

Appendix 7

Detailed Notes from Panel of Experts Discussion

An Appendix to
LONG TERM POPULATION PROJECTIONS FOR
NEWFOUNDLAND AND LABRADOR:
A Consultative Approach
DRAFT #2 — Final Report

A Joint Project Between
Economics and Statistics Branch, Department of Finance
and
Planning and Coordination Division, Atlantic Canada Opportunities Agency
(November 2001)

Panel of Experts Consultation Notes

A *Panel of Experts* was convened to provide a non-binding review of total population projections for Newfoundland and Labrador. The *Panel* was coordinated and chaired by Dr. Doug May. Its make-up was jointly agreed upon between ACOA and Provincial Finance, but determined in consultation with and on the recommendation of Dr. May. The *Panel of Experts* was convened in St John's, Newfoundland on January 13 and 14, 2001. Its make-up was as follows:

Attendance at the Panel of Experts Session

Academic Panel¹

Dr. Doug May (MUN), Chair
Dr. Dane Rowlands (Carleton U)
Dr. Roy West (MUN Medical)
Dr. Stan Winer (Ottawa U)
Dr. Byron Spencer (McMasters U)

Provincial Finance (E&SB)

Bev Carter (Presenter)
Alton Hollett
Rod Forsey
Ken Hicks (Presenter)
Linda Bartholomew (Presenter)
Patti Powers

Federal ACOA

Don Hogan (Presenter)
Paul Parsons
Conference Board of Canada
Mario Lefebvre (Regional Unit)
Statistics Canada
Francois Nault (Demography Unit)

¹Biographies for the panel are provided in Appendix 4.

The three economic/demographic scenarios, together with the major underlying assumptions, formed the basis of the federal/provincial presentations to the *Panel of Experts* which was convened in St John's, Newfoundland on January 13 and 14, 2001. The *Panel* was asked to review economic and demographic scenarios, including their underlying assumptions, as well as the methodology employed to develop the three population scenarios. The Panel discussions were facilitated by Dr. Doug May, project coordinator. Copies of all presentations are contained in Appendix 5, in the order in which they were presented.

Natural Population Change — Presentation

Bev Carter made the first presentation to the Panel. The presentation opened with a brief introduction outlining the important impacts that factors such as the collapse of the groundfish industry, the heavy dependency on UI prior to the collapse and the significant changes to EI, and government restraint have had on demographic changes in the province. In particular, these economic and policy changes have led to an increase in out-migration. Between 1993, peak year, and 2000, the province's population has dropped by 7 percent. It was also noted that population growth had historically be relatively slow in Newfoundland compared to Canada, and that out-migration was not a phenomenon that began with the 1990s.

While out-migration has been a significant factor in population decline, changes in the rate of natural population growth have also been important. In particular, changes in the number of births in the province are having a major impact on demographics. See Appendix 5 for presentation charts which provide an overview of the presentation.

Discussion

Considerable discussion ensued and several key points were noted. One key point was that stability of employment and income was thought to be an important factor in fertility rates. For instance, a study printed in the *Journal of Economic Perspectives* (Fall 2000) reported that fertility rates in 53 countries decreased proportionally to the number of women earning wages. This certainly confirms the view that rising participation rates have contributed to declining and low fertility rates in the Province. It was also noted that women are increasingly delaying childbearing, as they pursue education and careers, and this results in fewer children.

It was suggested that the province needed to collect information about the fertility behaviour of migrants. For instance, are women leaving and having more children because of stable incomes elsewhere; are they staying because they want to have less children; do Newfoundland women elsewhere have a lower fertility rate; if there are good jobs for men, are women more likely to have more children?

Insofar as the purpose of this consultation was concerned, none of the Panel members took issue with the assumptions that had been made concerning fertility and mortality rates. It was generally agreed that these assumptions were reasonable, and that they did not differ significantly from those being made by other non-government agents.

Population Projection System (POPPS) — Presentation

Dr. Byron Spencer, one of the Panel members, presented on the POPPS model which he and Dr. Frank Denton built for the province as part of its *Demographic Study*. The model simulates population change and labour markets for various regions within the province (e.g., total province, economic zones, education/health regions, etc.), accounting for different migration rates by age. It also determines *constant quality* program expenditure implications of demographic changes. Notes on this presentation are provided in Appendix 6.

Discussion

Dr. Spencer did present a population scenario, using the POPPS model's default assumptions. Most of the discussion which followed his presentation of the model centered on migration. It was noted that while migration is becoming increasingly important to the province, it is the one that we know the least about.

It appears older seniors move to become closer to services such as health care and seniors homes. It also appears that many families left in the late 1990s but it is expected that there will be a greater proportion of singles leaving in the future. Many young people are leaving the province. This is partly because they cannot enter the fishery since rehiring is being done on the basis of seniority and this means that it is mainly older workers that are being re/hired in fish plants.

It was noted that while out-migration can be calculated better than in-migration, age specific in and out flows are required to compute population scenarios. Planning should be on-going for infrastructure with new infrastructure possibly designed to have greater mobility and flexibility in the face of volatile demographics.

The panel felt that providing high, medium and low scenarios was best way to plan. It also felt that all scenarios lead in the same direction — urbanization and intra-provincial migration.

Statistics Canada mentioned that they adjust residual migration rates by region as the province does. It also mentioned that males 20 to 29 years of age are hard to enumerate in the census and tax filer data, as they are very mobile. The number captured varies by sources of information used. It was also noted that female migration rates trickle off by the ages of 25 to 29 years of age.

Regional Patterns in Births, Fertility Rates and Deaths — Presentation

Linda Bartholomew (Newfoundland Statistics Agency) made a presentation before the Panel on this topic. The main point is that there is little difference in fertility rates across economic zones. Virtually all zones had experienced declining births and rising deaths. Labrador was a major exception to *demographic rules of thumb*. It is quite different from the rest of the province because of a small population, large areas with mainly an Aboriginal population, affluence in the West because of iron ore mining and Central that has many more immigrants. Births have been declining in all regions of the province, with larger declines noted in those regions that had recorded significant out-migration of young people. Deaths have been rising in all regions because of aging.

Discussion

Women delaying child bearing until after the age of 30 years may make it more difficult to conceive, but doesn't explain the differences between Newfoundland and Canada. It was also noted that young, healthy, fit women have a slightly higher miscarriage rate. Surveys have found the preferred number of children is two, and having one child (or none at all) is becoming a more popular choice.

Fertility and Mortality Issues — Presentation

Dr. Roy West made a presentation before the Panel on this topic. He noted that the average life expectancy (from birth) is now in the 80-85 year range, and that improvements on this range are likely to come very slowly and at high cost in the future. Infant mortality has declined to almost nil. He also noted that the fertility rate has become a determinant of health issue, and thought that the rate might rebound somewhat if economic conditions improved, however, increasing fertility rates is a very long-term answer to declining populations. In-migration is the quick answer. Overall, Dr. West felt mortality assumptions are fairly straight forward as little can be done to increase life expectancy much further. Fertility can be influenced by public policy such as supporting parents who do not work.

Discussion

The discussion centered around the fertility and mortality (i.e., life expectancy) rate assumptions used by the various agencies. These rates were as follows:

Fertility Rates

Nfld.	Statistics Canada	POPSS Default	Conference Board
1997	1.269	1.269	1.269
2016	(1.46) 1.26 [1.17]	1.269	1.269
2026	(1.60) 1.30 [1.17]	1.269	1.269

Notes: () high scenario, [] low scenario
 • Canadian high scenario is 1.8, lower than the US rate. The 1996 rate was 1.3 in Germany and 1.28 in Italy.

Mortality Rates

	Statistics Canada		POPSS Default		Conference Board	
	M	F	M	F	M	F
1996 Canada	75.7	81.2				
1996 NFLD	74.4	80.2	74.4	80.2		
2016 NFLD	(80.4) (83.9) 78.7 82.9 [77.5] [82.0]		77.1	81.7	78.7	82.9
2016 Canada	80.0	84.0				

Notes: () high scenario, [] low scenario

It was noted that both the fertility and mortality rates which the Province used to develop its population projections were very much in the same ball park as the others. There was some discussion of factors which could influence these rates including more jobs and higher income patterns for women, which could mean lower fertility rates.

Migration as a Component of Population Change — Presentation

Bev Carter provided a presentation on this topic. The following chart provided the framework for the presentation and discussion which followed.



It was noted that out-migration is nothing new to Newfoundland and Labrador, having averaged 3,700 per year during the 1970s and 1980s. It was also noted that economic change can be observed in the migration trends. There are a number of factors thought to influence choices people make to migrate, as outlined in the chart above, and each was discussed with reference to the related charts contained in Appendix 5. It was noted that the data suggests future labour market requirements may be driven by retirements as well as some job growth. By 2026, it is projected 128,000 workers will retire. In-migration will be needed to fill these job vacancies.

In summary, both out-migration and natural population change have contributed to declining population. The highest decline in population began in 1993 and appears to be subsiding in 2000/01 as migration slows down.

Discussion

There was considerable discussion around the topic of migration following the presentation and at earlier and later points during the two day session. Most of the discussion served to reinforce points made in the presentation and also to emphasize the importance of more and better measures of migration.

Out-Migration Survey Results — Presentation

Linda Bartholomew provided a presentation on the results of the migration survey the Newfoundland Statistics Agency has been conducting in conjunction with the Newfoundland Medical Care Commission (MCP). She noted that the survey is basically confirming what the migration data shows and/or what most people believe about out-migrants. That is, most out-migrants leave for job related reasons, are single, have no children and are fairly well educated.

Discussion

There was little discussion of this presentation since many of the points raised had come up in other discussions.

In-Migration: Gross Flows — Presentation

This presentation was made by Ken Hicks, who noted that there was some suggestion in the data that a large part of in-migration was, in fact, return migrants although it could not be said with 100% certainty. He also noted that the real migration story for Newfoundland is interprovincial, with other flows being fairly small in most years, partly because the province's unemployment rate has consistently been high relative to Canada's and thus international immigrants have historically been more attracted to other parts of the country.

In the period from 1976 to 2000, Newfoundland & Labrador has had an oversupply of labour as witnessed by high unemployment rates, low participation rates and high out-migration. One of the major reasons for the oversupply of labour was that during the 25 years from 1976 to 2000 the age cohorts leaving the labour force were much smaller than those moving in to replace them. Looking at labour supply, in 1976, there were nearly 270,000 people between the ages of 10 and 34 and only about 120,000 between the ages of 35 to 59. So basically over the last 25 years we had roughly 120,000 people leaving prime labour force age and 270,000 people coming behind to replace them. There simply weren't enough jobs to go around.

In the coming years, this situation will be reversed, with more people leaving the labour force than the numbers that will be available to replace them. If the number of jobs in the economy remains constant over the next 25 years nearly 127,600 replacement positions will need to be filled, not to mention any new jobs that might open up due to economic growth. In order to meet this demand for workers, there must be net in-migration. Otherwise huge labour shortages will develop.

Factors Underlying Interprovincial Migration — Presentation

Dr. Stanley Winer presented the results of his and Dr. Kathleen Day's research on this topic using tax filer data (a 10% sample) from 1974 onwards. He noted that, according to their research, the costs of moving (i.e., social, economic or monetary, emotional and psychological) presented the greatest barrier to migration.

Discussion

Quite a lengthy discussion followed. The main points which arose were as follows:

- There is a residual adjustment on migration of approximately 1,700 per year between 1991 and 1996 (off by 1,700 x 5 over the 5 years).
- Residual adjustment mostly affects Newfoundland and B.C.
- Statistics Canada underestimates net out-migration and, therefore, over-estimates population size. It is a country consistency issue.
- The aging trends in Newfoundland are more exaggerated than the rest of the country.
- It would be useful to compare the Newfoundland data with what is happening in the rest of the country to see how much different Newfoundland is in its aging trends.
- It was noted that many factors in the Winer/Day model may not be important to people migrating from Newfoundland during the 1990s. It was suggested Craig Riddell's research on tracking tax filers when the EI regulations were changed might be helpful in understanding what went on during the northern cod moratorium.

Consultations and Regional Economic Trends — Presentation

Don Hogan provided a brief overview of the Regional Consultations, and highlighted some of the main themes which emerged. There was little discussion of the regional detail

Economic and Demographic Scenarios — Presentation

Ken Hicks presented the three (High, Medium & Low) economic scenarios which had been developed for the project, along with the implications of the economics for the demographic projections and changing industry labour demands. He explained the "what would happen if" nature of the economic/demographic scenarios, based upon a set of assumptions agreed upon between ACOA and NF Finance. He also explained that the key issues related to the economic forecast are: mega project assumptions, outlook for individual industries, output per worker and real wage

growth assumptions for individual industries, population levels, age/gender specific participation rate assumptions and unemployment rate assumptions

The economic projections were developed using the Newfoundland and Labrador Econometric Model (NALEM) and the ACOA/NF Finance agreed upon assumptions. NALEM is essentially a neo-classical Keynesian synthesis where real GDP is modeled on an expenditure basis, but limited by capital stock constraints and, to some degree, by labour supply constraints. However, most of the export components of final demand are determined by local resource constraints and are essentially exogenous. The service sector type demands run off population and income.

The various combinations of key assumptions produced three economic scenarios with differing labour force and thus population requirements in 2025, and thus different population outcomes.

The demographic scenarios were developed by choosing three total fertility rate assumptions, three life expectancy assumptions and combining these with the economic scenarios. Through an iterative process between POPPS and NALEM the population projections and the economic projections were adjusted back and forth, via net-migration in POPPS and via total population in NALEM, until the two were consistent with each other.

The results of the projections showed that labour requirements are very sensitive to output per worker assumptions and participation rate assumptions. The resulting population projections for 2025 (the end year was changed to 2016 following the consultation) were:

Low: 466,300 Medium: 515,300 High: 540,600.

All three scenarios show a shifting of employment shares towards the service sector.

Discussion

Captured elsewhere in this section of the report, and therefore not repeated here. Basically, there was a lot of overlap between the discussions.

Panel Discussion and Reaction to Presentations

Francois Nault, Statistics Canada

Mr. Nault reviewed Statistics Canada's latest demographic projections for Newfoundland and Labrador, and highlighted the main assumptions. He noted that their projections are largely based on historical trends, although they do consult with the provinces on the assumptions. He also noted that their projections for all provinces are constrained to add to the totals for Canada. Statistics Canada's latest three demographic projections for the province are not significantly different from those presented to the panel.

Mario Lefebvre, Conference Board of Canada

Conference Board's latest population projections for the Province differ quite a bit from those presented, however, they will likely change when their long term forecast is revised. The Conference Board does use equations in their macroeconomic model to try and capture migration, but does not have the capability to do detailed age/sex demographic analysis.

Dr. Byron Spencer, McMaster University (Co-Author of the AIMS Report)

Dr. Spencer voiced some concern about using the NALEM model for long term economic forecasting (i.e., to 2025), suggesting it should be restricted to the medium term (i.e., up to about 10 or 15 years). He did indicate, however, that he thought the one projection (medium scenario) that had been presented to the Panel was reasonable. He suggested that it would be instructive to assess the implications of continued traditional rates of out-migration i.e., about 3,700/year and what that would mean for labour markets and GDP output. This recognized that the province's scenario for net in-migration assumed that labour demands would be met, but asked the question "What if the labour demands are not met?"

Dr. Stan Winer, Ottawa University

Dr. Winer shared Dr. Spencer's concern about the use of the NALEM model for long term forecasting, but felt that

NALEM was advantageous in that it forced consistency among the various indicators in the outlook. However, he felt that, as the uncertainty increases the further out you go, it might be better to focus on the next 5-10 years instead of a full generation (i.e., 26 years).

He thought it might be helpful to think about the issues in a simpler way, by modeling long term labour supply in the first instance, and then allowing demand for labour to adjust to that. He also thought it would be instructive to develop a scenario whereby Newfoundland becomes a dynamic economy as in the Irish model.

Dr. Dane Rowlands, Carleton University

Dr. Rowlands felt that a reasonable argument can be made that Newfoundland may be on a cusp and that labour markets will tighten up earlier in this province, however, information on what is likely to happen in the rest of the country is necessary. He also indicated he was uncomfortable seeing in-migration after years of out-migration.

The urban to rural shift of population is important to consider. The dynamic dimension of this is that people move to urban areas, find no jobs and leave. Are urban areas gathering and keeping people or are they moving on? Another dynamic social component is when people leave their rural ties are they likely to move again. Need to assess whether urbanization will continue.

Historical job prospects are very important. The population is getting older and youth are becoming educated. Youth may be less willing to accept the low wages of jobs in resource sector and may become more mobile.

Dr. Roy West, MUN School of Medicine

Dr. West focused mainly on fertility and mortality rates, as well as general health policy issues, although he did express the view that some serious consideration needed to be given to what to do about rural communities. He felt it was unlikely there would be any changes in the fertility rate, and even if there were, it would not have any short term effects on population.

General Discussion

The academic members of the panel questioned whether or not the NALEM model was the best tool for analyzing long term demographic trends in the Province, and also whether or not net in-migration to meet future labour market requirements was a reasonable expectation given historical trends. Some members felt it would be important to consider the implications of this not occurring (i.e., the in-migration needed under the economic scenarios presented), and thought it would be important to study how labour markets respond to shortages.¹ The likelihood of ongoing urbanization, given aging of the population and the fact that people are often much less likely to move once they pass 40, should also be studied.

Wage rate patterns of the past will not likely continue in the future. The province has remained competitive due to the low wage rates although inefficient in the presence of social and economic development policies aimed at maintaining status quo. If the province is to compete in the future, there will need to be convergence in productivity and wage rates as the labour market tightens up.

During the discussion the Province maintained its confidence in the NALEM model as an analytical tool to be used in conjunction with the POPPS model, noting that it had been reviewed by Federal Finance a few years ago in connection with some joint work and met with that federal Department's approval. The province also maintained the view (i.e., assumption), agreed upon between ACOA/NF Finance when details of the projections were being worked

¹It is noted that apart from Dr. May, none of the members of the Panel of Experts had worked with the NALEM model or reviewed any of its documentation. It is also noted that the purpose of the project was to develop "what would happen if" scenarios (and not "view of the world" scenarios) under an ACOA/NF Finance agreed upon set of assumptions. Labour demands not being met was not one of the agreed upon assumptions, though it might be worth considering in future work with a different purpose

out, that net in-migration would occur if jobs were available and wages were competitive with other parts of Canada. A key determinant of past out-migration was a shortage of jobs in relation to the number (or potential number) of new labour market entrants. This will not be an issue in the future due to attrition as current, aging workers begin to retire in large numbers. Any net employment growth would only add to the attrition-related demand for workers.

The underlying assumptions and projections are reasonable “*what would happen if scenario*”, as called for by the proposal, and this is confirmed by the regional consultations and the related population projections. The economic/demographic projections are based on participation rates approaching, though not reaching because of seasonality of employment, national levels. They also include fairly low unemployment rate assumptions and assume fairly strong productivity growth that would see productivity levels in this province at, or above in some cases, national levels.

Both Statistics Canada and the Conference Board of Canada felt the province’s analysis and projections were reasonable. Moreover, it is noted that while the formal consultation took place in January 2001, informal discussions with the agencies represented began a year or more prior to that. The projections, and hence demographic views, of both Statistics Canada and the Conference Board of Canada much more closely approximate the province’s now that they did a year ago, as illustrated in Appendix 11.