailers, such as meat cutting and the assembly of products such as bicycles and computers.

Wholesale Trade (Code 41)

This sector comprises establishments primarily engaged in wholesaling merchandise and providing related logistics, marketing and support services. The wholesaling process is generally an intermediate step in the distribution of merchandise; many wholesalers are therefore organised to sell merchandise in large quantities to retailers, and business and institutional clients. However, some wholesalers, in particular those that supply non-consumer capital goods, sell merchandise in single units to final users.

This sector recognises two main types of wholesalers, that is, wholesale merchants and wholesale agents and brokers.

Wholesale Merchants

Wholesale merchants buy and sell merchandise on their own account, that is, they take title to the goods they sell. They generally operate from warehouse or office locations and they may ship from their own inventory or arrange for the shipments of goods directly from the supplier to the client. In addition to the sale of goods, they may provide, or arrange for the provision of; logistics, marketing and support services, such as packaging and labelling, inventory management, shipping, handling of warranty claims, in-store or co-op promotions, and product training. Dealers of machinery and equipment, such as dealers of farm machinery and heavy-duty trucks, also fall within this category.

Wholesale merchants are known by a variety of trade designations depending on their relationship with suppliers or customers or the distribution method they employ. Examples include wholesale merchants, wholesale distributors, drop shippers, rack-jobbers, import-export merchants, buying groups, dealer-owned co-operatives and banner wholesalers.

The first eight sub-sectors of wholesale trade comprise wholesale merchants. The grouping of these establishments into industry groups and industries is based on the merchandise line or lines supplied by the wholesaler.

Wholesale Agents and Brokers

Wholesale agents and brokers buy and sell merchandise owned by others on a fee or commission basis. They do not take title to the goods they buy or sell, and they generally operate at or from an office location.

Wholesale agents and brokers are known by a variety of trade designations including import-export agents, wholesale commission agents, wholesale brokers, and manufacturer's representatives and agents.



Retail Trade (Code 44-45)

The retail trade sector comprises establishments primarily engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.

The retailing process is the final step in the distribution of merchandise; retailers are therefore organised to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers, that is, store and non-store retailers. Their main characteristics are described below.

Store Retailers

Store retailers operate fixed point-of-sale locations, located and designed to attract a high volume of walk-in customers. In general, retail stores have extensive displays of merchandise and use mass-media advertising to attract customers. They typically sell merchandise to the general public for personal or household consumption, but some also serve business and institutional clients. These include establishments such as office supplies stores, computer and software stores, gasoline stations, building material dealers, plumbing supplies stores and electrical supplies stores.

In addition to selling merchandise, some types of store retailers are also engaged in the provision of after-sales services, such as repair and installation. For example, new automobile dealers, electronic and appliance stores and musical instrument and supplies stores often provide installation services. As a general rule, establishments engaged in retailing merchandise and providing after sales and services are classified in this sector.

Catalogue sales showrooms, gasoline service stations, and mobile home dealers are treated as store retailers.

Non-Store Retailers

Non-store retailers, like store retailers, are organised to serve the general public, but their retailing methods differ. The establishments of this sub-sector reach customers and market merchandise with methods such as, the broadcasting of infomercials, the broadcasting and publishing of direct-response advertising, the publishing of traditional and electronic catalogues, door-to-door solicitation, in-home demonstration, temporary displaying of merchandise (stalls) and distribution by vending machines.

The methods of transaction and delivery of merchandise vary by type of non-store retailers. For example, non-store retailers that reach their customers using information technologies can receive payment at the time of purchase or at the time of delivery, and the delivery of the merchandise may be done by the retailer or by a third party, such as the post office or a courier. In contrast, non-store retailers that reach their customers by door-to-door solicitation, in-home demonstration, temporary displaying of merchandise



(stalls) and vending machines typically receive payment and deliver the merchandise to the customer at the time of the purchase.

The non-store retailers sub-sector also includes establishments engaged in the home delivery of products. This includes home heating oil dealers and newspaper delivery companies.

Transportation and Warehousing (Code 48-49)

This sector comprises establishments primarily engaged in transporting passengers and goods, warehousing and storing goods, and providing services to these establishments. The modes of transportation are road (tracking, transit and ground passenger), rail, water, air and pipeline. These are further subdivided according to the way in which businesses in each mode organise their establishments. National post office and courier establishments, which also transport goods, are included in this sector. Warehousing and storage establishments are subdivided according to the type of service and facility that is operated.

Many of the establishments in this sector are structured as networks, with activities, workers, and physical facilities distributed over an extensive geographic area.

Exclusion(s): Establishments primarily engaged in:

- renting and leasing transportation equipment without operation (532, Rental and Leasing Services).

Information and Cultural Industries (Code 51)

This sector comprises establishments primarily engaged in creating and disseminating (except by wholesale and retail methods) information and cultural products, such as written works, musical works or recorded performances, recorded dramatic performances, software and information databases, or providing the means to disseminate them. Establishments that provide access to equipment and expertise to process information are also included.

The unique characteristics of information and cultural products, and of the processes involved in their production and distribution, distinguish this sector from the goods-producing and services-producing sectors. In particular,

- the value of these products lies in their information, educational, cultural or entertainment content, not in the format in which they are distributed. Most of these products are protected from unlawful reproduction by copyright laws. Only those possessing the rights to these works are authorised to reproduce, alter, improve and distribute them. Acquiring and using these rights often involved significant costs.

- the intangible nature of the content of information and cultural products allows for their distribution in various forms. For example; a movie can be shown at a movie theatre, on a television broadcast, through video on demand, or rented at a local video store; a sound recording can be aired on radio, embedded in multi-media products or sold at a record store; software can be bought at retail outlets or downloaded from an electronic bulletin board; a newspaper can be purchased at a news-stand or received on-line. In addition, improvements in information technology are revolutionising the distribution of these products. The inclusion in this sector of telecommunications carriers and Inter-net access providers reflects the increasingly important role these establishments play in making these products accessible to the public.

The main components of this sector are the publishing industries, including software publishing, the motion picture and sound recording industries, the broadcasting and telecommunications industries, and the information services and data processing industries. There are establishments engaged in culture related activities that are classified in other sectors of NAICS. The most important are listed below.

Exclusion(s): Establishments primarily engaged in:

- duplicating information or cultural products in print form, or in the form of optical or magnetic media-(31-33, Manufacturing);
- wholesaling information and cultural products such as newspapers, books, software, videocassettes and sound recordings (41, Wholesale Trade).,
- retailing information and cultural products such as newspapers, books, software and sound recordings (44-45, Retail Trade).
- design activities (54, Professional, Scientific and Technical Services),
- producing live presentations that involve the performances of actors and actresses, singers, dancers, musical groups and artists, and other performing artists (71, Arts, Entertainment and Recreation);
- performing in artistic productions, and in creating artistic and cultural works or productions as independent individuals (71, Arts, Entertainment and Recreation); and
- preserving and exhibiting objects, sites, and natural wonders of historical, cultural and/or educational value (71, Arts, Entertainment and Recreation).

Finance and Insurance (Code 52)

This sector comprises establishments primarily engaged in financial transactions (that is, transactions involving the creation, liquidation, or change in ownership of financial assets) or in facilitating financial transactions. Included are:

- establishments that are primarily engaged in financial intermediation. They raise funds by taking deposits and/or issuing securities, and, in the process, incur liabilities, which they use to acquire financial assets by making loans and/or purchasing securities. Putting themselves at risk, they channel funds from lenders to borrowers and transform or repackage the funds with respect to maturity, scale and risk.
- establishments that are primarily engaged in the pooling of risk by underwriting annuities and insurance. They collect fees (insurance premiums or annuity considerations), build up reserves, invest those reserves and make contractual payments. Fees are based on the expected incidence of the insured risk and the expected return on investment.
- establishments that are primarily engaged in providing specialised services that facilitate or support financial intermediation, insurance and employee benefit programs.

In addition, establishments charged with monetary control - the monetary authorities - are included in this sector.

Real Estate (Code 53)

This sector comprises establishments primarily engaged in renting, leasing or otherwise allowing the use of tangible or intangible assets. Establishments primarily engaged in managing real estate for other; selling, renting and/or buying of real estate for others; and appraising real estate, are also included.

Professional, Scientific and Technical Services (Code 54)

This sector comprises establishments primarily engaged in activities in which human capital is the major input. These establishments make available the knowledge and skills of the employees, often on an assignment basis. The individual industries of this sector are defined on the basis of the particular expertise and training of the service provider.

The main components of this sector are legal services industries, accounting and related services industries, architectural, engineering and related services industries, surveying and mapping services industries, design services industries, management, scientific and technical consulting services industries, scientific research and development services industries, and advertising services industries.

The distinguishing feature of this sector is the fact that most of the industries grouped in it have production processes that are almost wholly dependent on worker skills. In most of these industries, equipment and materials are not of major importance. Thus, the establishments classified in this sector sell expertise. Much of the expertise requires a university or college education, though not in every case.



Establishments primarily engaged in providing instruction and training in a wide variety of subjects and those primarily engaged in providing health care by diagnosis and treatment are not included in this sector.

Management of Companies and Enterprises (Code 55)

This industry comprises establishments primarily engaged in managing companies and enterprises and/or holding the securities or financial assets of companies and enterprises, for the purpose of owning a controlling interest in them and/or influencing their management decisions. They may undertake the function of management, or they may entrust the function of financial management to portfolio managers.

Business, Building and Other Support Services (Code 56) (Formerly - Administrative and Support, Waste Management and Remediation Services)

This sector comprises two different types of establishments; those primarily engaged in activities that support the day-to-day operations; and those primarily engaged in waste management activities.

The first type of establishment is engaged in activities such as administration, hiring and placing personnel, preparing documents, taking orders from clients, collecting payments for claims, arranging travel, providing security and surveillance, cleaning buildings, and packaging and labelling products. These activities are often undertaken, in-house, by establishments found in many sectors of the economy. The establishments classified to this sector specialise in one or more of these activities and can therefore provide services to clients in a variety of industries and, in some cases to households.

Waste management establishments are engaged in the collection, treatment and disposal of waste material, the operation of material recovery facilities, the remediation of polluted sites and the cleaning of septic tanks.

Educational Services (Code 61)

This sector comprises establishments primarily engaged in providing instruction and training in a wide variety of subjects. This instruction and training is provided by specialised establishments, such as schools, colleges, universities and training centres. These establishments may be privately owned and operated, either for profit or not, or they may be publicly owned and operated. They may also offer food and accommodation services to their students.

Educational services are usually delivered by teachers who explain, tell, demonstrate, supervise and direct self-learning. Instruction is imparted in diverse settings, such as educational institutions, the workplace or the home (through correspondence, television or other means). The lessons can be adapted to the particular needs of the students,

for example sign language can replace verbal language for teaching students with hearing impairments. All industries in the sector share this commonality of process, namely, labour inputs of teachers with the requisite subject matter expertise and teaching ability.

Health Care and Social Assistance (Code 62)

This sector comprises establishments primarily engaged in providing health care by diagnosis and treatment, providing residential care for medical and social reasons, and providing social assistance, such as counselling, welfare, child protection, community housing and food services, vocational rehabilitation and child care, to those requiring such assistance.

Arts, Entertainment and Recreation (Code 71)

This sector comprises establishments primarily engaged in operating facilities or providing services to meet the cultural, entertainment and recreational interests of its patrons. These establishments produce, promote or participate in live performances, events or exhibits intended for public viewing; provide the artistic, creative and technical skills necessary for the production of artistic products and live performances, preserve and exhibit objects and sites of historical, cultural or educational interest; and operate facilities or provide services that enable patrons to participate in sports or recreational activities or pursue amusement, hobbies and leisure-time interests.

There are establishments engaged in activities related to arts and recreation that are classified in other sectors of NAICS. The most important are listed below.

Exclusion(s):

- transportation establishments providing sightseeing and pleasure cruises (48-49, Transportation and Warehousing);
- motion picture theatres, libraries and archives, and publishers or newspapers, magazines, books, periodicals and computer software (51, Information and Cultural Industries);
- establishments that provide both accommodation and recreational facilities, such as hunting and fishing camps, resorts and casino hotels (721, Accommodation Services); and
- restaurants and night clubs that provide live entertainment in addition to the sale of food and beverages (722, Food Services and Drinking Places).

Accommodation and Food Services (Code 72)

This sector comprises establishments primarily engaged in providing short-term lodging and complementary services to travellers, vacationers and others, in facilities such as hotels, motor hotels, resorts, motels, casino hotels, bed and breakfast accommodation,



housekeeping cottages and cabins, recreational vehicle parks and campgrounds, hunting and fishing camps, and various types of recreational and adventure camps. This sector also comprises establishments primarily engaged in preparing meals, snacks and beverages, to customer order, for immediate consumption on and off the premises.

Other Services (except Public Administration) (Code 81)

This sector comprises establishments, not classified to any other sector, primarily engaged in repairing, or performing general or routine maintenance, on motor vehicles, machinery, equipment and other products to ensure that they work efficiently; providing personal care services, funeral services, laundry services and other services to individuals, such as pet care services and photo finishing services; organising and promoting religious activities; supporting various causes through grant-making, advocating (promoting) various social and political causes, and promoting and defending the interests of their members. Private households are also included.

Public Administration (Code 91)

This sector comprises establishments primarily engaged in activities of a governmental nature, the enactment and judicial interpretation of laws and their pursuant regulations, and the administration of programs based on them. Legislative activities, taxation, national defence, public order and safety, immigration services, foreign affairs and international assistance, and the administration of government programs are activities that are purely governmental in nature.

Ownership is not a criterion for classification. Government owned establishments engaged in activities that are not governmental in nature are classified to the same industry as privately owned establishments engaged in similar activities.

Government establishments may engage in a combination of governmental and non-governmental activities. When separate records are not available to separate the activities that are not governmental in nature from those that are, the establishment is classified to this sector.