
Business Indicators ♦ August 1997

Sub-Provincial Employment Outlook for British Columbia

Annual projections of future levels of employment by industry in British Columbia have been available for some time at the provincial level from a number of sources, including a variety of private sector forecasters as well as the provincial and federal governments. However, the lack of sub-provincial information has made it difficult to assess the regional implications of labour market shifts occurring at the provincial level. In order to address this problem, BC Stats, with support from Human Resource Development Canada (HRDC), has developed a British Columbia Regional Employment Projection Model (REPM).¹

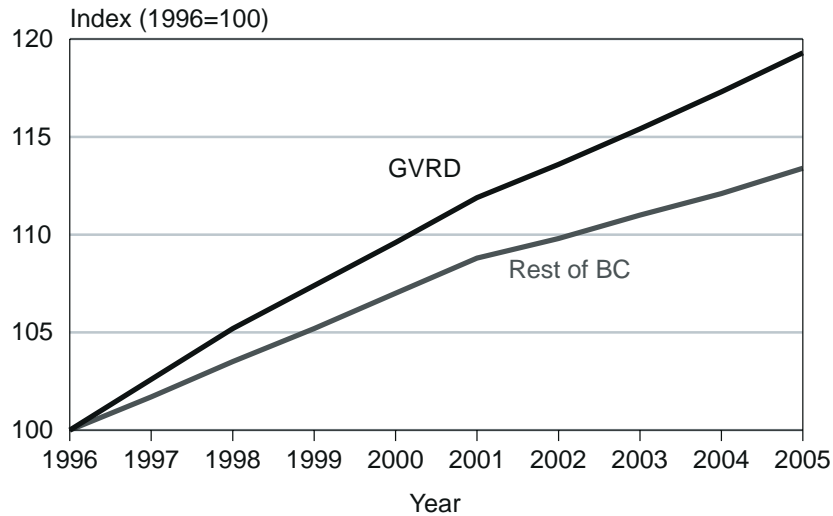
The methodology used in the model has come largely from previous work on community dependencies carried out by the Ministry of Finance and Corporate Relations for the Forest Resources Commission and the Round Table on the Environment and the Economy. The fundamental premise is that the economy of a community can be represented by income flows that can be classified as “basic” (or driver) and “non-basic” (or support), depending on the source of the income. Using these linkages, the model calculates indirect and induced employment effects given an initial regional employment shock, and relates the derived total employment to population projections by calculating unemployment rates.

It should be noted that the REPM is solely a tool, which can be used to rationally estimate the indirect and induced effect of the projected change to the economic base of a region. As such, the outputs from the model (e.g., employment change) are heavily dependent on the assumptions made with regard to the base industries in a particular region. Therefore, the resulting simulation should be regarded as only one of numerous possible future patterns of change.

The current simulation to the year 2005 produced using the REPM was controlled at the provincial level to the latest employment forecasts produced by HRDC using the Canadian Occupational Projection System (COPS), and that produced by the British Columbia Ministry of Finance and Corporate Relations (Spring, 1997). The resulting simulation channelled most of the job growth to the service and manufacturing (excluding wood and paper manufacturing) sectors of the economy, with the resource extraction industries and the wood/paper manufacturing sectors experiencing some decline for the next few years. Consequently, areas of the province which are more resource driven are forecast to receive less employment growth than areas where the service and non-wood/paper manufacturing industries are more dominant. The Greater Vancouver region, in particular, is forecast to achieve significant employment growth and subsequent reductions in the unemployment rate.

¹ BC Stats (May 1997), *British Columbia Regional Employment Projection Model Methodology*, BC Stats, Ministry of Finance and Corporate Relations. The REPM allows the user to project employment by Regional District for 31 industry groups and also converts employment into occupational groupings at the three-digit and four-digit National Occupational Classification (NOC) level

Figure 1:
Employment Growth: GVRD vs. Rest of BC

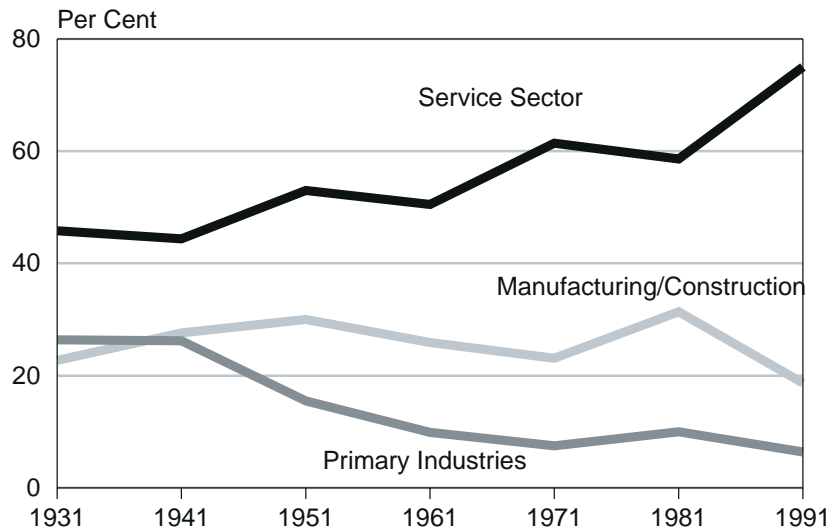


Source: BC Stats, Regional Employment Projection Model, Simulation 9605
Note: GVRD includes Dewdney-Alouette RD

There is historical evidence to support the trend toward less employment in the primary (resource extraction) industries, and corresponding growth in the secondary (manufacturing² and construction) industries and tertiary (service) sector. Figure 2 displays the historical pattern of employment in British Columbia. It is clear that employment in the primary sectors has become less predominant, while the service sector has increased significantly as a proportion of all employment.

2 Note that wood and paper manufacturing are included in this category. For the purposes of this paper, the wood/paper manufacturing sector will be treated differently from other manufacturing and will be separated out where possible. The reason is that the forest sector is one of the largest employers in the province and current COPS and Ministry of Finance and Corporate Relations forecasts for employment growth are not as strong as in other manufacturing sectors, which means that treating all manufacturing alike will understate both the strength in other manufacturing sectors, and the slower growth in the forest sector.

Figure 2:
Employment Distributon By Industry Sector, British Columbia



Source: Statistics Canada

Trends in the labour force have changed dramatically over the last hundred years, not only in British Columbia, but world-wide. Canada was historically built on its “staple” industries and several provinces, including BC, retain some dependence on these resource staples. The most important resource industry in BC is forestry and this industry is a crucial source of employment, not only from direct forest jobs, but also from indirect jobs from industries servicing the forest sector, as well as induced jobs in the tertiary sector that service the employees of the forest sector. However, the mining, agriculture and fishing industries are also important, not only to the province’s economy, but as a source of employment as well.

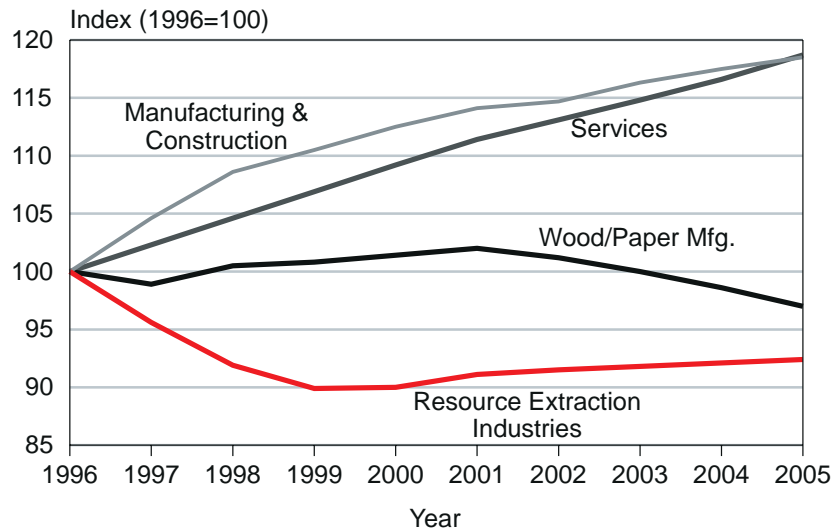
Resource depletion, particularly evident in the forestry and fishing sectors, has resulted in some tough decisions in British Columbia, and often job loss has resulted where significant

conservation efforts were deemed essential. These environmental concerns have driven home the precarious nature of an over-dependence on resource extraction industries to fuel the economy. As a result, efforts are being made to increase the value-added component of these natural resource industries. In other words, there has been a push toward increased manufacturing of BC resource products, rather than exporting them in a relatively unfinished form. Many feel that if British Columbia is to continue to have a strong economy, this trend toward more value-added manufacturing must continue, and this is reflected in the forecasts underlying the REPM simulation. Both the COPS and Ministry of Finance forecasts of employment by industry show a trend toward a declining resource sector and a burgeoning manufacturing sector.³

Figure 3 shows the projection of employment growth by sector for British Columbia based on a synthesis of Ministry of Finance and COPS forecasts. Under this simulation, both the service and

3 The COPS forecast was finalised early in 1997 and the Ministry of Finance and Corporate Relations forecast was prepared in March, 1997; therefore, any regional or industry-specific economic initiatives proposed since these dates are not reflected in the simulation.

Figure 3:
Employment by Sector - British Columbia



Source: BC Stats, Regional Employment Projection Model, Simulation 9605

manufacturing (excluding wood/paper manufacturing) sectors are expected to experience strong growth, but the primary resource and wood/paper manufacturing sectors are expected to see some decline in employment. In terms of unemployment rates this means that in the more service-oriented population centres like the Greater Vancouver region they will likely remain low and fall even further, while in the less populous regions, unemployment rates will continue to climb as the employment base of the primary and forest-related manufacturing sectors dwindles.

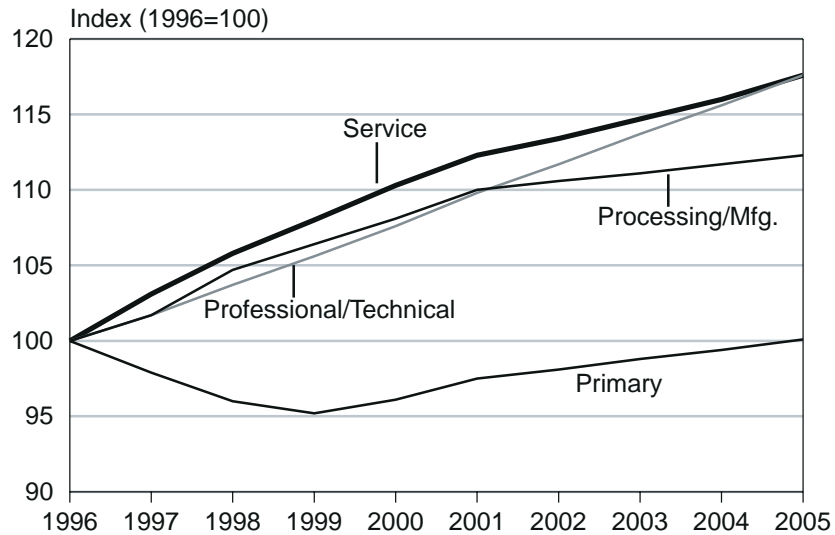
As seen in Figure 4, the forecast of employment by occupation also shows this trend.⁴ This is not surprising, since any occupations tend to be tied to specific industries. As with

the industry sector breakdown, the occupational split shows an expected decline in the occupations related to primary industries, while service-type occupations and manufacturing/processing occupations are expected to experience growth. Again, since the primary industries are more likely to be located in communities that are more sparsely populated, compared to major centres like Vancouver and Victoria, falling employment in this occupation class will mean rising unemployment rates and possible out-migration of population from the more rural areas.

There is historical evidence that economic slowdowns in the resource sectors (including processing of resources, particularly forest resources) affect the rural areas more than the major metropolitan centres of Greater Vancouver, the Fraser

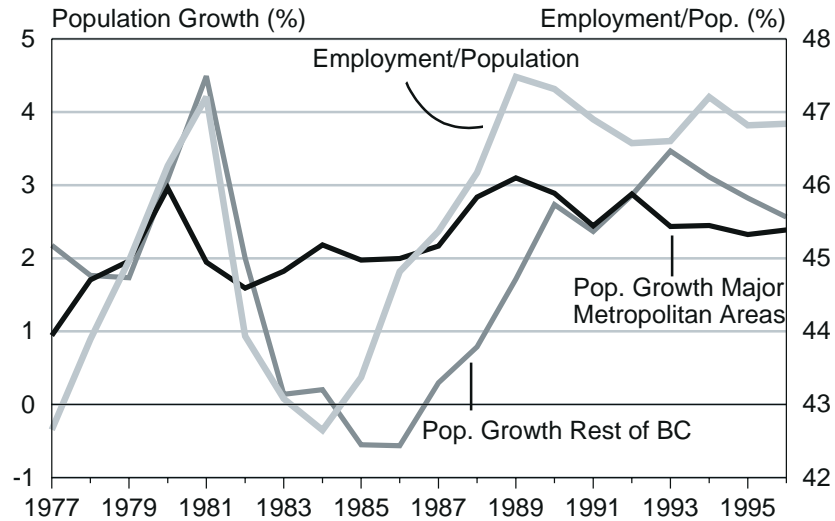
4 Figure 4 displays groupings of National Occupation Classifications as follows: Professional/Technical includes Senior Management, Business, Finance and Administration, Natural and Applied Sciences and Related, Health, Social Science, Education, Government Service and Religion, and Art, Culture, Recreation and Sport occupations (i.e., NOC classes 1 through 5, plus Major Group 00-Senior Management); Service includes Sales and Service, and Trades, Transport and Equipment Operators and Related occupations (i.e., classes 6 and 7); Primary is class 8, and Processing/Manufacturing is class 9 (Note that no attempt was made to separate wood and paper manufacturing occupations, since there is significant overlap with other industries).

Figure 4:
Employment Growth by Occupational Group



Source: BC Stats, Regional Employment Projection Model, Simulation 9605

Figure 5:
Population Growth vs. Employment/Population Ratio
Major Metropolitan Areas vs. Rest of BC

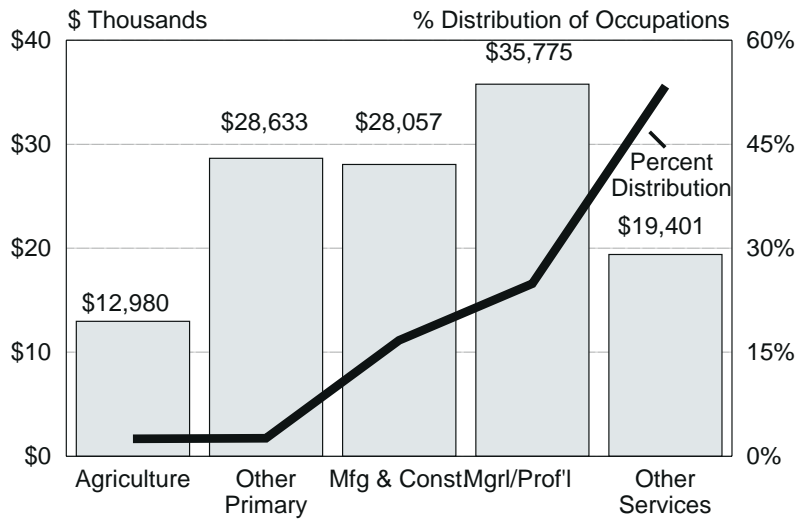


Source: Labour Force Survey for Employment data; BC Stats for Population data

Valley and the Capital region. Figure 5 shows clearly how the recession of the early eighties, which was driven by a fall off in the resource sectors, affected the population of rural British Columbia significantly, with population falling as employment fell and recovery lagging

far behind the recovery in employment growth. Conversely, the major metropolitan centres' population growth appears to be more or less unaffected by the trends in employment.

Figure 6:
Income by Occupation, British Columbia, 1990



Source: 1991 Census

This link between dependence on resource sectors and population growth (or lack thereof) can further be seen by examining the most recent census figures. For those municipalities that experienced population declines between the 1991 and 1996 Censuses, virtually all have resource-based economies, and the majority have almost 50 percent or more of their basic sector employment in a single resource industry. The exceptions were municipalities like Masset and Alert Bay, where Federal government public sector cuts resulted in an exodus of people, and Kitimat and Trail, where rationalizations in the manufacturing sector resulted in job loss and subsequent population declines. However, for most of the other municipalities that experienced reductions in population, the population outflows were the result of job losses in the resource sectors. Perhaps the best example of what happens to a “one-horse” town when it loses its “horse” is the mining town of Cassiar. When the asbestos mine shut down in 1992, Cassiar ceased to exist for all intents and purposes. The remote nature of the area and the fact there were no longer any basic sector industries to drive the economy spelled doom for the community.

This begs the question of what is to become of the communities that are currently dependent on the resource extraction industries and on wood/paper manufacturing. There are basically two possibilities to consider. The first possibility is the one presented in the REPM simulation. That is, these communities will continue to rely on resource extraction industries to drive their economies and if the base projections concerning dwindling employment in the resource sector hold up, unemployment rates will climb for these regions. Rising unemployment rates will likely lead to people migrating out of the rural areas and into the more metropolitan areas in search of new employment. The situation may not approach the seriousness of what happened in Cassiar, but the scenario is unpalatable nonetheless.

The other possibility is that the nature of the economy in the rural areas will change. In other words, the economy will shift away from one of resource extraction and toward more value-added and service-oriented industries. The problem with this is that service industries are driven by basic sector industries and unless the amount of value-added manufacturing done in the province increases substantially, it may not be so easy to wean

some of these resource-dependent communities off their mines and sawmills.

Tourism is certainly a plausible industry to turn to for much of the province, but tourism jobs tend to be seasonal and have lower pay than resource sector jobs. There is also a possibility that new industries will emerge, or that options like telecommuting will become more widespread and allow people to live virtually wherever they want. According to Statistics Canada, Victoria (7.1%) and Vancouver (6.8%) were the top Census Metropolitan Areas in Canada with respect to the percentage of the employed labour force (excluding agriculture) working at home in 1991.⁵ Is it possible that home-based businesses will become more prevalent in other parts of the province as well.

Whatever the case, there are likely to be consequences to this scenario as well. The service sector (excluding managerial and professional service jobs) tends to have fewer unions, lower wages, shorter job tenure, greater turnover, and more incidence of part time work. In addition, with the lower wages, service sector jobs tend to create fewer spin-off jobs. As can be seen in Figure 6, although service-related jobs represented over half of all occupations in British Columbia in 1990, they were paid far less compared to professional/managerial occupations and goods-producing jobs. Only jobs in agricultural occupations were paid less.

The results of the REPM may not reflect the reality of British Columbia's future with regards to regional employment trends, but it certainly points out some of the possible problems that may arise if current trends toward declining employment in the primary industries and forest-related manufacturing continue. Initiatives like the current drive toward increasing the amount of the value-added component of our forest products may be steps in the right direction. Other options such as telecommuting and an increase in the number of self-employed entrepreneurs may not occur in large enough numbers to offset the losses in the resource sectors. Whatever happens, it is a certainty that the nature of work in this province will undergo a significant change with significant regional implications as we enter the new millennium.

5 Nadwodny, R., "Canadians Working at Home," *Canadian Social Trends*, Spring 1996, p. 17.