Cape Breton Prosperity Gap Study

Presented to:

Cape Breton Partnership
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Executive Summary

In 2009, Enterprise Cape Breton Corporation and the Cape Breton Partnership released the Cape Breton Prosperity Study. That study, using a methodology developed by the Institute for Competitiveness and Prosperity, calculated the prosperity gap between Cape Breton and a number of comparator regions. The main metric used was the GDP per Capita. That study demonstrated a significant gap between the Cape Breton GDP per capita and all of its comparators. The 2009 study had data current to 2006. This study brings that data up to 2008.

The gap that existed in 2006 has continued to exist. Cape Breton still lags all of its comparators. The GDP per Capita has improved between 2006 and 2008 with a growth rate that was better than all of its comparators. Yet given the starting point, Cape Breton was not able to completely bridge that gap. In 2008 Cape Breton's GDP per capita was $25,909 while its comparison peer group had a GDP per capita of $33,964. Further, more recent labour force data suggests that that improvement over its comparators has been lost since 2008 as the local economy has shed more jobs.

The 2008 gap between Cape Breton's GDP per capita and that of its peer group is $8,055. The most significant component of this gap, at $3,071, is the participation rate. Cape Breton's participation rate is far below that of its comparators indicating a lack of perceived employment opportunity. Productivity of the workforce is also below our comparators accounting for $1,958 of the gap. This indicates that the work undertaken in Cape Breton is of lower economic value and pays lower wages. Finally, the employment rate also accounts for $1,513 of the gap. This again highlights the lack of employment opportunity in Cape Breton. Bridging the prosperity gap in Cape Breton thus entails developing higher value added activity that will employ more people in better paying jobs.

The demographic profile did not demonstrate a significant impact on the prosperity gap for Cape Breton. This result, however, must be taken with some caution as the indicators suggest that the demographic profile of Cape Breton will soon become a more significant problem. Cape Breton's population is shrinking and aging faster than its comparators. This will soon put more pressure on our economy as more boomers start to retire and there are fewer people to replace those lost positions. In 2006 the percentage of the population who are of working age started to decline at a significant rate and at a pace distinctly different from its comparators.

Expanding the discussion of prosperity beyond GDP and production is important as production does not give a complete picture of economic well being. This report took up the approach developed by Commission on the Measurement of Economic and Social Progress to highlight some broader economic measurements that can help us understand Cape Breton's economic prosperity.

Those measures generally try to see how economic prosperity is shared and what non-monetized economic activity is undertaken. In Cape Breton, the median household income is significantly below the provincial and national levels indicating that the average household is living on much less income in Cape Breton. Further, the dependency ratio in Cape Breton is significantly higher indicating much higher reliance on government transfers for households in the region. Households in Cape Breton are not only relying on government to make up for shortfalls. Measures of unpaid work show that in many areas Cape Breton households are providing services for themselves. This economic activity is not counted in the GDP approach.

This report indicates that the economic challenges for Cape Breton continue to be significant. The increase in activity between 2006 and 2008 demonstrate that improvements can be made in relatively short amounts of time. However, to be effective those improvements must be shared and must be sustainable.

Introduction

In 2009, Enterprise Cape Breton and the Cape Breton Partnership, released the Cape Breton Prosperity Study. That study identified basic economic indicators that could be used to compare Cape Breton to other areas and measure progress towards prosperity. That study illustrated a large and continuing gap between Cape Breton's GDP per capita and its comparison regions. The data in the 2009 study brought the information up to 2006. This study will update that information to 2008.[1]

Prosperity Measures

The previous report used GDP per capita as a measure of prosperity. While GDP per capita is useful for a number of reasons – primarily because of the availability and comparability of the data – it should not be seen as the best measure of prosperity. There are other measures that have a more nuanced approach to prosperity. GDP is a measure of total economic activity. It does not indicate whether the activity was socially beneficial or not. Crime, for instance, creates a lot of economic activity through policing, insurance, justice systems, etc., but does not increase society's wellbeing. The most accepted approach to moving away from GDP measure is one advocated by the French government and developed by leading economists Joseph Stiglitz, Amartya Sen and Jean-Paul Fitoussi. This report will take some direction from their report near the end.

GDP per Capita

The overall approach to this study is one that draws upon the work done by the Institute for Competitiveness and Prosperity (ICP) which has completed similar studies within Ontario. In Nova Scotia, there have been two studies that have used this approach: the aforementioned Enterprise Cape Breton report in 2009 and one undertaken by the Nova Scotia Voluntary Planning Group in 2004.

The approach to measuring economic prosperity and progress developed by the ICP uses GDP per capita as its base measurement. This measurement is useful because of its availability but also because it can be broken into five components which also provide valuable information. The five indicators include 1) the demographic **profile** of the population, 2) **participation** of the population in the

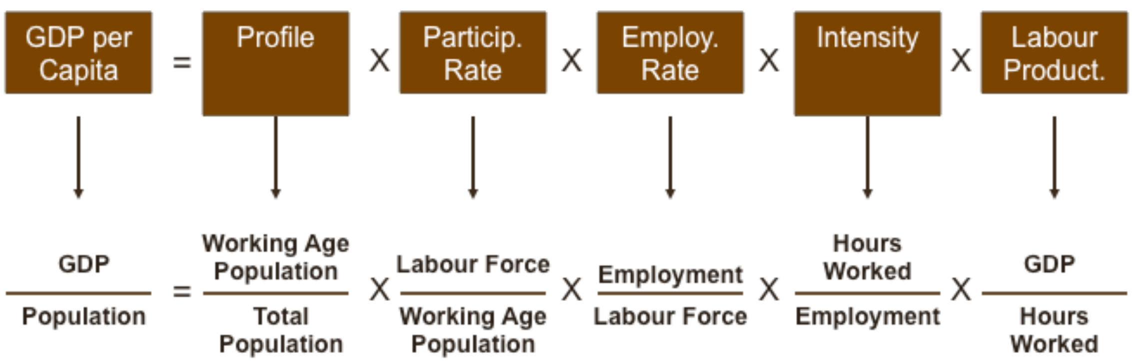
[1] Note that some of the figures for 2006 have changed due to using updated Statistics Canada data. In the last few years Statistics Canada has changed some of the data tables that underlie these calculations. In most instances the updated figures have no significant impact on the figures, however, the exact figures quoted here may be different than those published in the 2006 report due to these changes. Further, this report uses 2002 chained dollars. The previous report used 2000 chained dollars. This too will cause a discrepancy in the historical figures quoted in this report and those used in the 2009 report.

workforce, 3) the **employment** rate of the labour force, 4) the **intensity** of work in each job and 5) the **productivity** of work done.

The first indicator, profile identifies the proportion of the population who are of working age. For the purposes of this study, working age is defined as being between the ages of 15 and 64. Secondly, participation identifies the proportion of the working age population who are within the labour force. Statistics Canada includes someone in the labour force if they are either employed or actively seeking employment. The third indicator is employment, which identifies the proportion of the labour force who are employed.[2]

The fourth indicator, intensity, measures the hours worked per job. Intensity therefore captures the relative balance between part time, full time and overtime work. The final component, productivity, measures the value of work done. It is a measurement of GDP (output) divided by the number of hours worked (input).

Figure 1 - GDP per Capita and its components



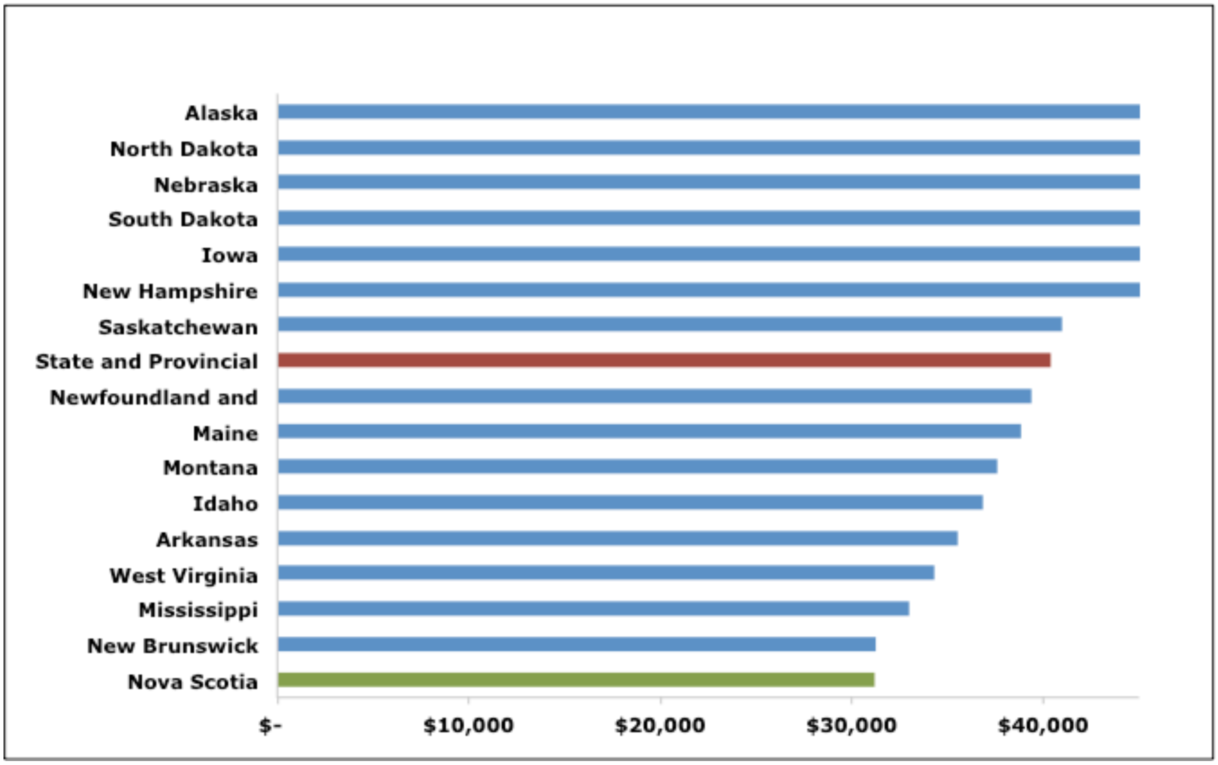
The previous Enterprise Cape Breton study compared the Cape Breton economy to a number of benchmarks. Clearly we want to know how we are doing compared to the national and provincial levels, so these were used. However, there was also a need to compare Cape Breton to similar regions in Canada. Therefore a comparison peer group was created to evaluate how Cape Breton is performing against other broadly similar regions. This peer group was made up of other regions that had at least one census division with a population of 18,000 and did not incorporate a provincial capital. The 2004 provincial study also included a peer comparison group constructed of a number of provinces and states. Both of these peer groups are used throughout this report. Generally the Nova Scotia figures should be compared to the provincial-state peer group and Cape Breton should be compared to the sub-provincial peer group.

[2] Note that this is different than Statistics Canada's approach to the employment rate, which measures the proportion of the population who are employed.

GDP per Capita within peer groups

In the previous reports both Cape Breton and Nova Scotia have ranked at the bottom of their peer groups in terms of GDP per capita. This situation continues. In terms of the provincial level, the 2008 GDP per capita was $31,193. The Provincial-state peer average was $40,390. While the provincial GDP per capita has grown over the 2006 level ($30,121) it still compares very poorly compared to the other provinces and states in its group. In 2008 it ranked last in that group (see figure 2).

Figure 2 - Province and State Peer Group GDP per Capita 2008



At the sub provincial level, Cape Breton's 2008 GDP per capita was estimated to be $25,909. This represents a 14% increase over just two years. While this increase was substantial, in comparison to its peers over this two year period, Cape Breton remains near the bottom of the group (see figure 3), overtaking only Southern Nova Scotia in the past two years.[3] While the significant gains in Cape Breton between 2006 and 2008 are notable, it is important to be cautious as there are some indications that that growth has slowed down and even reversed itself in the subsequent years as we shall see further in the report. In this period at least, it appears that Cape Breton moved towards bridging the gap between

[3] Note that a calculation error improperly ranked Prince Albert as last in the 2009 report. In actuality Prince Albert's GDP per capita in 2006 is similarly ranked to its position in 2008 as being just under the sub-provincial peer group average. Cape Breton therefore should have been ranked last in 2006.

itself and its peer group and the province (see figure 4). The basis for this growth will be explored later in this report.

Figure 3 - Sub-Provincial Peer Group GDP per Capita 2008

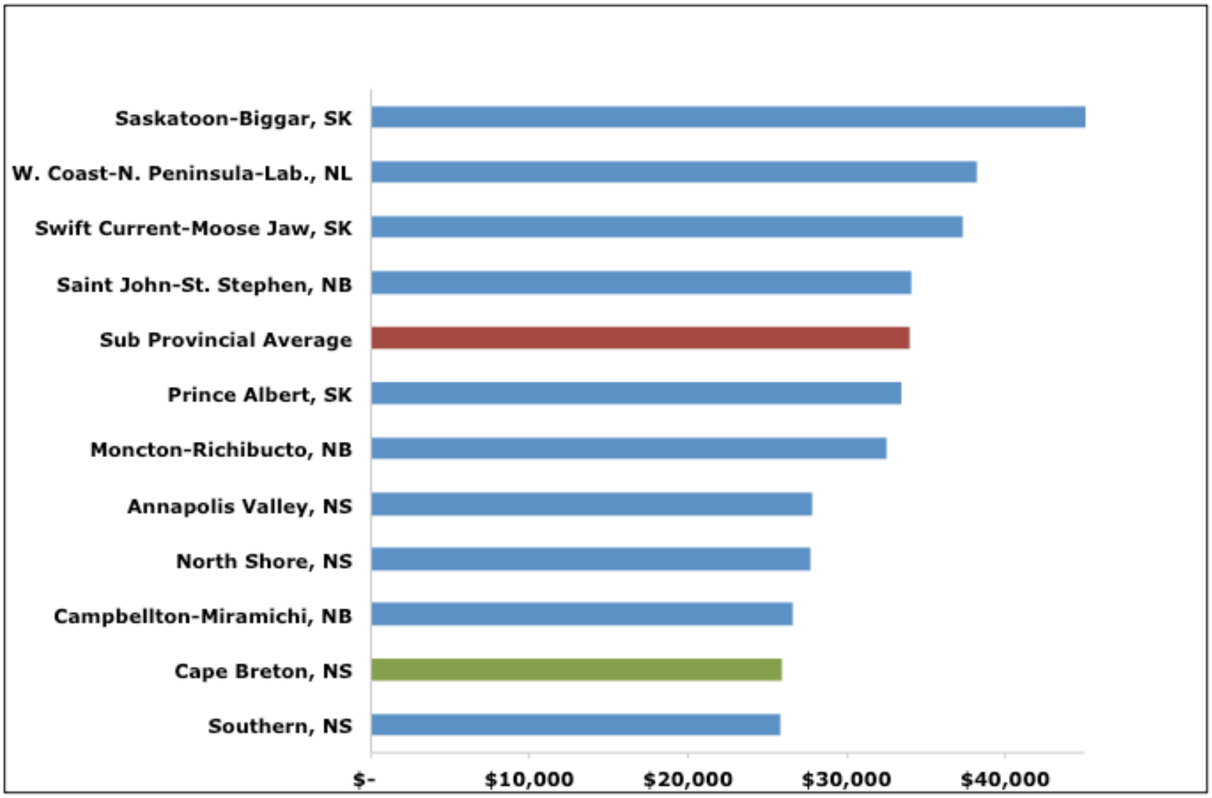
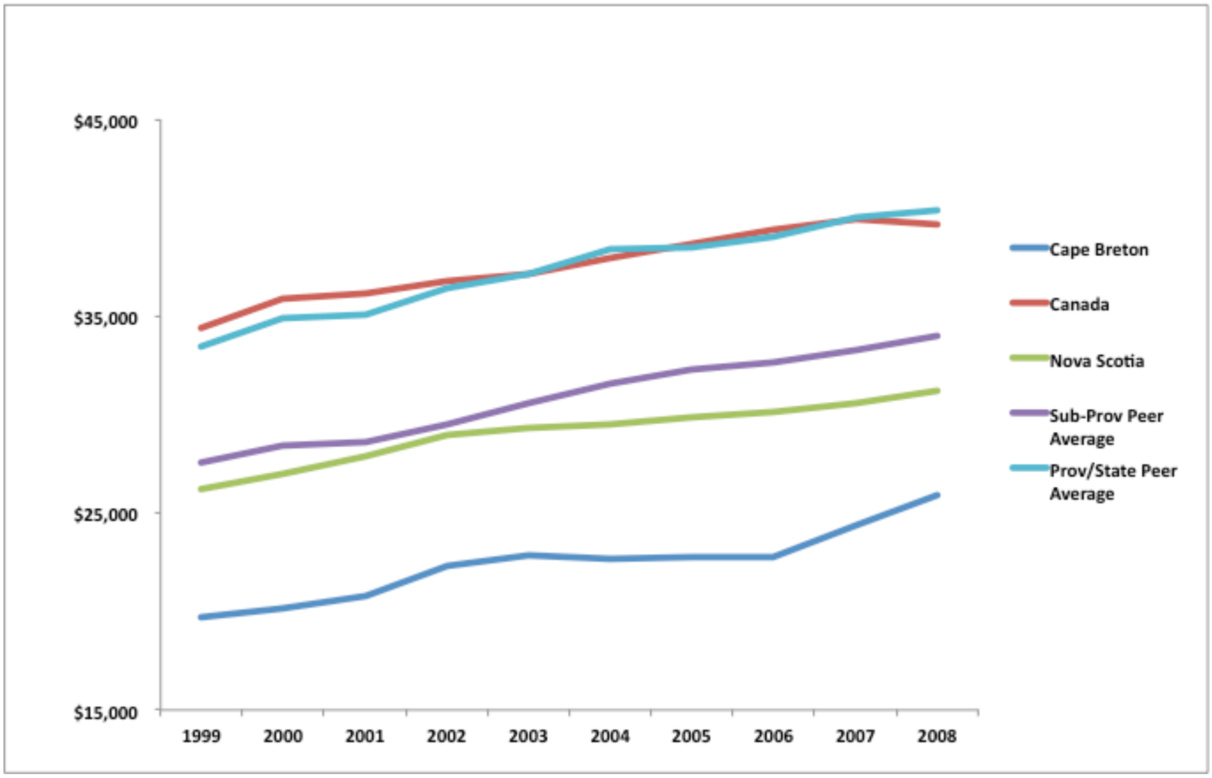


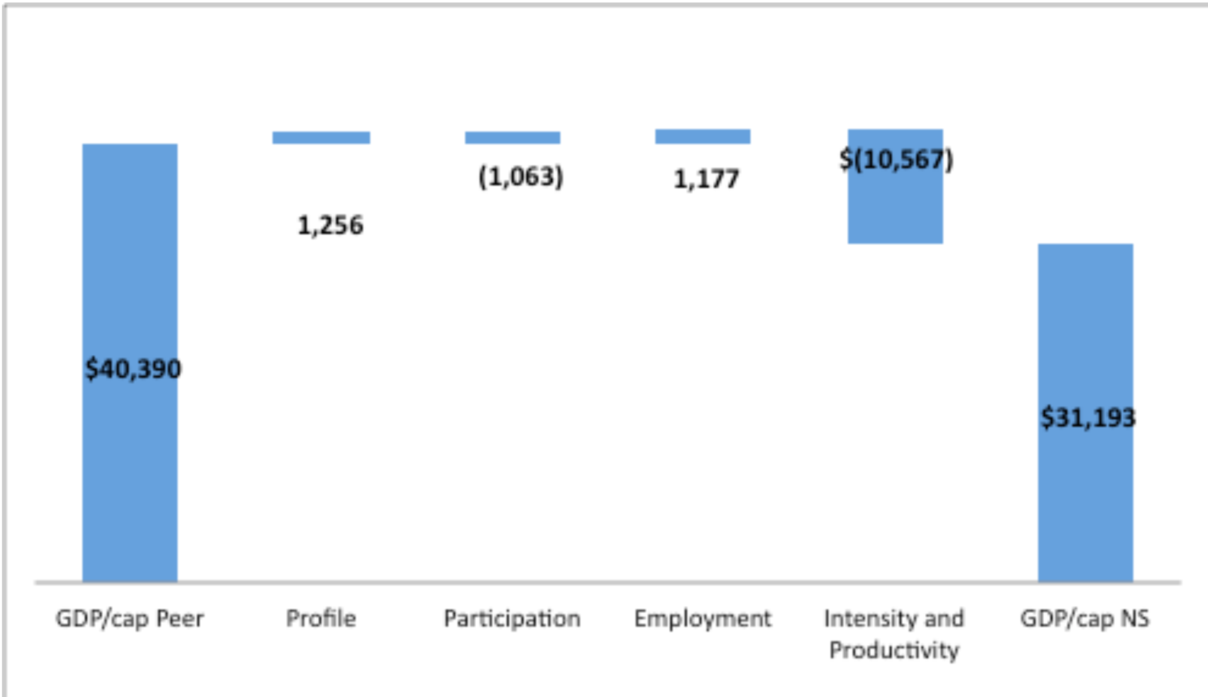
Figure 4 - GDP per Capita 1999-2008



The GDP per capita Gap

As indicated above, GDP per capita can be divided into five components. The gap between one area and its comparison group can be broken down into these separate categories; each component contributing (or bridging) the gap to some extent. Figure 5 shows the gap between Nova Scotia and the Province and State Peer group for 2008. This waterfall diagram demonstrates how each indicator contributes to the gap. In this diagram the Intensity and Productivity components are combined due to difficulties in comparing working hour data across international borders. Figure 5 shows that Nova Scotia's gap is predominantly due to deficiencies in productivity. Both the profile and the employment components help reduce the GDP per capita gap while the participation component increases the gap. From a historical perspective, Nova Scotia continues to perform well on most of the components, showing an overall improving trend in the last 10 years. Critically, however, over the last ten years intensity and productivity has declined significantly in relation to its peer group.

Figure 5 - Prosperity Gap NS vs Province and State Peer 2008



In the Cape Breton context while productivity, and to a lesser extent, intensity are large contributors to the GDP per capita gap in relation to its peer group, participation is the largest factor that contributes to the gap. Employment also makes a noted contribution to the gap. Therefore, while productivity is an issue, there are also issues regarding employment opportunity as well. Further, while the demographic profile is essentially neutral with respect to the gap in 2008, it must be noted that the demographic pressure soon to be experienced in Cape Breton will likely shift this factor as well.

Figure 6 - Prosperity Gap Cape Breton vs Sub-Provincial Peer 2008

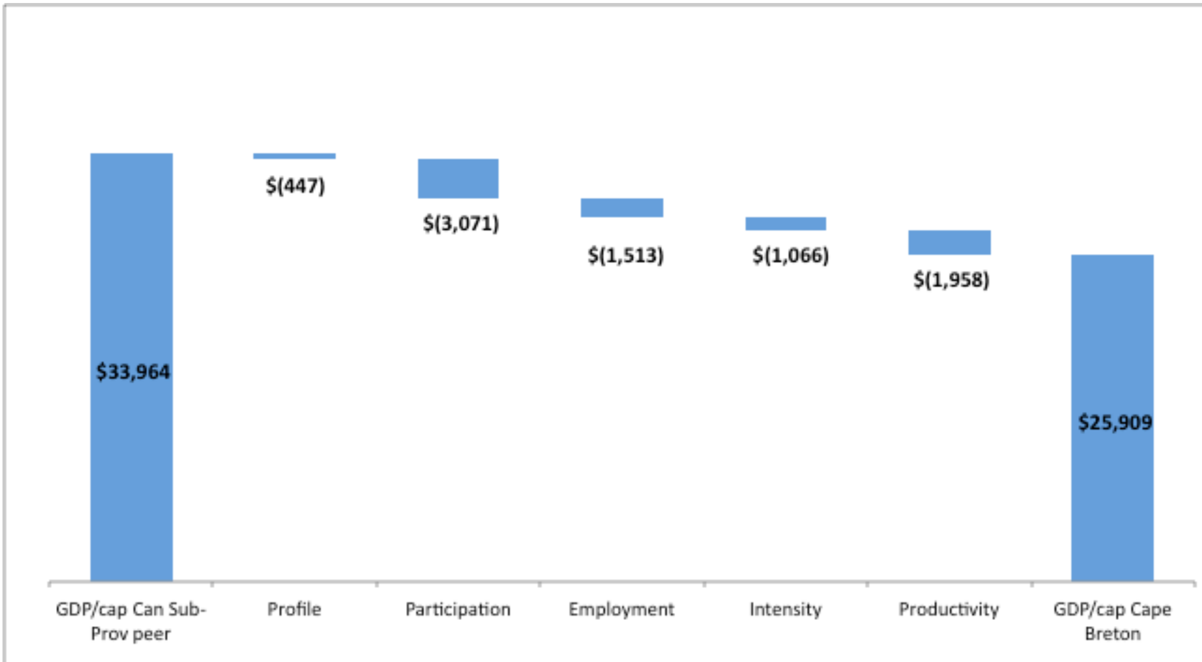
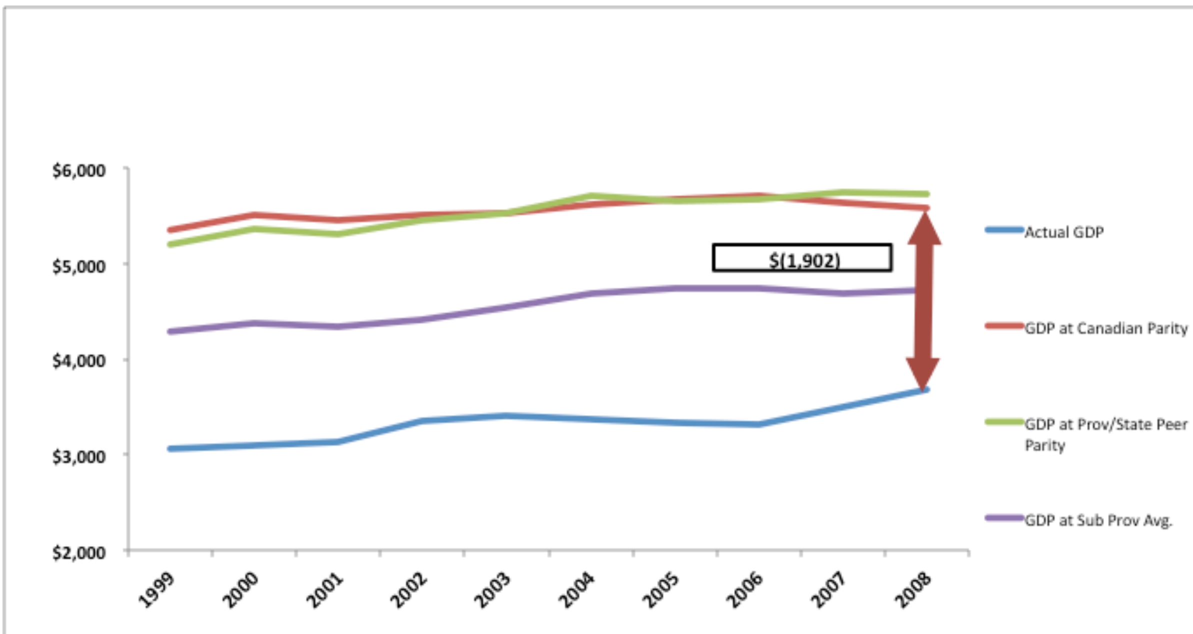


Figure 7 shows the gap between Cape Breton's actual GDP and its potential GDP if it was performing at the same level as its comparators. In 2006 the gap between the actual and the potential if performing at the Canadian average was calculated to be $2.4B. By 2008 that gap closed to $1.9B. The gap between Cape Breton and its peer group was $1B in 2008, down from $1.4B in 2006. This reduction in the gap is due to an increase in economic activity and employment in those two years. In those two years approximately 1600 jobs were added to the local economy; often in highly paid sectors such as utilities, transportation, professional and scientific and the public sector. It must be noted, however that while we do not have GDP calculations available for 2009, the number of jobs declined sharply in 2009. Cape Breton lost 2800 jobs in 2009 with many of those losses in similarly high-paid sectors. We can expect the GDP figure for 2009 to follow the same trend and cannot expect this performance to continue in the short term.

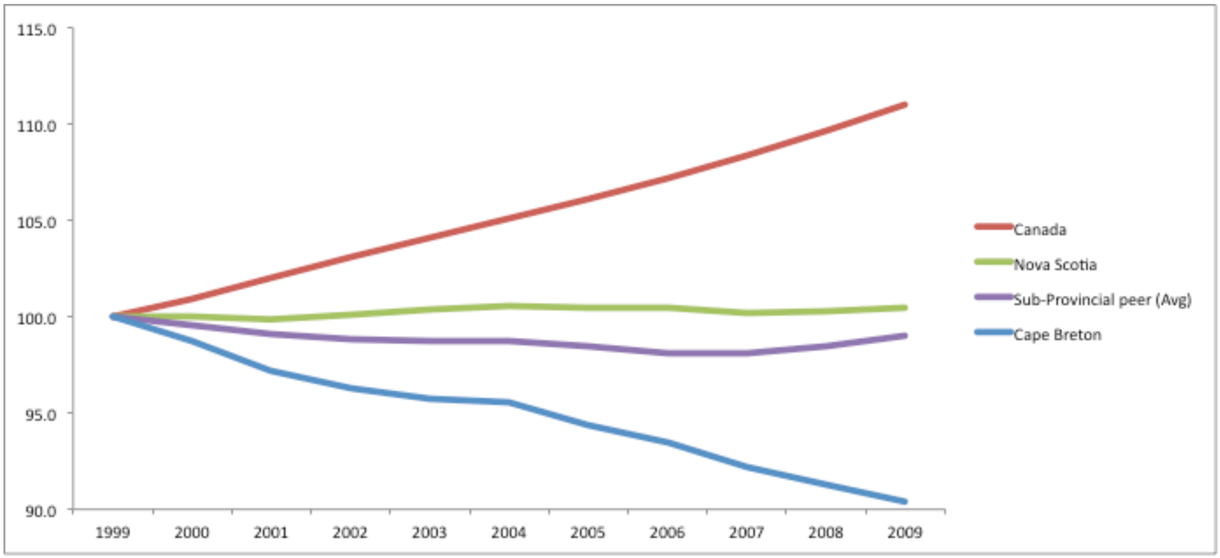
Figure 7 - Cape Breton Actual & Potential GDP (millions)



Components of the Gap

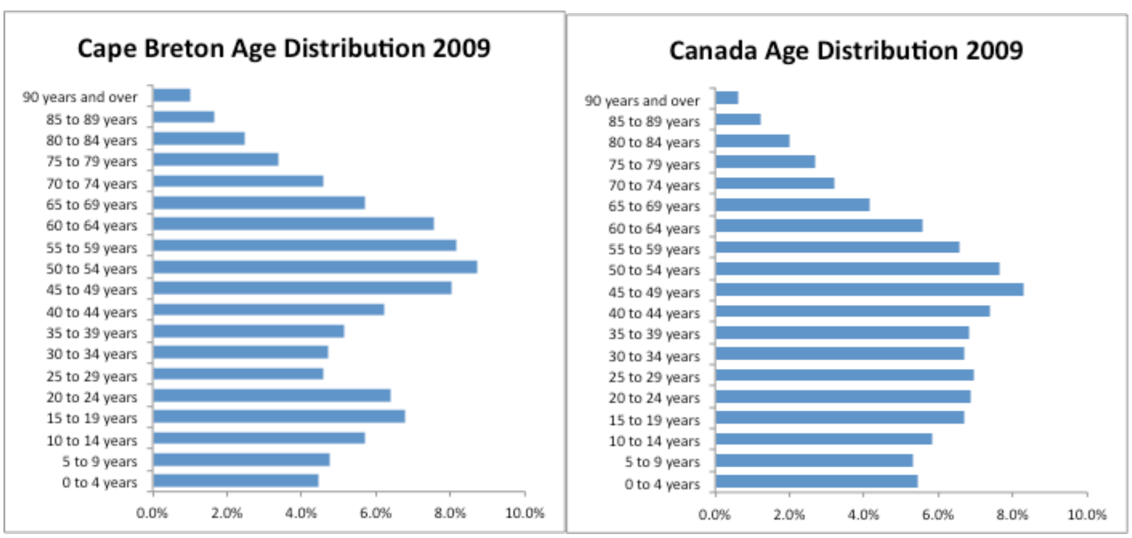
The $1.9B GDP gap between Cape Breton's current performance and its level if it performed at the Canadian average remains significant. In this section we explore the various components of Cape Breton's GDP per capita. First is a look at our population. Figure 8 shows that Cape Breton is experiencing a significant population decline relative to its comparators. While both the province and the sub-provincial peer group have maintained relatively stable populations, by 2009 Cape Breton's population dropped 10% from where it was in 1999.

Figure 8 - Population Change 1999-2009 (1999=100)



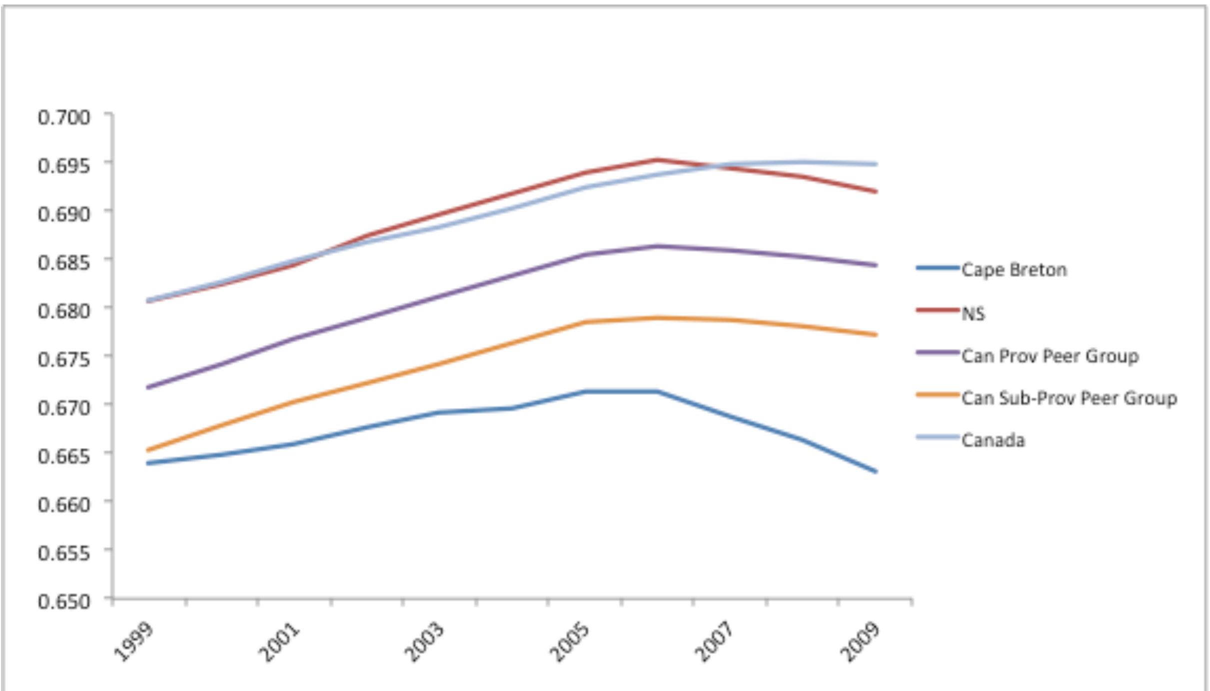
The age profile of Cape Breton also shows rapidly aging population. Figure 9 compares Cape Breton's age profile to that of Canada as a whole. Cape Breton's age distribution is disproportionally older with a hollowed out young adult (25 to 45 years) profile. The lack of population in this age range also means a much lower birth rate and small populations under 10 years of age. Further, the baby boom bubble in Cape Breton is more pronounced and closer to retirement age. This will create pressure on the population as those individuals begin to retire.

Figure 9 - Age profile of Cape Breton and Canada (2009)



Looking at the components of the GDP per Capita calculation (Figure 1), **Profile** is the first component. Profile measures the proportion of the population who is of working age (15 to 64 years). Figure 10 shows the demographic profile of Cape Breton and its comparators. What is striking from this graph is the shift that occurred in Cape Breton in 2006 and 2007 where the proportion of the population who are of working age started to trend downwards. This trend is distinctly stronger than those of its comparators. The cause of this is the aging population and the beginnings of the baby boomers starting to retire. As figure 9 shows, we can expect this shift to continue and to accelerate in Cape Breton.

Figure 10 - Demographic Profile 1999-2009



The next two components of the GDP per capita calculation are Participation and Employment. Figures 11 and 12 show each of these respectively using data from the Labour Force Survey. Both figures tell a similar story in that a much lower percentage of the population is active in the labour force in Cape Breton. That is, not only does Cape Breton have fewer people of working age (figure 10), but of the working age population, fewer are active in the labour force and fewer are employed. This speaks to the lack of employment opportunity in the local area.

Figure 11 - Participation Rate (1999-2009)

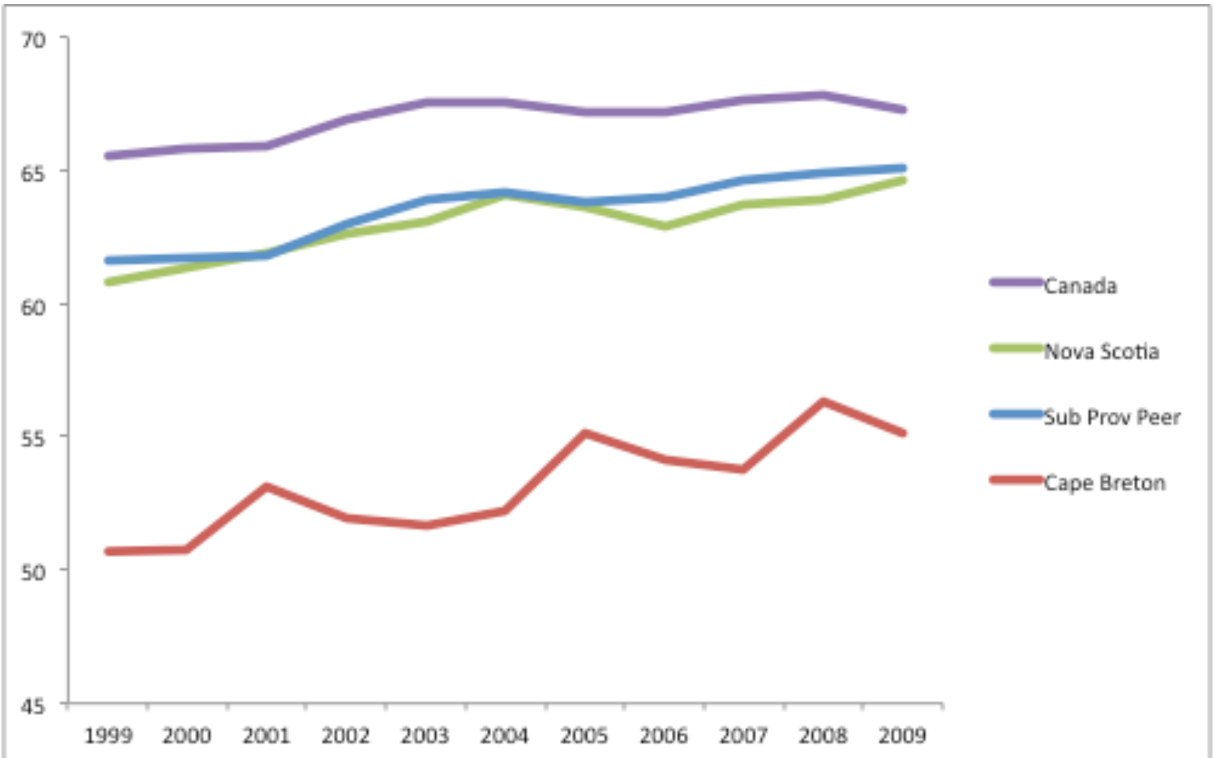
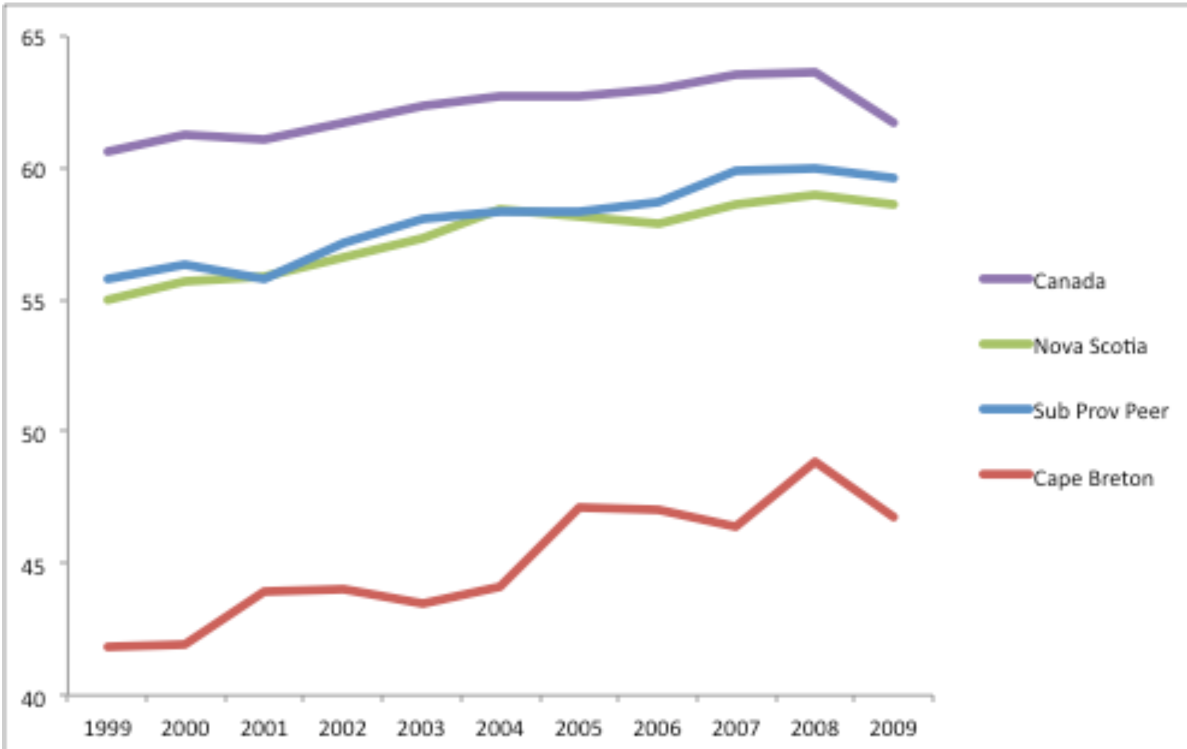


Figure 12 - Employment rate (1999-2009)



Labour productivity also appears as a significant component of the prosperity gap for Cape Breton. Productivity is a measure of the value of output per hours worked. As noted above, the available data makes this indicator difficult to calculate, particularly at the sub-provincial level. However, there are ways to gain an understanding of the productivity levels of the region. One way to increase productivity is for a region to engage in higher value work. Table 1 gives us a measure of the productivity of the Cape Breton economy by examining the relative concentration of jobs in particular sectors. The first data column, the location quotient, indicates the relative concentration of jobs in that sector compared to the national economy for the year 2009. A location quotient of 1 indicates that the local concentration is the same as found nationally. A location quotient above one shows a relative concentration of jobs in that sector for the local area and a location quotient below 1 indicates a relative lack of jobs in that sector. Location quotients are used to determine what sectors are the main economic drivers for a region. For Cape Breton the strong sectors include: business building and support services; forestry, fishing, mining, oil and gas; health care and social assistance, accommodation and food services; and educational services. Cape Breton fares particularly low in manufacturing; professional, scientific and technical services; finance, insurance and real estate; other services and construction.

Table 1 – Sectoral Analysis of Cape Breton

	Location Quotient vs Canada 2009	Shift Share vs Canada 2004-09	Average Income Nova Scotia
Cape Breton			
Industry			
Total employment	1.00	-2%	
Goods-producing sector	0.64	-25%	
Agriculture			$14,400
Forestry, fishing, mining, oil and gas	1.98	-36%	$32,600
Utilities		6%	$61,200
Construction	0.78	-28%	$29,000
Manufacturing	0.31	-37%	$37,800
Services-producing sector	1.10	3%	
Trade	1.02	-3%	$22,300
Transportation and warehousing	0.99	1%	$41,500
Finance, insurance, real estate and leasing	0.48	-49%	$31,600
Professional, scientific and technical services	0.47	2%	$46,000
Business, building and other support services	2.05	3%	$17,100
Educational services	1.16	-22%	$37,900
Health care and social assistance	1.67	19%	$38,600
Information, culture and recreation	1.01	61%	$33,900
Accommodation and food services	1.31	25%	$14,500
Other services	0.75	-37%	$21,300
Public administration	1.25	73%	$57,200

The second data column, the shift term, provides a measurement of how the local economy is changing over time relative to the national economy. It shows the degree to which the local economy is outgrowing or lagging behind the national economy in terms of employment growth in each sector. For instance, the national economy's goods producing sector grew by 10% in the period between 2004 and 2009. The local economy grew 13% for the same period of time in the same sector. Therefore, Cape Breton shift term is 3%; indicating that the local economy out grew the national over that period of time by 3% in that sector. Table 1 shows that the Cape Breton economy was significantly lagging behind the national economy in the goods producing sector but did outpace growth in some service sectors. Public administration jobs and information, culture and recreation jobs were particular strong categories for Cape Breton. The accommodation and food service sector and the health care and social assistance sector also grew significantly over this period.

The third column provides the average earnings in Nova Scotia for each sector. In 2006 the evidence showed that Cape Breton was strongly concentrated in the lowest paid sectors. In 2009 there is more of a mix. The sector with the highest concentration of jobs continues to be business building and support services which is also near the lowest paid sector. The main type of employer in this sector in Cape Breton are call centres. Accommodation and food services, where Cape Breton also has a concentration also is low paid. Counter-acting that, however, are relative concentrations in high paying sectors such as public administration and health care.

Alternative Measures of Wellbeing and Prosperity

This study has predominantly used GDP per Capita as an indicator for economic prosperity. GDP is used because it is the most common indicator, the data required is easily available and, therefore, is a very comparable indicator. While GDP is an important measure of production, it does have several limitations when used as an indicator for economic well being. Simon Kuznets, the developer of the GDP concept cautioned that GDP fails to distinguish "between quantity and quality of growth, between costs and returns and between the short and long run." Just because the GDP is going up, the well being of the region or community may not be following. Recognizing this issue, the French government created the Commission on the Measurement of Economic and Social Progress in 2008. The Commission was chaired by two leading global economists: Joseph Stiglitz and Amartya Sen. Their report, issued in 2009 summarized the issues with using GDP as a measure of economic wellbeing and suggested avenues for using other approaches. Their conclusion suggested that prosperity and well being must be measured in a number of different ways and would include measurements for 1) economic prosperity, 2) well being and 3) sustainability. In terms of measuring economic prosperity they made several recommendations:

1. Look at income and consumption rather than production.
2. Consider income and consumption jointly with wealth.
3. Emphasize the household perspective.
4. Give more prominence to the distribution of income, consumption and wealth.
5. Broaden income measures to non-market activities.

Within the Cape Breton and Nova Scotia context we can see how some of these approaches provide more perspective on our economic prosperity. In particular we can look at household income levels. Figure 13 shows the median household income for 2000 and 2005. This figure shows that the median household income in all Cape Breton counties is much lower than the provincial or national levels. The gap between the median income in Cape Breton County and Canada for instance was $14,517 in 2000 and $13,183 in 2005.

Figure 13 - Median Household Income (2000 & 2005)

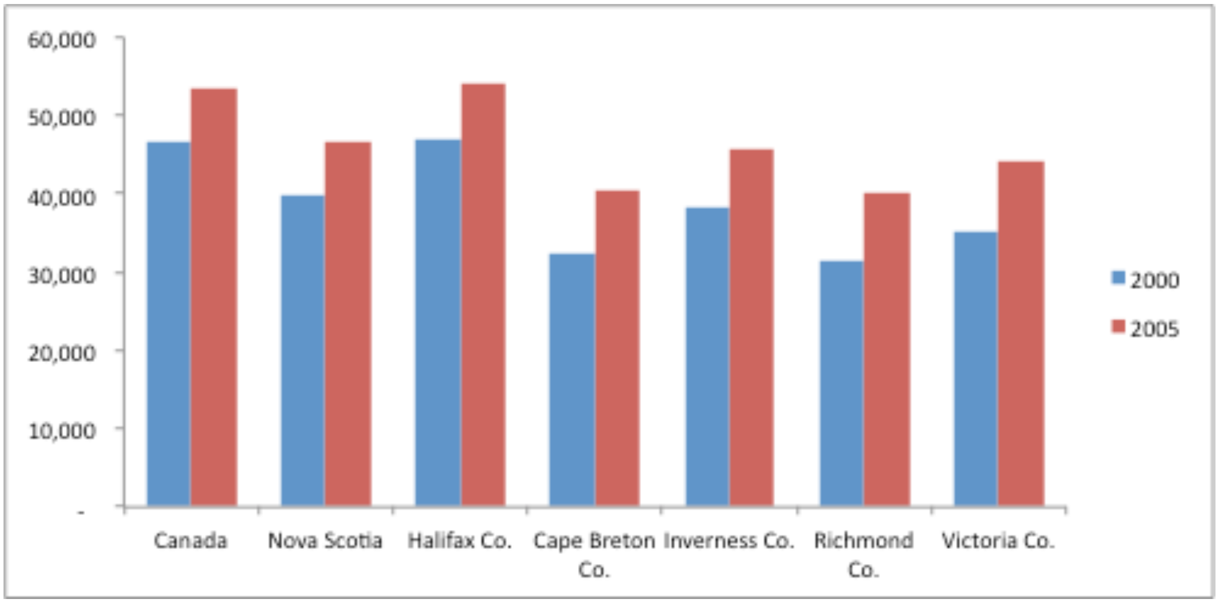


Figure 14 shows the total amount income growth in Cape Breton and its comparison regions between 1999 and 2008. The growth is indexed so that 1999 = 100. Here we see that Cape Breton's income growth has under performed in comparison to the other regions. This suggests that Cape Breton continues to fall behind in incomes and is not bridging the gap with its comparators. Further, the income that is coming into households in Cape Breton is highly dependent on government transfers. Figure 15 shows dependency ratios which measure the ratio between earned income and government transfers. Here we see that Cape Breton maintains a significantly higher dependency ratio than its comparators. Both of these graphs show a slight improvement between 2006 and 2008. However, as earlier noted, we should be cautious in extending that trend as employment and therefore employment income dropped significantly in 2009.

Figure 14 - income growth (1999 = 100)

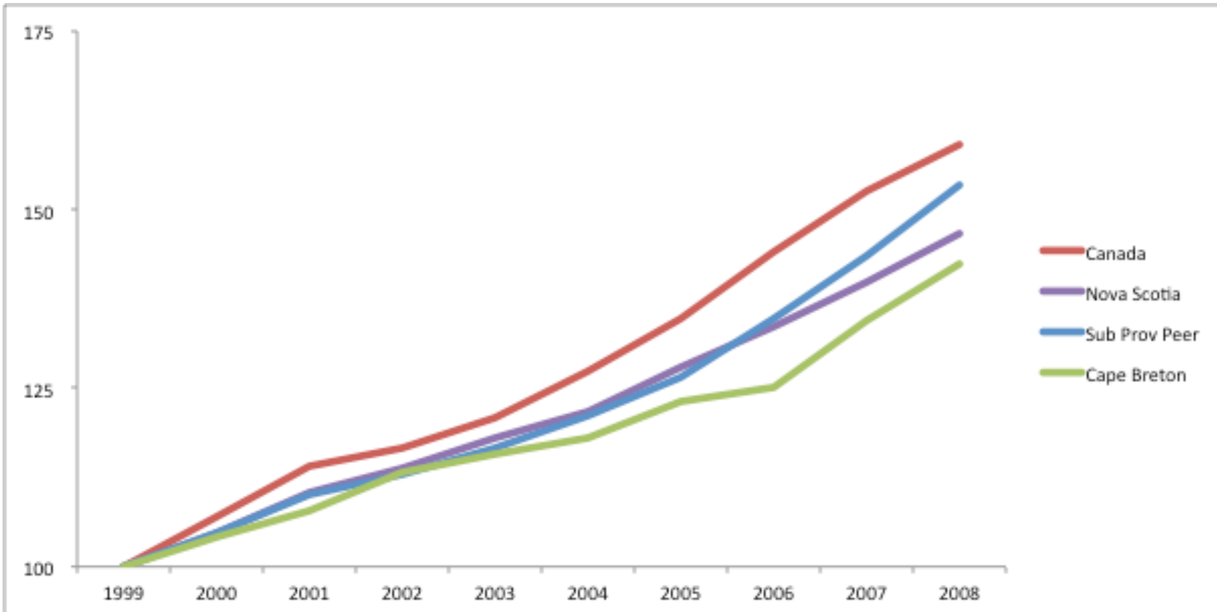
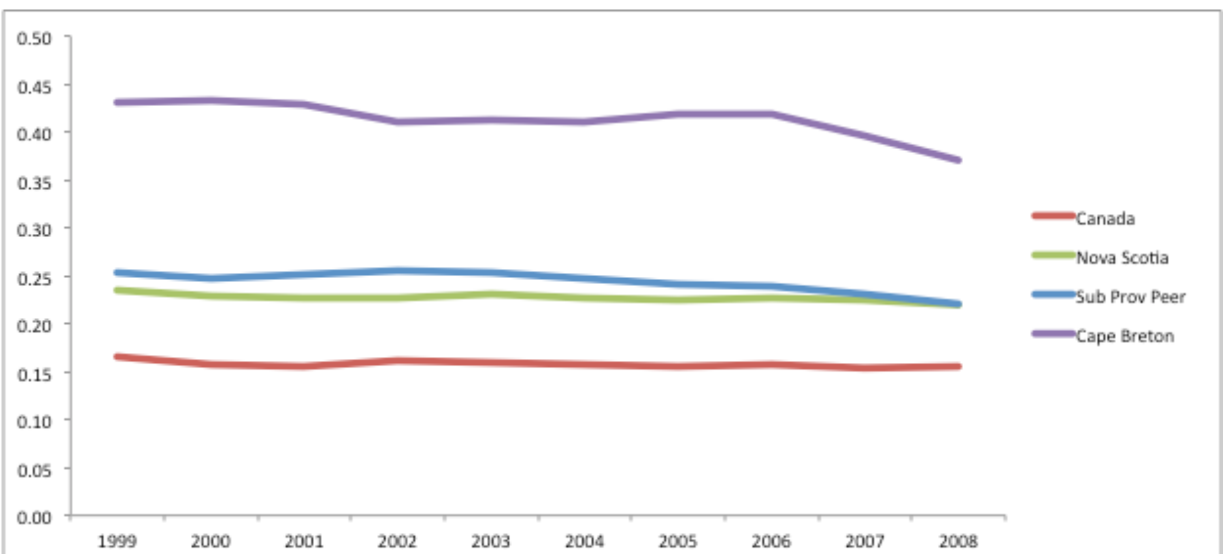
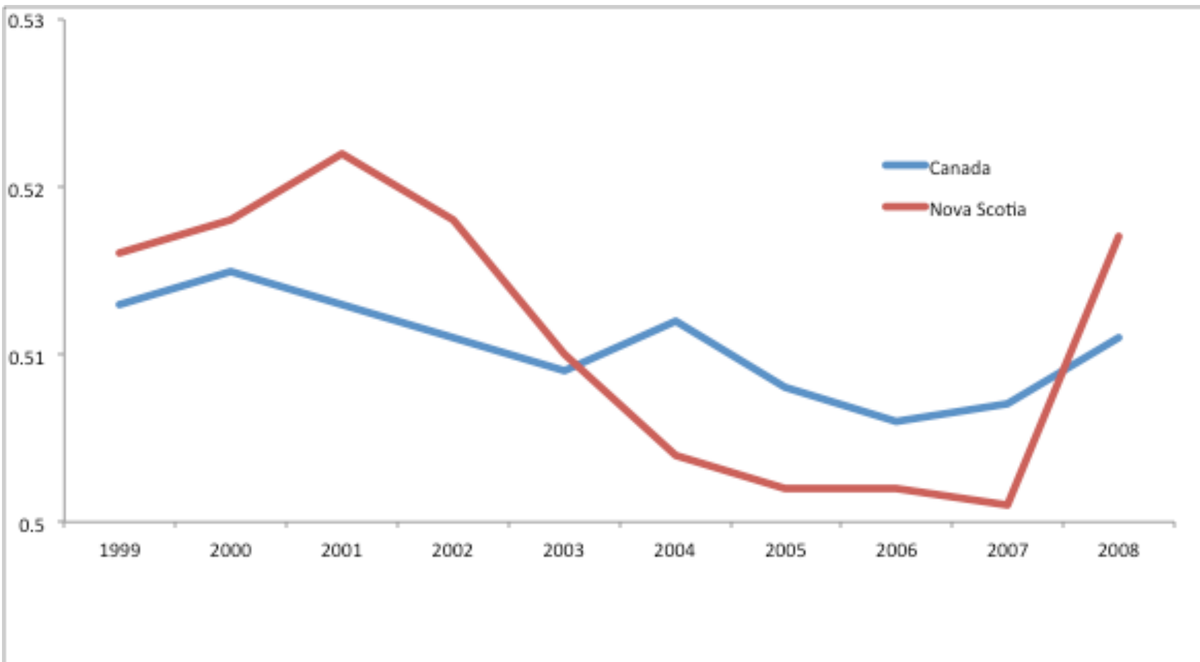


Figure 15 - Dependency Ratio 1999-2008



The Commission also recommended that the distribution of income be measured as well. Figure 16 shows the Gini coefficient for Nova Scotia and Canada. Gini coefficients measure the inequality of the distribution of income. A Gini coefficient of 1 would indicate maximum inequality (where all the income was earned by only one person) and a measure of 0 would indicate perfect equality (where everyone eared exactly the same amount). Figure 16 shows that over the last decade, at the provincial and national level at least, inequality trended downward over the first part of the decade and then has shifted up again in the last few years. If we are to talk about the economic prosperity of the region (Cape Breton) it is important to measure (and manage) the distribution of income in Cape Breton as well.

Figure 16 - Gini Coefficients 1999-2008



Finally, the Commission recommends broadening measures to non-market indicators as well. The economic prosperity of a region is not solely based on market exchange. Through non-market activity such as the self-provisioning and barter, people can enhance their economic well-being in ways not measured in traditional indicators. Figures 17, 18 and 19 show the amounts of selected forms of unpaid work undertaken in Canada, Nova Scotia and Cape Breton respectively at the time of the 2006 census. These figures represent non-market economic activity that would otherwise need to be paid for on the market. As such it is a form of self provisioning that enhances ones economic wellbeing. Figure 17 shows the amount of hours spent doing housework. In Cape Breton a greater proportion of households perform greater hours of housework per week. Figure 18 shows the amount of time spent caring for children. Interestingly, Cape Breton has a lower proportion of people caring for children in most time categories. This would be understandable as it reflects the lack of children in Cape Breton (see figure 9) and therefore the need to undertake child care. However, those who do have children tend to spend a large amount of time caring for them as Cape Breton had the highest proportion of people spending 60 hours or more caring for children. This suggests that there is a high level of stay at home parents for those who do have children in Cape Breton. Figure 19 shows the amount of time spent caring for seniors. Again, the demographic profile of Cape Breton has an impact as a Cape Breton has much higher proportions of people caring for seniors in each of the time categories. Thus although there may be lower incomes, and perhaps because of the lower incomes, Cape Breton households do find alternative ways to provide the services required. These non-market services should be considered part of the economic activity of the region.

Figure 17 - Unpaid Housework (2006)

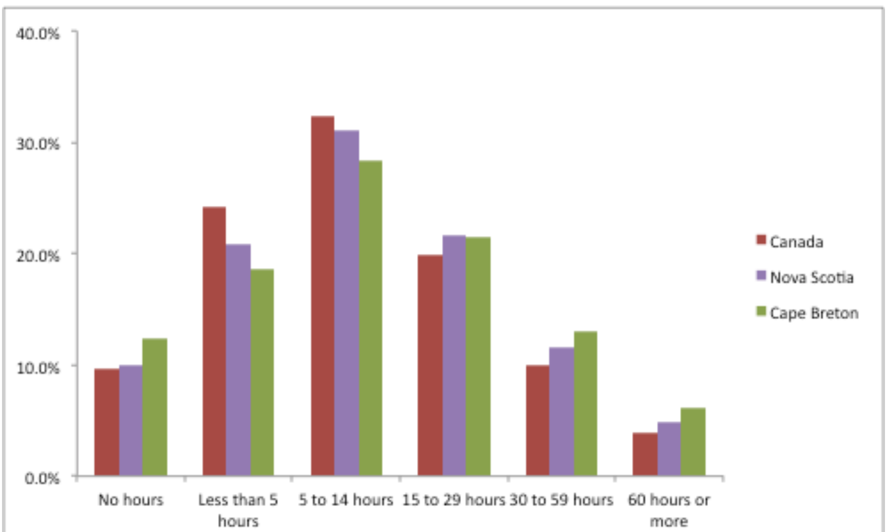


Figure 18 - Unpaid Childcare (2006)

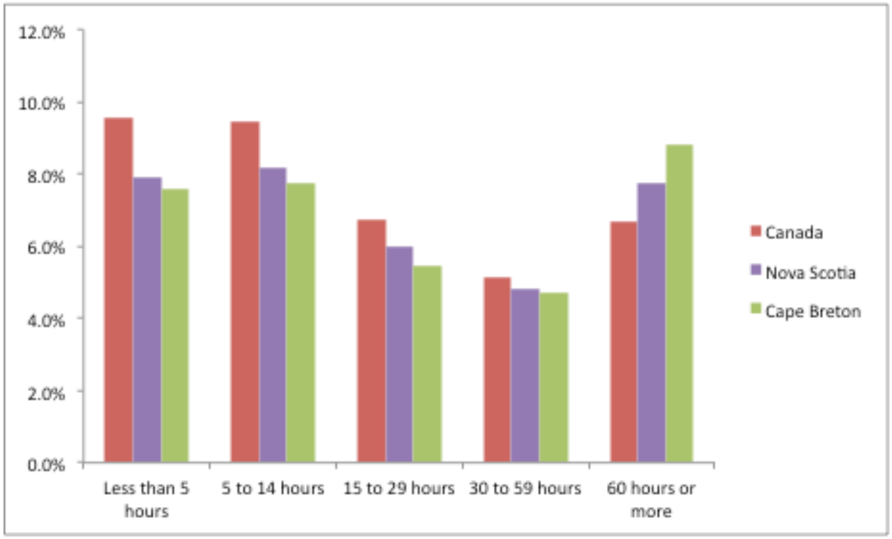
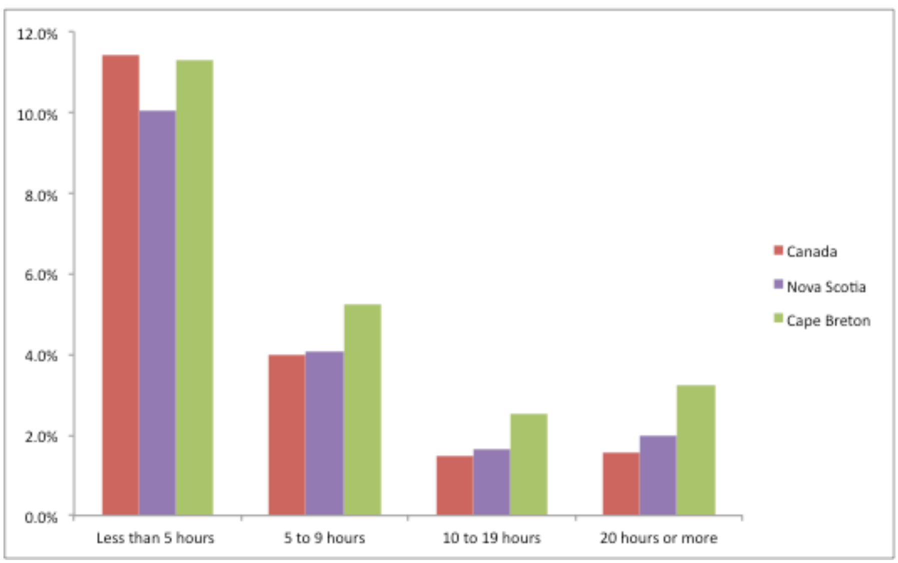


Figure 19 - Unpaid Senior Care (2006)



Conclusion

In 2009, the Cape Breton Prosperity Study identified a significant prosperity gap between Cape Breton and its peers, the province and the country as a whole. This report shows that that gap has persisted. The gap between Cape Breton's GDP per Capita and its peers was $8,055 in 2008, down from $9,869 in 2006[4]. The gap between Cape Breton and the Canadian GDP per capita was $13,739 in 2008, down from $16,642 in 2006. While the gap has shown signs of closing in the last couple of years, it remains a significant gap to bridge and, as discussed above, there are reasons to be cautious regarding the upward trend between 2006 and 2008.

The main economic challenges for Cape Breton as indicated in this report, remain the demographic pressures that Cape Breton faces as well as employment opportunity. The declining and aging population will have a significant impact on the potential economic prosperity of the future. Further, there is a lack of employment opportunities for the current population and those that do exist tend to be in relatively low paid sectors. Again, while there does seem to be some shift towards better paying sectors in the last few years, there is reason to be cautious as those employment opportunities seem to disappear equally quickly in 2009.

Policy makers therefore remain challenged to address the depletion of the local economy and create new opportunities for sustained future growth. To plan for a prosperous future the Cape Breton region will need to address the challenges illustrated in this report but also need to address the challenges of measuring prosperity in broader terms and ensuring that economic and social well being is sustainable.

[4] Note that figures reported for 2006 are different than the original report due to using 2002 chained dollars and updated Statistics Canada tables.