Competitive Advantage Analysis for the South Central Enterprise Region

prepared for

Enterprise Saskatchewan

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by

Sask Trends Monitor

Background

- Sask Trends Monitor is preparing statistical profiles for the thirteen southern enterprise regions in the province. The main elements of the profiles are:
  - **demographic** data (population, age, ethnicity, Aboriginal identity, immigration, family structures, etc) from the census and other sources;
  - **socioeconomic** data (education, employment, income, housing, etc.) about the residents from the census and other sources;
  - a **competitive advantage analysis**; and
  - other available **economic** data (contribution to the economy, business counts, major capital projects, e.g.).
- This material is a short version of the Competitive Advantage Analysis (CAA) that will be included in those reports.
- It is provided in advance for the Enterprise Region until the full profiles are ready.
- The methodology used in a competitive advantage analysis (CAA) was developed by economist Dr. Emanuel Carvalho from the University of Waterloo. It is based on work he did for the Ontario Ministry of Municipal Affairs.

Competitive Advantage Analysis: What it is

- The CAA is a particular kind of statistical analysis that looks at economic trends in a region or community by sector (industry group).

- The CAA is **not** a forecast of future opportunities. It is, instead, an examination of past trends with a view to identifying industry sectors that have under-performed or over-performed relative to other industries and other regions. While this may help inform future growth, it is not a blueprint for it.

- The CAA is only one of the tools that can be used to identify the economic strengths and weaknesses in a geographic region.

- The CAA compares a region's economic performance by industry group over a period of time compared with those same industries in another economy over the same period. So there are **five choices** to make before embarking on the analysis.

The Five Choices

- **Choosing the Regions:** Because the enterprise regions have custom boundaries, the only source of economic data that can be used for the CAA is the census.

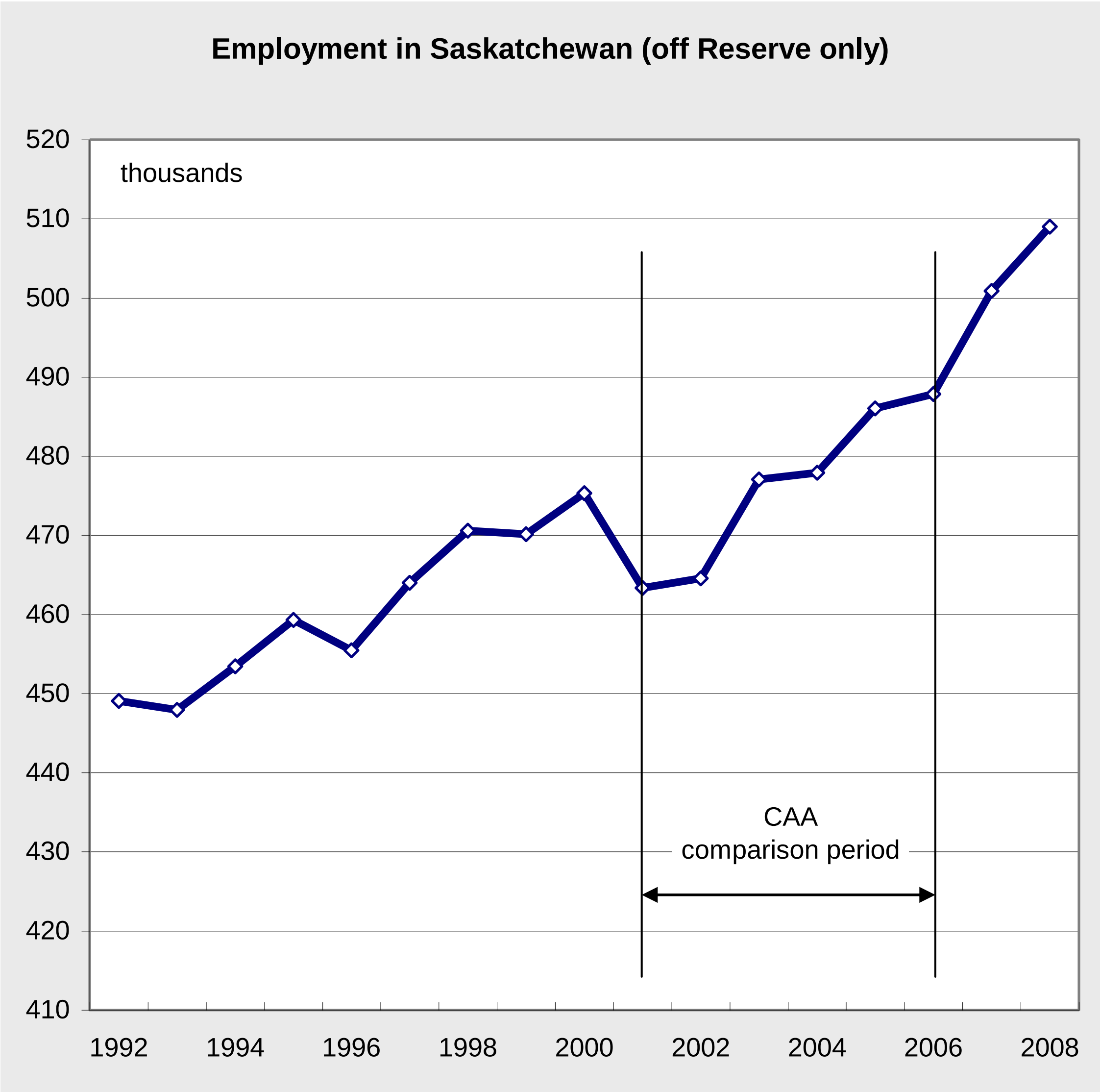
- **Choosing the Economic Measure:** Employment was used as the economic measure because it is the only economic measure available from the census. This has both advantages and disadvantages.
  - Employment has the advantage of being easy to understand – a job is a readily identifiable measure of economic success for an individual if not an economy.
  - Relatively detailed data from Statistics Canada's decennial census provides employment by industry group at the sub-provincial level.
  - Changes in productivity can affect changes in employment; a firm or industry may be more successful by every other measure except employment.
  - Changes in hours of work, multiple job holdings, and commuting can cause problems in the employment data.

- **Choosing the Time Frame:** A short (2001 to 2006) period was chosen over longer options because the industry group definitions used by Stats Canada changed between 1996 and 2001.

- **Choosing the Comparison Economy:** The provincial economy was used as the reference point.

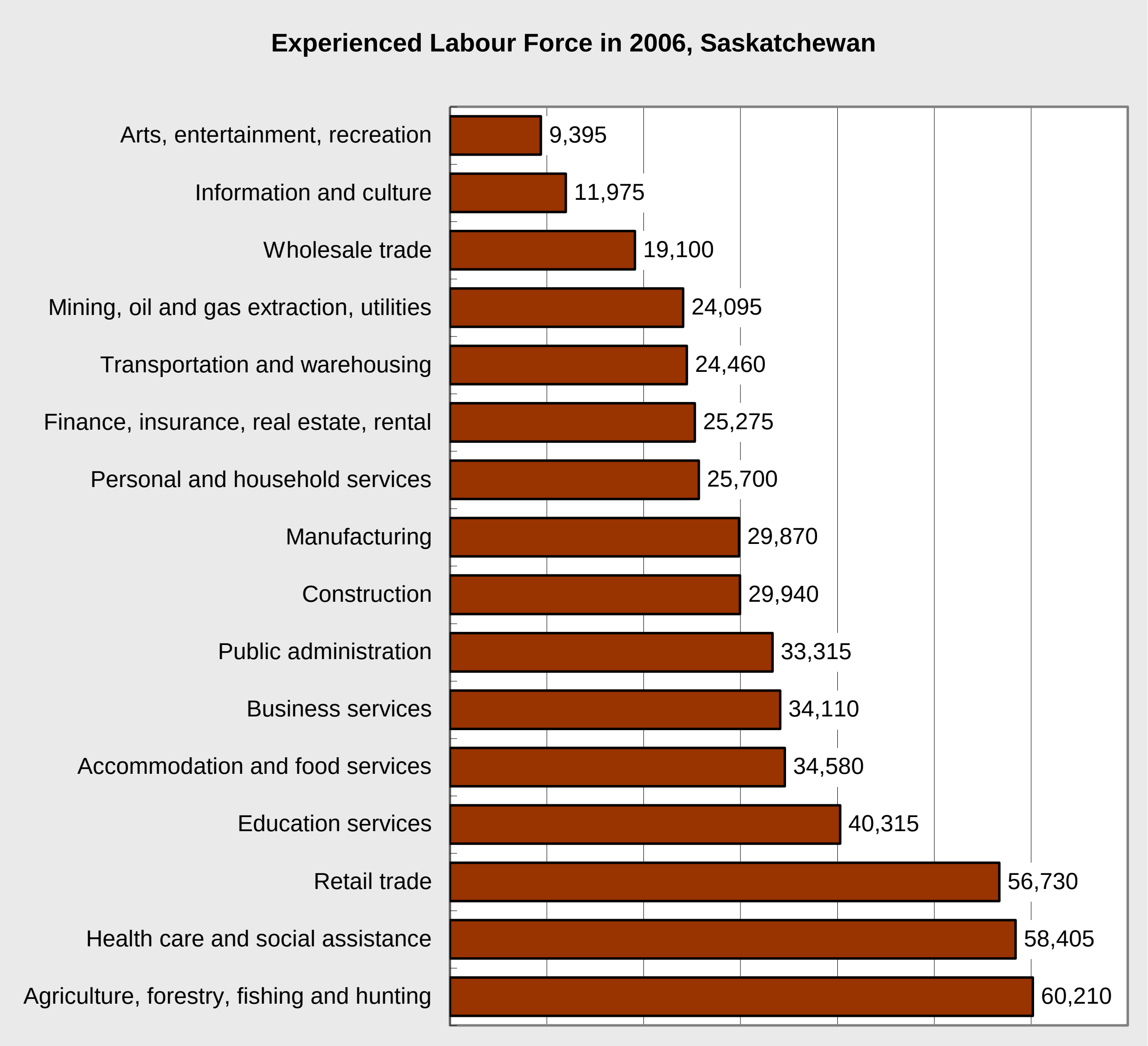
- **Choosing the Industry Groups:** The most detailed possible industry breakdown available translates into sixteen industry groupings.

Choosing the Time Frame



- By using the 2001 and 2006 census, we are effectively measuring what happened to employment in the province during that period.
- This was the period in which the provincial economy was prospering but not booming.
  - This is after Y2K and the "dot.com" bust and before the commodity price boom.
  - Consumer confidence was high particularly late in the period.
  - The population was declining because of out-migration to Alberta.
  - The price of crude oil was rising, starting the period at US$26/bbl and ending at US$66/bbl.
  - Agriculture was in some difficulty from low crop prices and BSE.

Choosing the Industry Groups



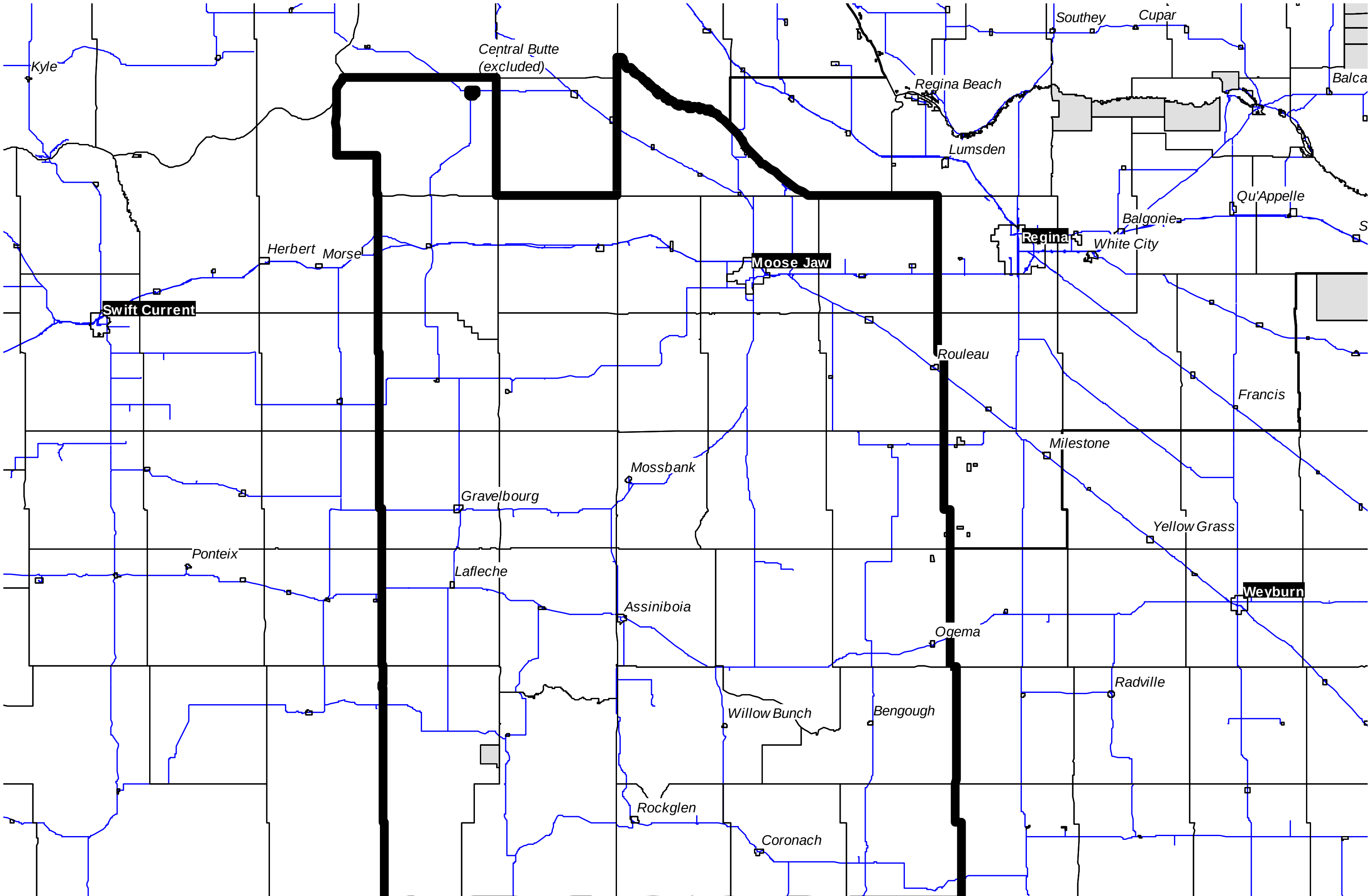
- There are 16 industry groups used in the analysis, the most that can be easily and accurately derived from the census.
- The public sector (government, health care, etc.) is included for completeness, not because there is any expectation that it is a development target.
- The experienced labour force is measured for the industry of the person’s main job or, if not working, their most recent job in the past 18 months.

Components of the Competitive Advantage Analysis

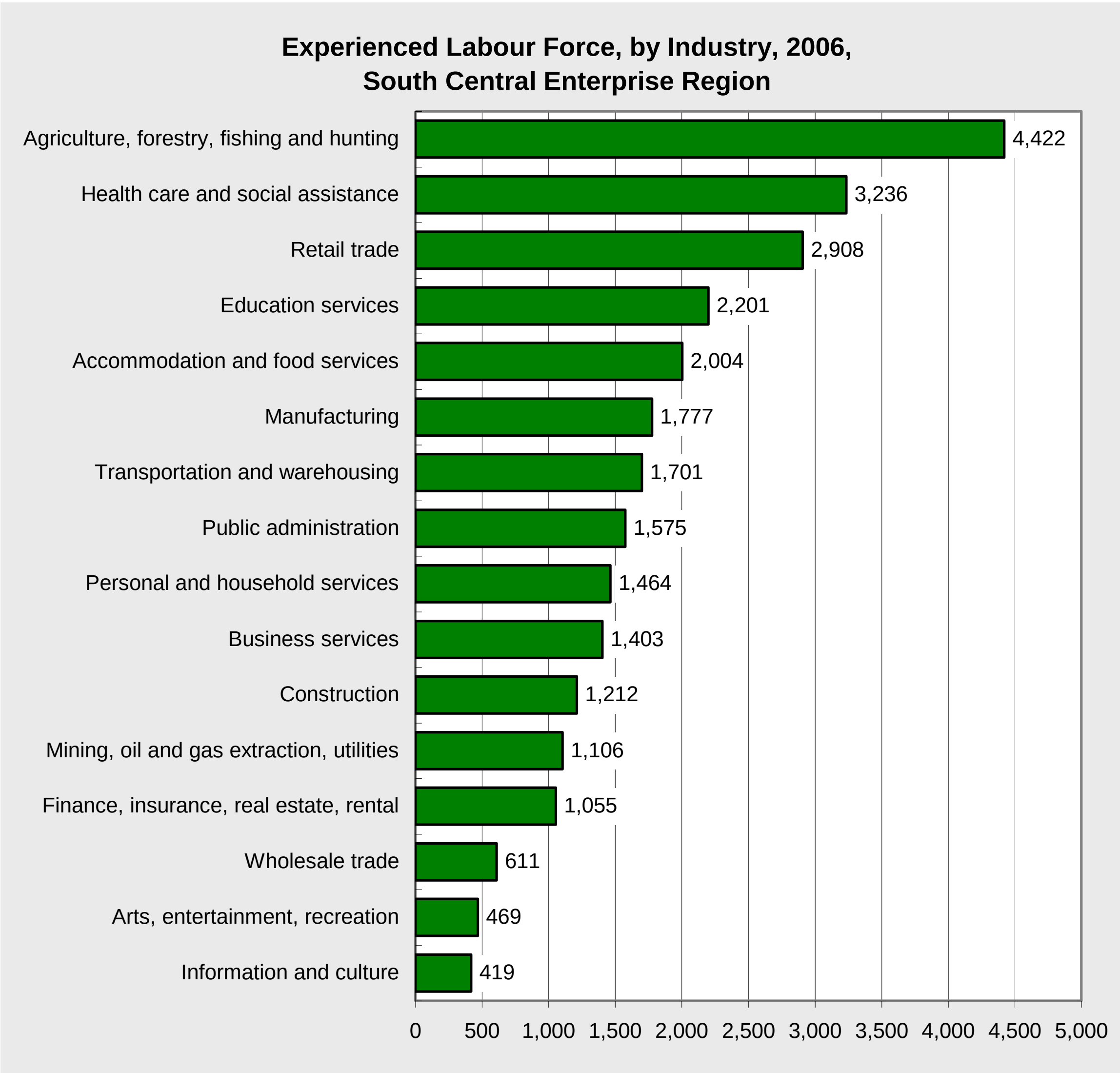
There are four components to the CAA that are applied to each industry sector. All are interesting and useful in their own right.

- Location Quotients – a measure of industry concentration
- Shift/Share Analysis – a measure of growth adjusted for “normal” patterns
- Leading/Lagging Analysis – measures relative growth rates
- Industry Classification – a summary of the three measures

South Central Enterprise Region

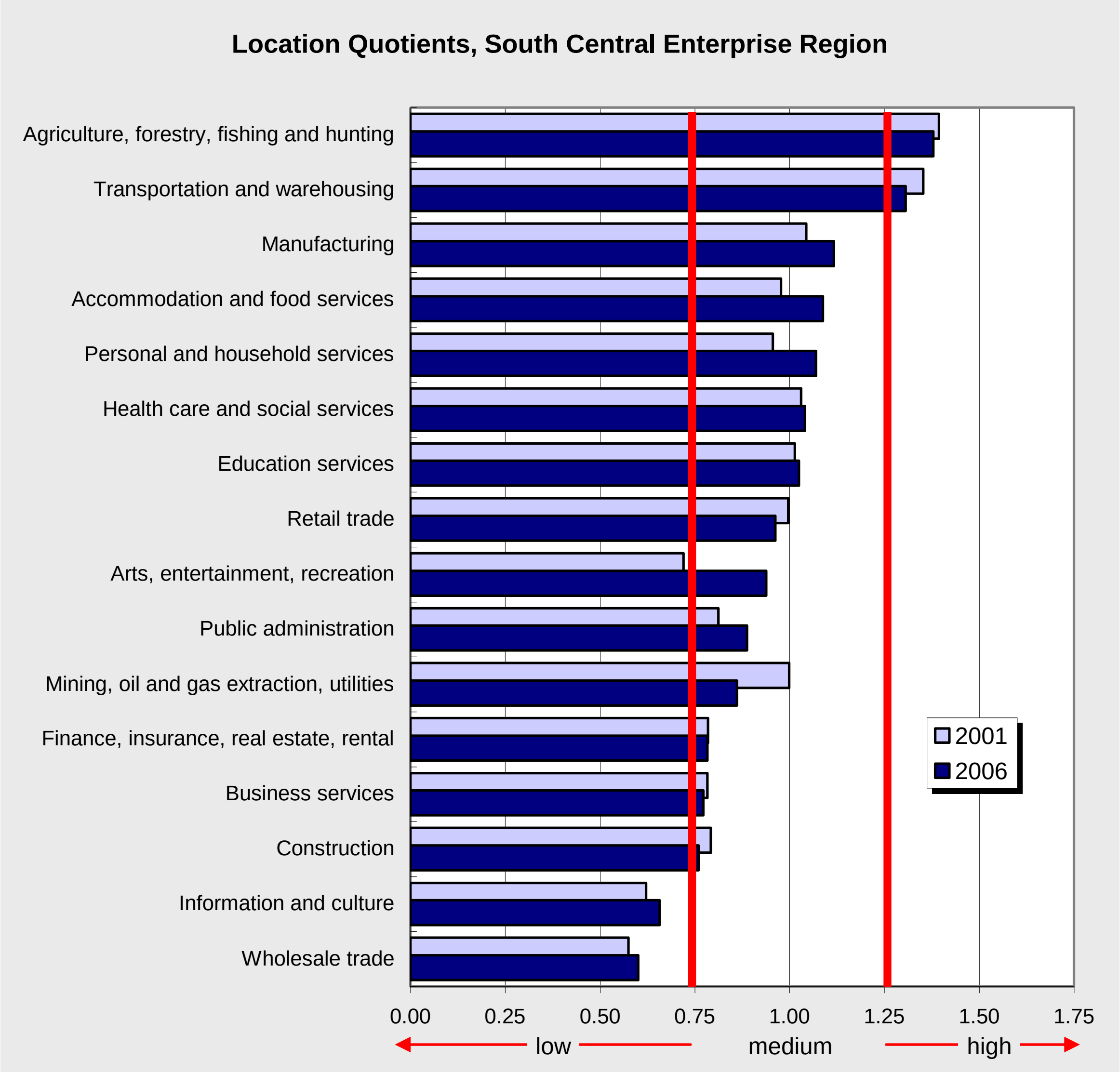


Experienced Labour Force, South Central Enterprise Region, 2006



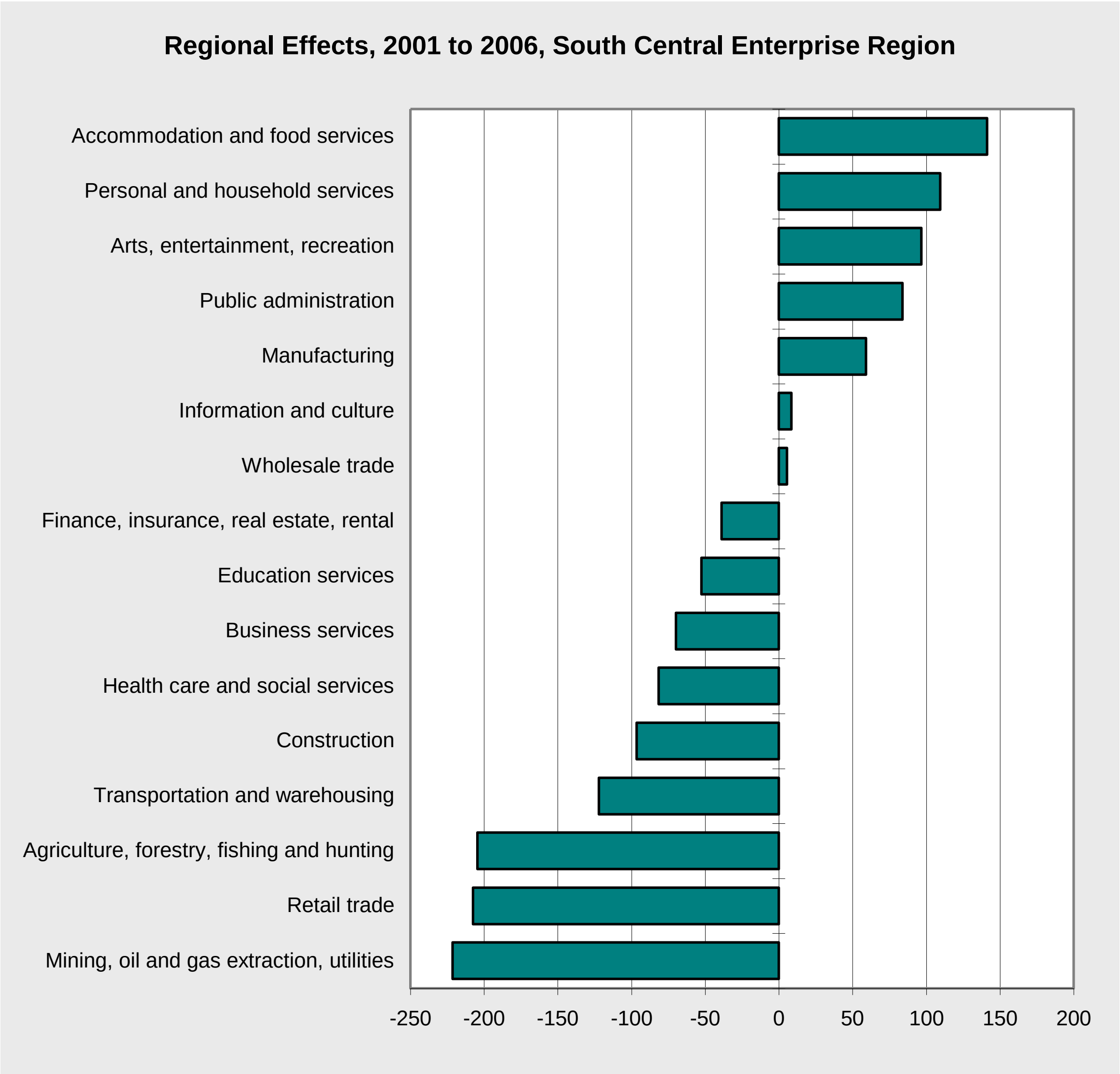
- Measured by employment, agriculture is the largest industry group in the South Central Enterprise region.
- The public sector, broadly defined to include the health and education sectors as well as government proper, is also a major employer in the region.
- Employment in the region has almost the same industry distribution as in the province as a whole.

Location Quotients



- The location quotient measures the size of the industry in the region relative to the province as a whole. Industries with a location quotient in excess of 1.25 are classified as "high"; those less than 0.75 are classified as "low".
- This doesn't mean the industries are small or large, just that they are relatively smaller or larger than in the province as a whole.
- Industries with a 'high" location quotient tend to export goods/services from the region. Goods and services probably need to be imported for those with a "low" location quotient.
- The transportation and agriculture sectors are classified as "high" in 2006 as they were in 2001. The wholesale trade and information/culture group are classified as "low".

Shift/Share Analysis, 2001 to 2006



- The shift/share analysis breaks down employment change into three components:
  - the provincial effect;
  - the industry effect; and
  - the regional effect.
- The regional effect is the most interesting because it measures what part of the employment change is attributable to factors unique to the region. These are changes that cannot be explained by the performance of the sector at the provincial level.
- Measured in terms of the absolute change in employment, the South Central ER has a large negative regional effect in agriculture, retail trade, and the resource sector.
- There is a positive effect in manufacturing, accommodation and food services and in personal and household services.

Leading/Lagging Analysis, 2001 to 2006

- The leading/lagging analysis compares, for each industry group:
  - employment growth in the region relative to growth provincially in the same group; and
  - employment growth provincially relative to total employment growth.

- The graph on the next page maps the industry groups doing poorly and well on the horizontal axis with their regional performance on the vertical axis.

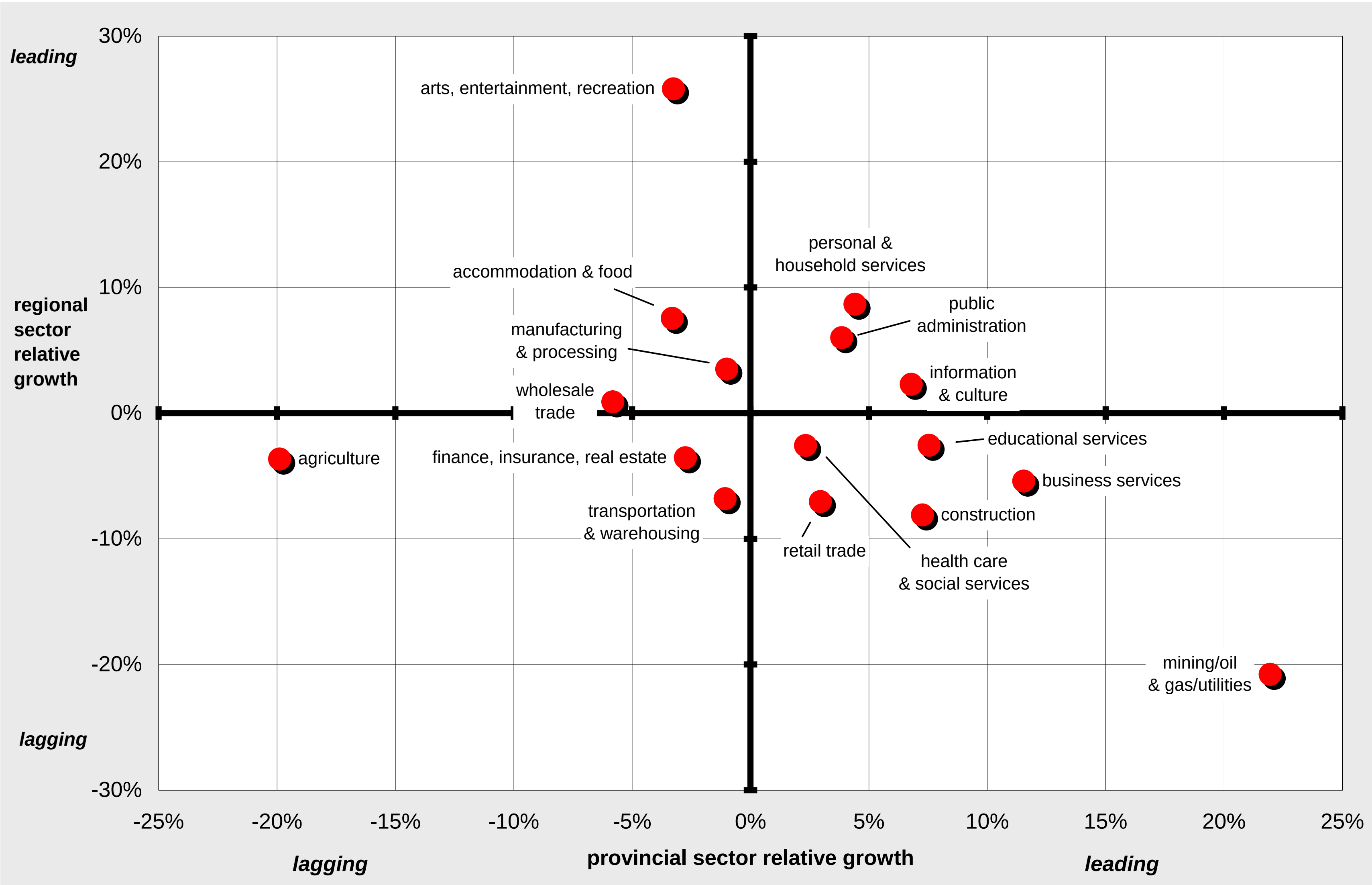
- Industry groups in the upper right quadrant are leading growth both in the region and provincially. They are classified as "drivers". The information/culture group and the personal/household services groups are drivers for the South Central Enterprise Region.

- Those in the lower left are lagging in both cases and are classified as vulnerable or challenging. Agriculture, the finance group, and transportation are in this quadrant.

- Those in the upper left quadrant are typically in a state of evolution. The arts/entertainment group and the accommodation/food services groups are in this quadrant.

- Those in the lower right are classified as either modest, yielding, or promising, depending on their size. Construction, the resource sector, and retail trade, for example, are all classified as "yielding" because they have medium location quotients.

Leading/Lagging Analysis, 2001-2006, South Central ER



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Industry Classification Scheme

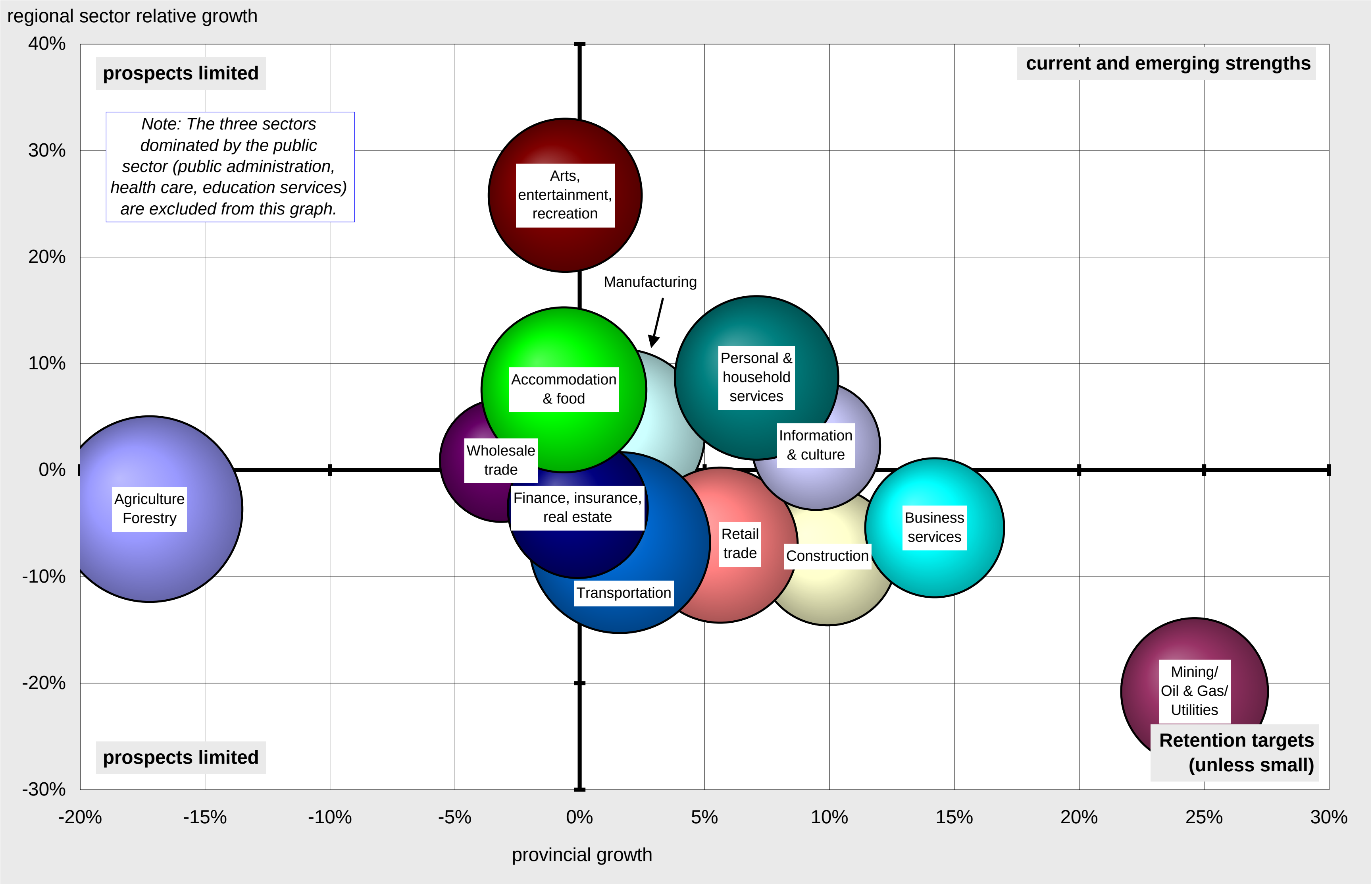
- The Competitive Advantage Analysis is future oriented in the sense that it classifies the industries in the region into categories using forward-looking terminology. Some terms used, for example, are:
  - Emerging strength
  - High priority retention target
  - Prospects limited by external trends

- Besides the data quality issues and the fact that we are using relatively old employment data as a measure of economic success, there are some problems with the classification scheme.
  - The methodology implicitly assumes that employment growth at the provincial level is a measure of success. If the industry group is not growing provincially but is doing so in the region, for example, then it is assumed that the sector has limited prospects.
  - There is a bias toward large sectors; relatively small industry groups can be classified as an emerging strength but most are dismissed as having a "weak base". The concept of a "niche market" doesn't enter into the equations.

- In spite of the limitations, the classification does seem to generate the needed debate about which sectors have limited prospects and which do not. The analysis, to be useful, has to be tempered with a realistic assessment by the region's economic players.

- The graph on the following page shows the classifications for the South Central Enterprise Region. Industry groups that are on the borders of the four quadrants (manufacturing, e.g.) could be classified in either of their adjoining quadrants.

Industry Classification: South Central Enterprise Region



Industry Classification, South Central Enterprise Region

Industry	Carvalho Classification
Agriculture, forestry, fishing and hunting	Prospects limited by external trends and declining competitiveness
Mining, oil and gas extraction, utilities	High priority retention target
Construction	High priority retention target
Manufacturing	Current strength
Wholesale trade	Prospects limited by external trends and small base
Retail trade	High priority retention target
Transportation and warehousing	High priority retention target
Information and culture	Emerging strength
Finance, insurance, real estate, rental	Prospects limited by external trends and declining competitiveness
Education services	High priority retention target
Health care and social services	High priority retention target
Business services	High priority retention target
Accommodation and food services	Prospects limited by external trends
Arts, entertainment, recreation	Prospects limited by external trends
Personal and household services	Current strength
Public administration	Current strength