

# Appendix 5

## Charts for Presentations Provided to the Panel of Experts

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

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

## **Presentations to SSP Boards and the Panel of Experts on Demography**

The following are examples of presentations made by Beverley Carter, Linda Bartholomew, Dr. Doug May, and Ken Hicks during the consultations with the Strategic Social Plan (SSP) boards and the meeting of the Panel of Experts on Demography.

Beverley Carter's presentations to the SSP boards gave a general overview of past demographic trends in the province, a brief economic outlook for the province, a population projection consistent with the economic outlook and key implications of demographic trends. Linda Bartholomew and Dr. Doug May's presentations to the SSP boards gave an overview of recent demographic trends in the relevant region and then outlined the results of the Newfoundland Statistics Agency's MCP survey of out-migrants from this province. An example of their presentation to the Avalon SSP board is included.

Beverley Carter's presentation to the Panel of Experts on Demography was broken into two sections. The first section gave an overview of the demographic trends in Newfoundland and Labrador, focusing on natural population change and relevant economic and social factors affecting demographic trends. The second part of the presentation focused on migration and the factors relevant to it. Information on future labour market requirements and future aging of the population was also presented.

Linda Bartholomew made two presentations to the Panel of Experts on Demography. The first presentation covered regional patterns for fertility, female migration and natural population change. The second presentation outlined the Newfoundland Statistics Agency's Survey of Out-Migrants and presented some of the results from the survey.

Ken Hicks made two presentations to the Panel of Experts on Demography. The first presentation covered information on historical migration flows in and out of the Province. The second presentation outlined the assumptions behind three economic scenarios (high, medium, and low) for the province developed by the Department of Finance in consultation with Dr. Doug May. The implications of these economic projections for demographics and changing industry labour demands were also presented.

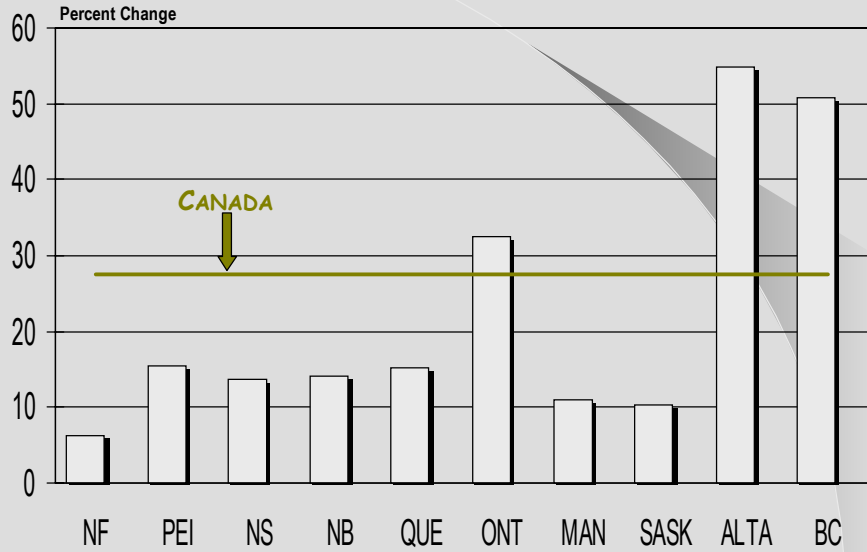
# Demographic Change in Newfoundland and Labrador

Prepared for  
Panel of Experts – January 2001  
Department of Finance  
Government of Newfoundland & Labrador

## Overview Of Presentation

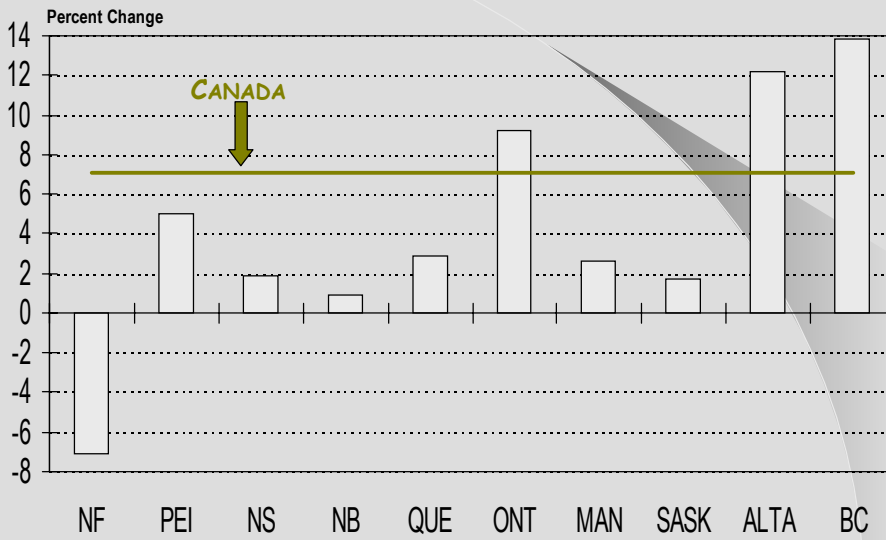
- Demographic Study and Consultation Process
- Historical Population Growth/Decline
  - Canadian comparative framework
- Historical Demographic Trends
  - Components of population change
  - Population aging
  - Regional population trends
- Economic Outlook in Brief
  - Economics/employment/demographics linkages
- Future Demographic Trends (Illustrative Scenario)
  - Total population
  - Components of population
- Key Future Issues and Implications

### Change In Total Population 1973-1993 Canada and the Provinces



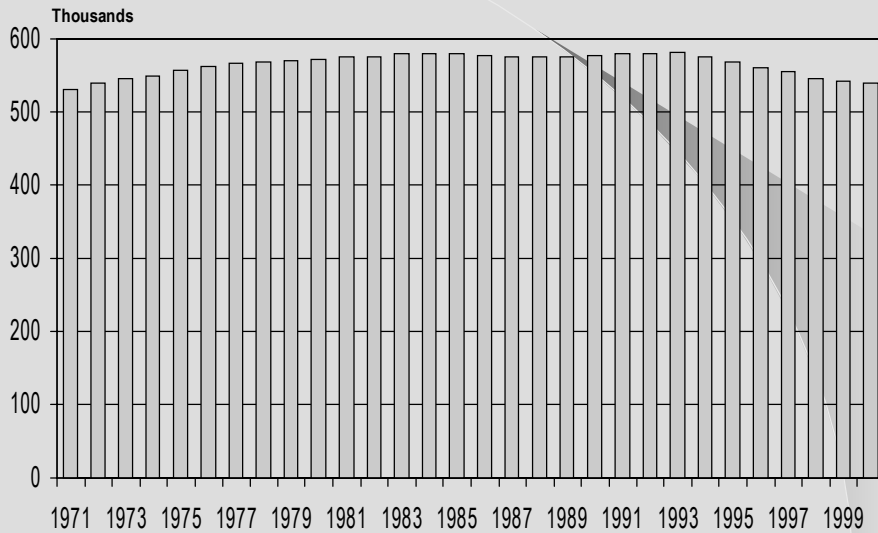
Department of Finance, Government of Newfoundland & Labrador . . . . . 3

### Change In Total Population 1993-2000 Canada and the Provinces



Department of Finance, Government of Newfoundland & Labrador . . . . . 4

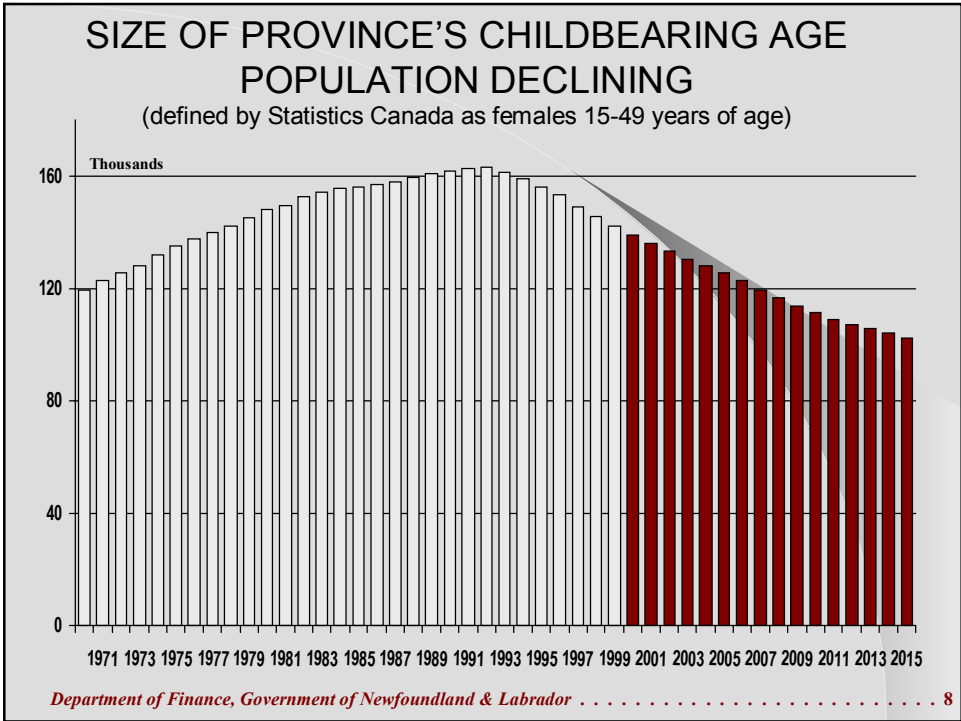
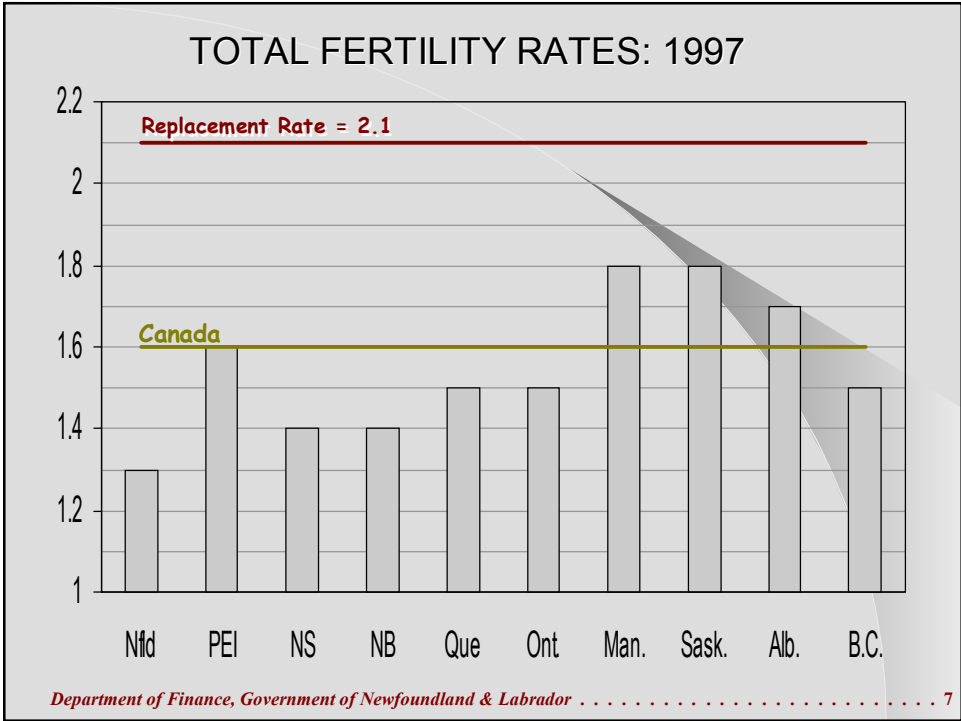
## TOTAL POPULATION 1971-2000 Newfoundland and Labrador



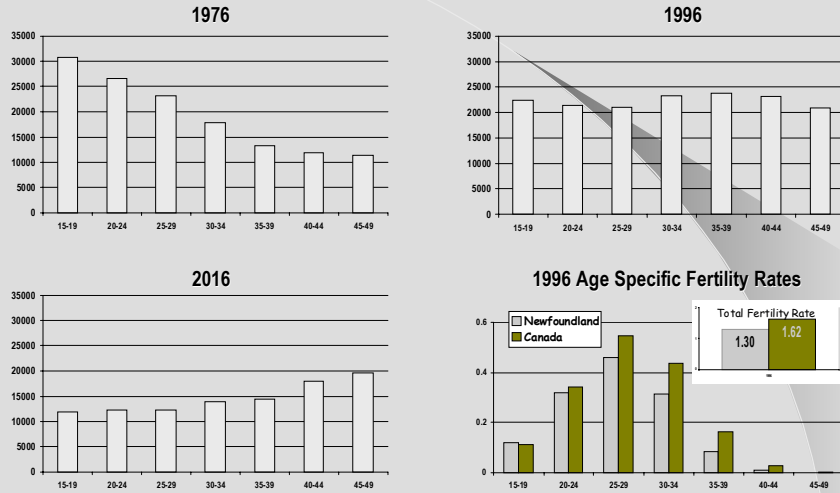
Department of Finance, Government of Newfoundland & Labrador . . . . . 5

## Components of Population Change Newfoundland and Labrador

- Natural Population Changes  
–Births and Deaths

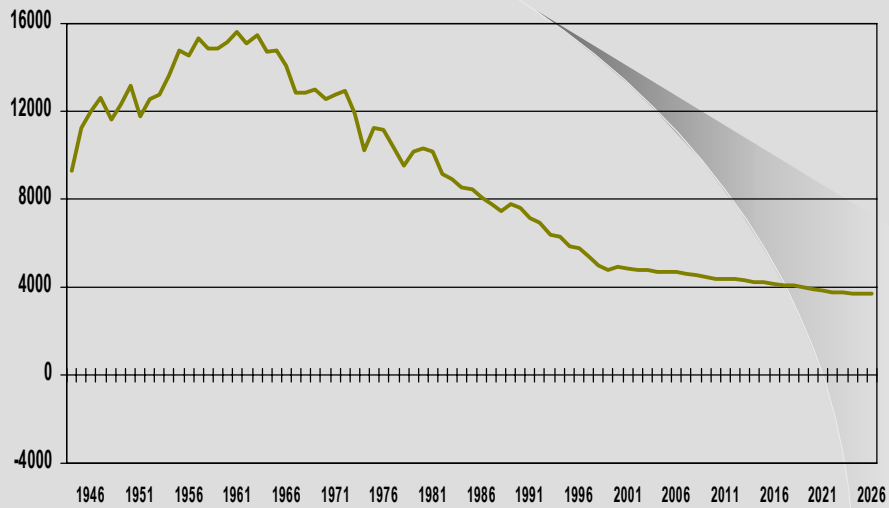


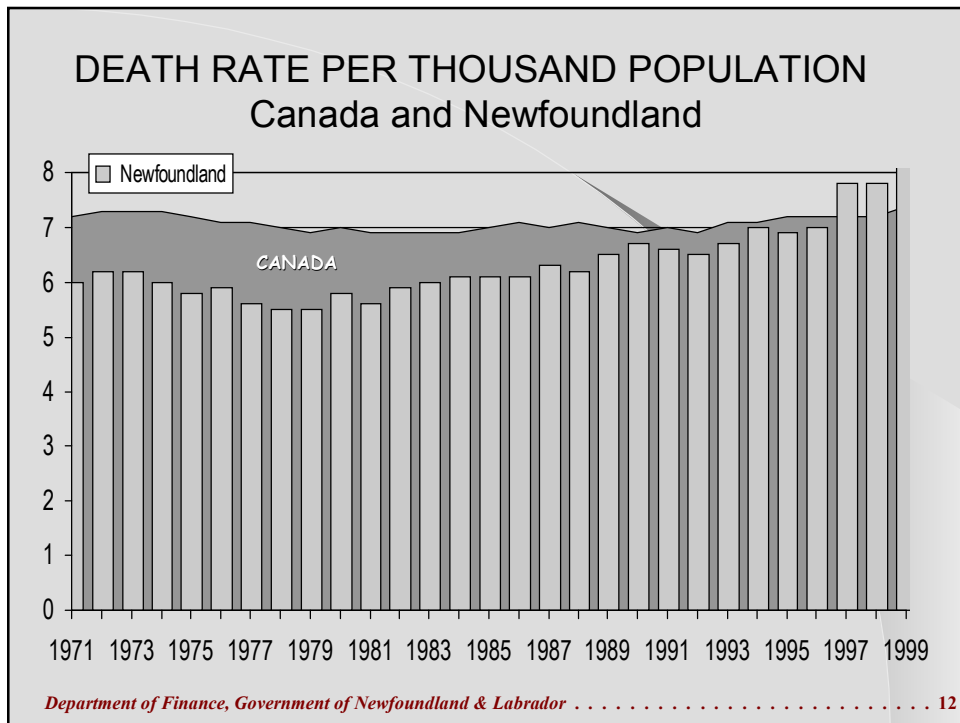
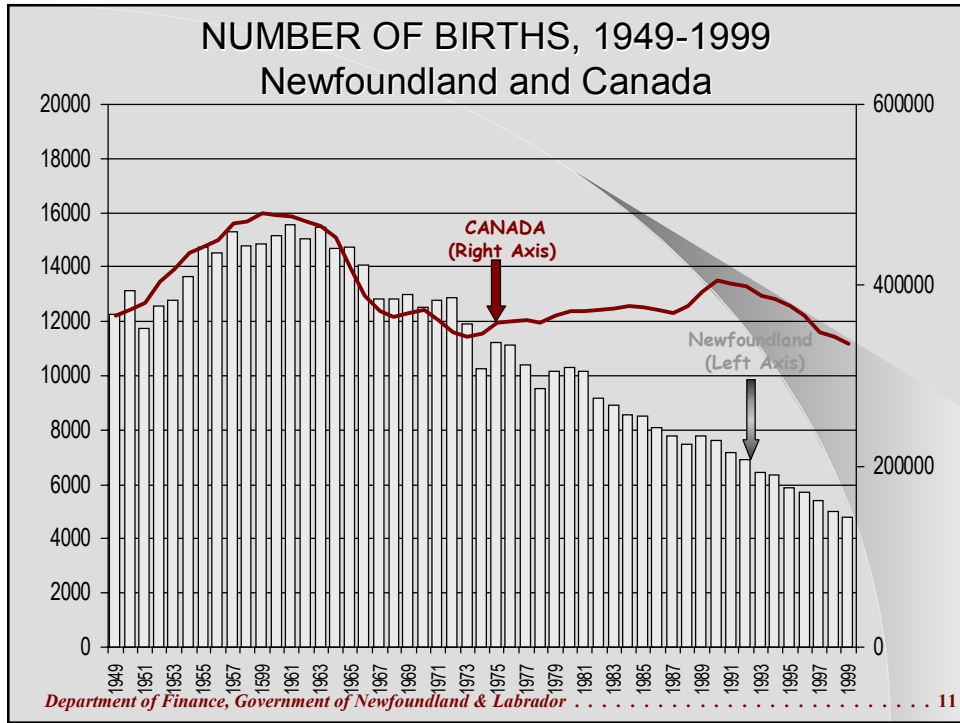
## PROVINCE'S CHILDBEARING AGE POPULATION AGING



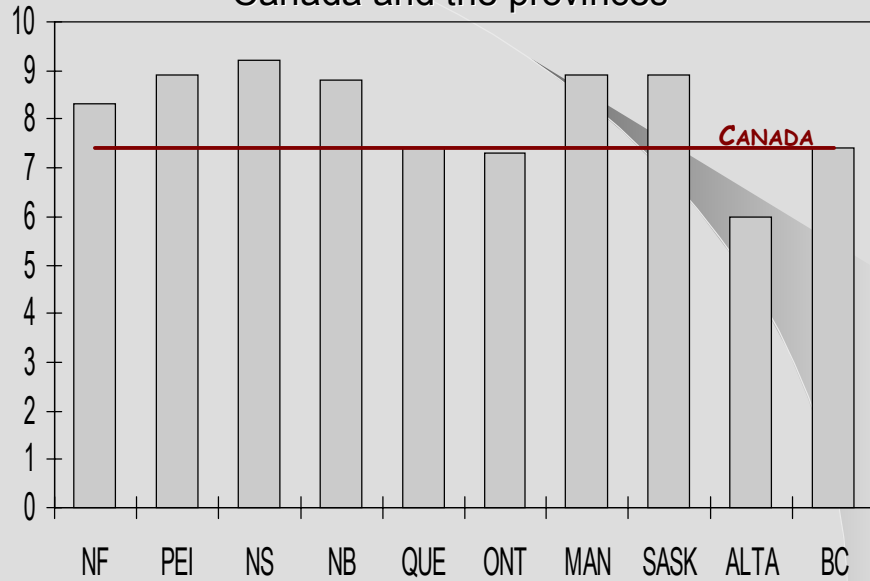
## Natural Population Change: BIRTHS

Newfoundland and Labrador: 1944-2026  
(One Scenario)





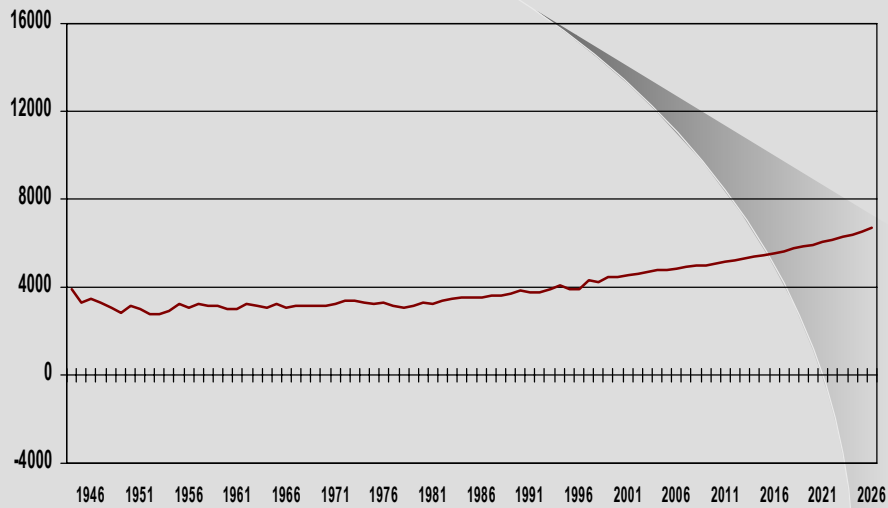
### DEATH RATE PER THOUSAND POPULATION — 1999 Canada and the provinces



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### Natural Population Change: DEATHS

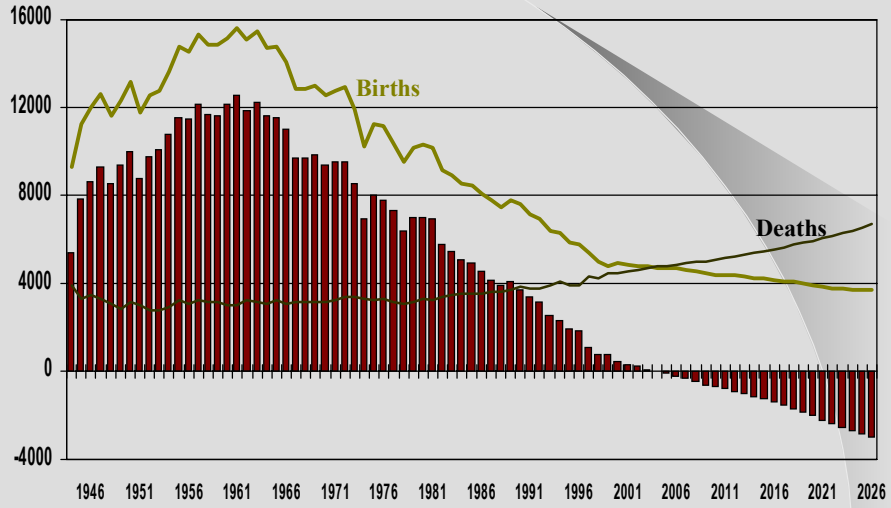
Newfoundland and Labrador: 1944-2026  
(An Illustrative Scenario)



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# Natural Population Change: BIRTHS - DEATHS

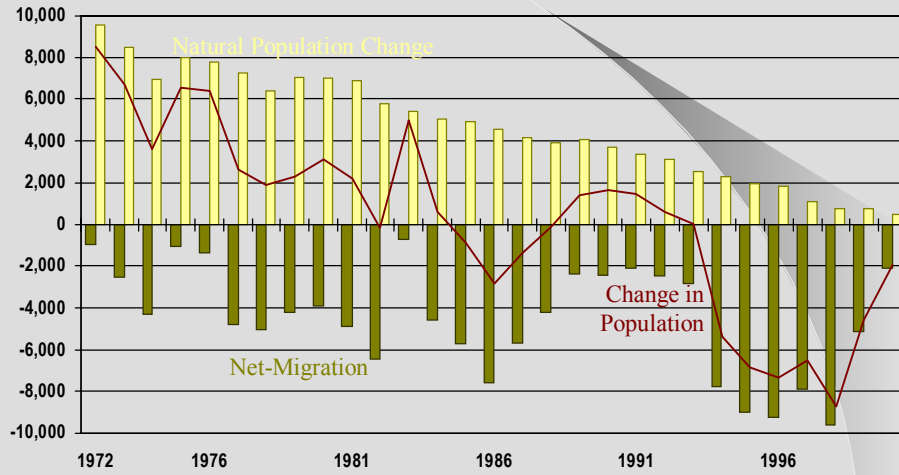
Newfoundland and Labrador: 1944-2026  
(An Illustrative Scenario)



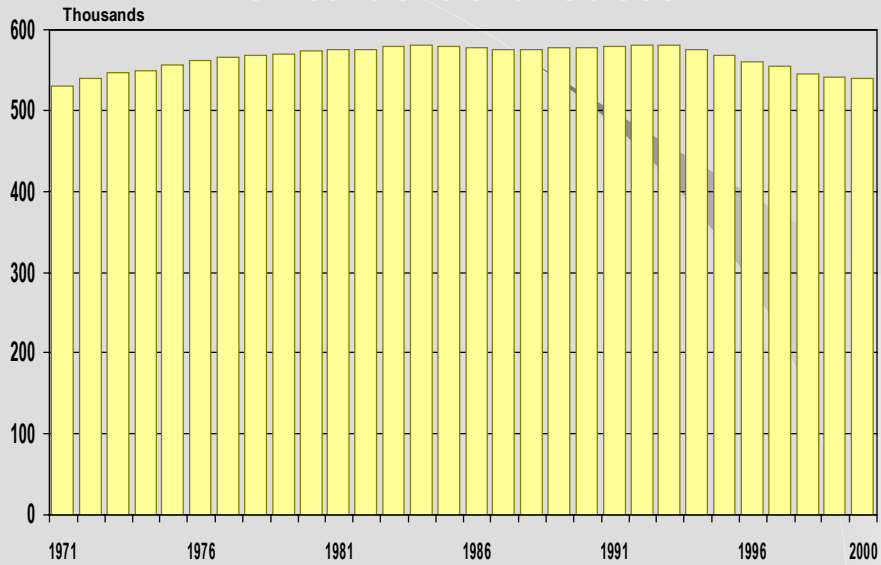
## Population Change by Component

- Natural Population Changes
- Migration Changes

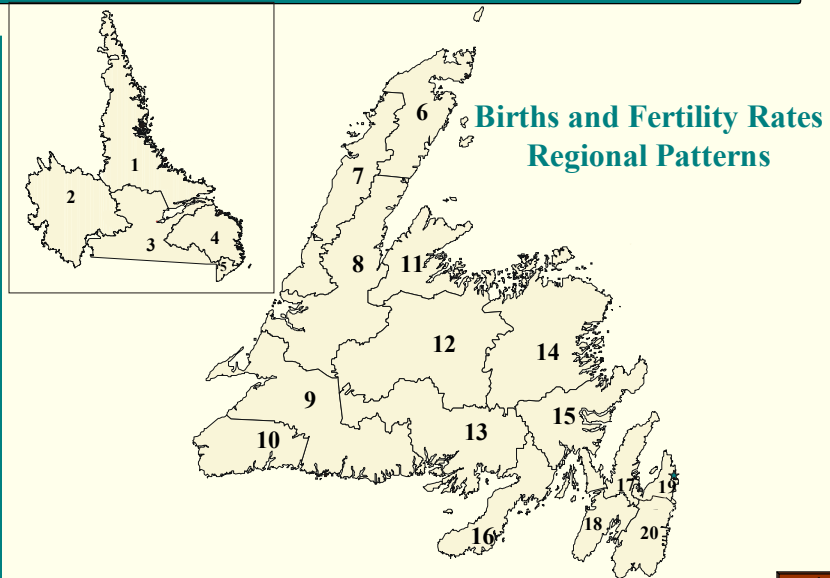
## Change in Population by Component Newfoundland and Labrador



## TOTAL POPULATION 1971-2000 Newfoundland and Labrador

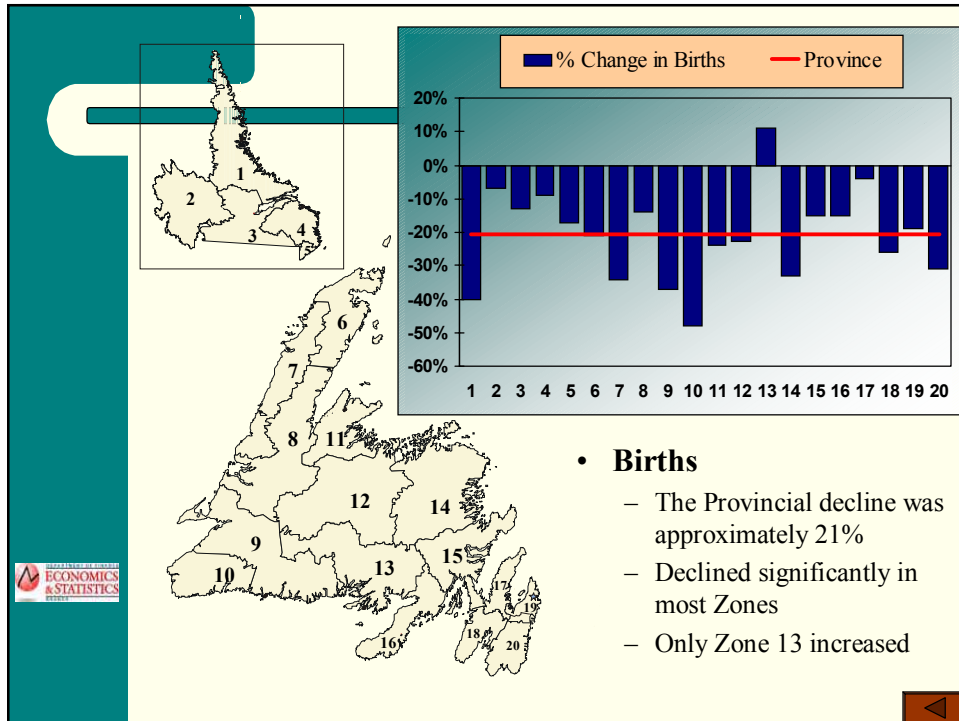


## Panel of Experts Consultation



## OUTLINE

- **Change in Number of Births**
- **Total Fertility Rate**
- **Mean Age of Fertility**
- **Migration Rates of Females**
- **Natural Population Change**



## What Caused Births to Decline?

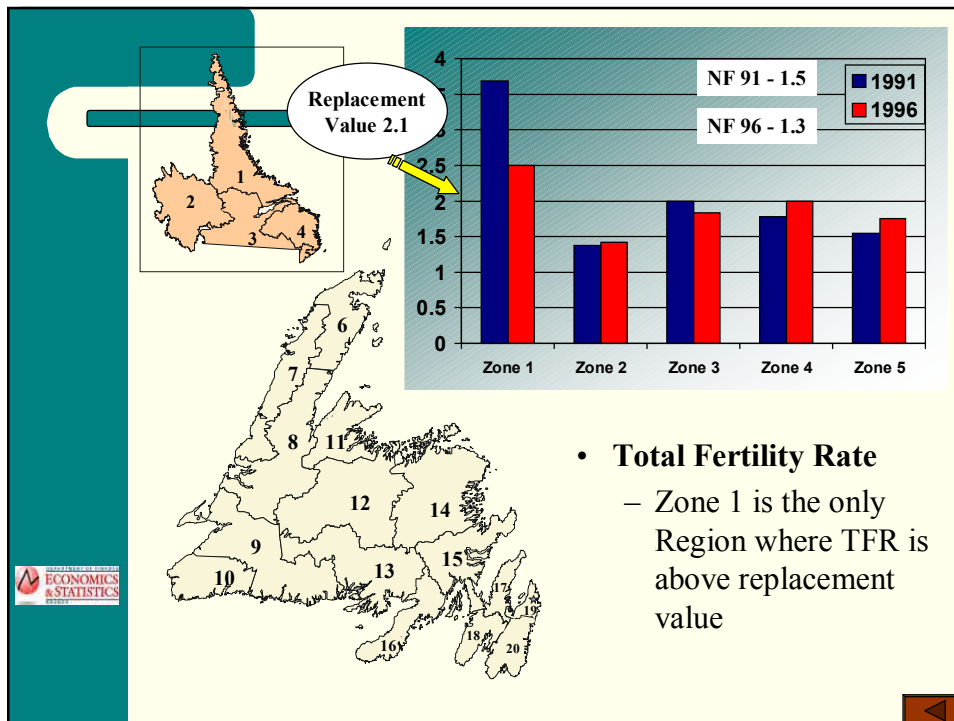
- **Low Total Fertility Rates**
- **Out-Migration of young people, particularly women of prime childbearing age**
- **Aging Population**

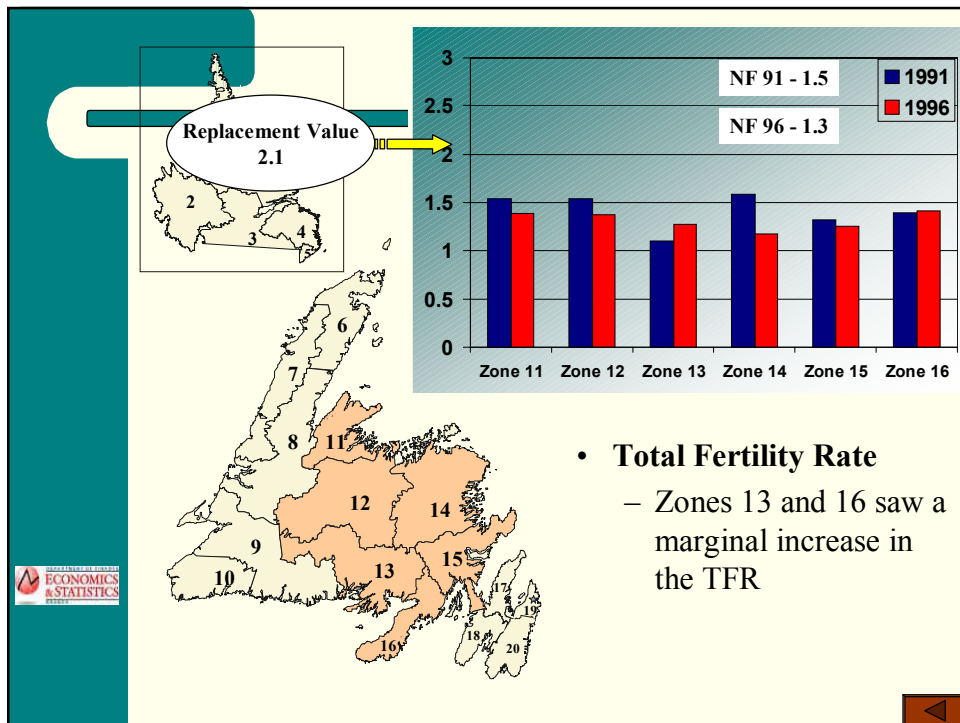
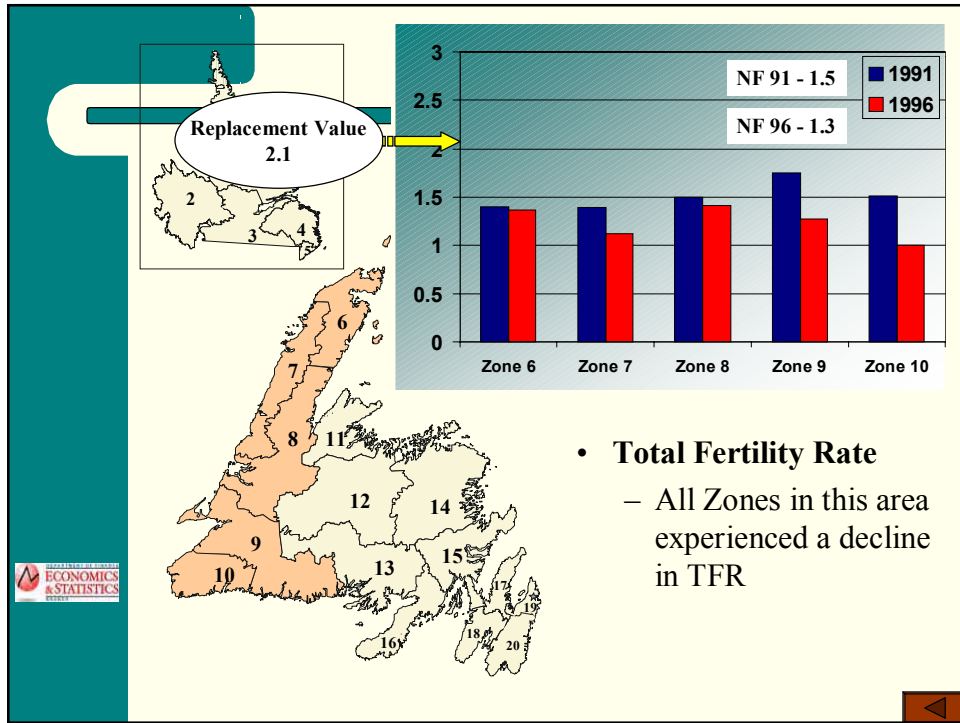
**Department of Economics & Statistics**

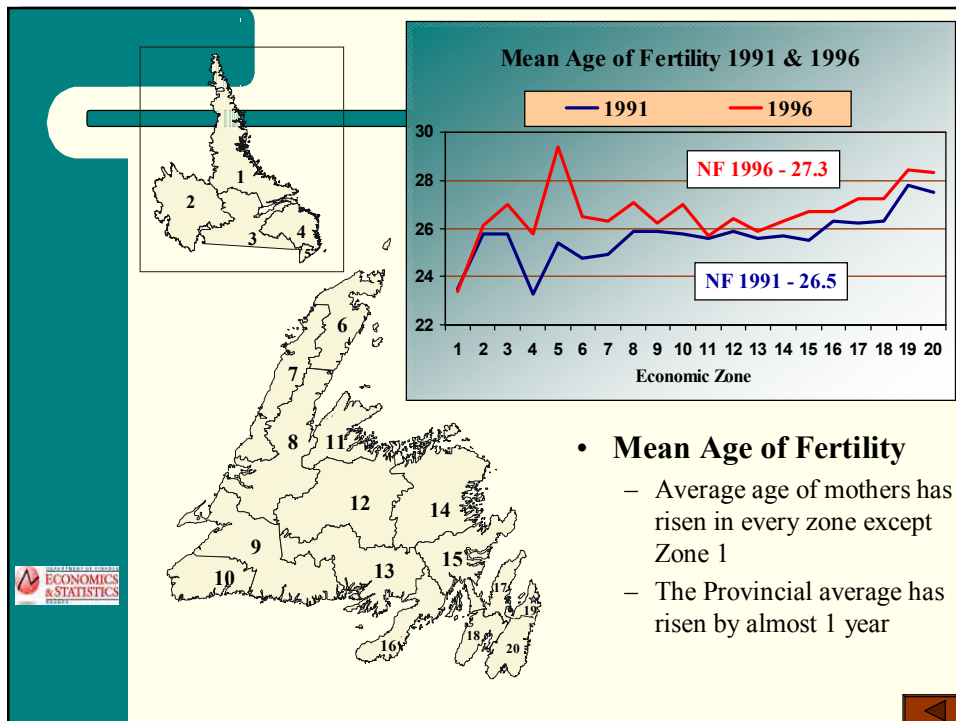
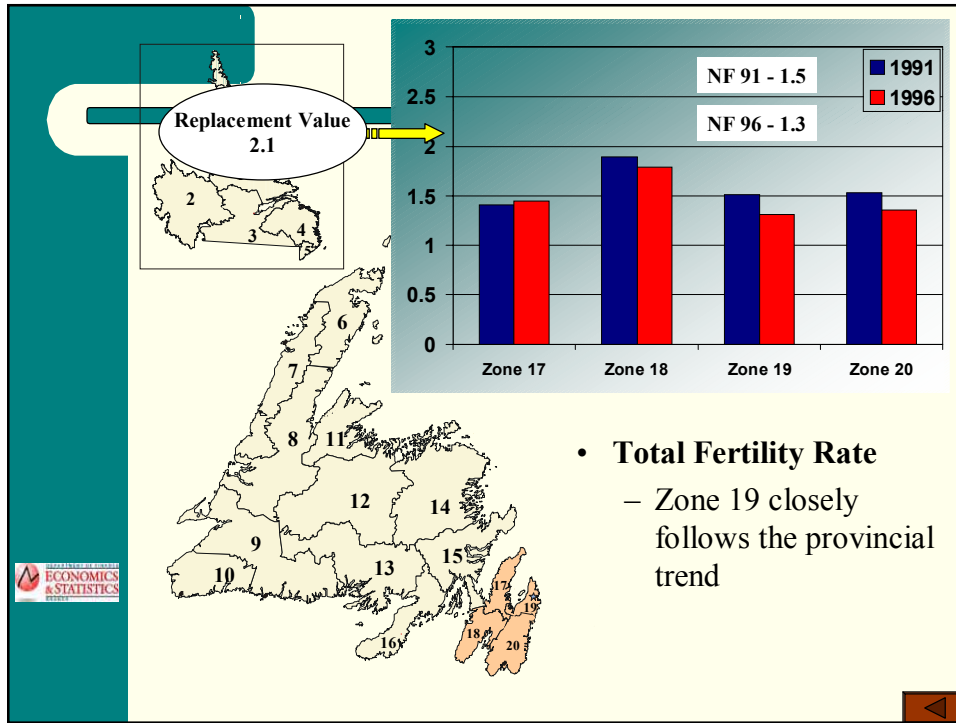
## Total Fertility Rate by Region

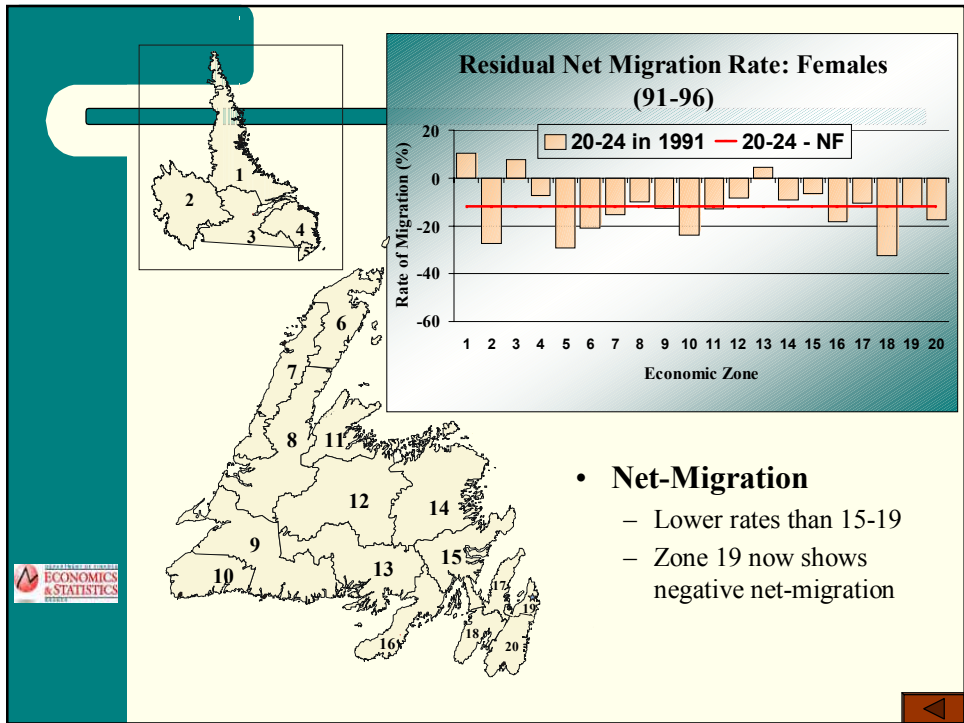
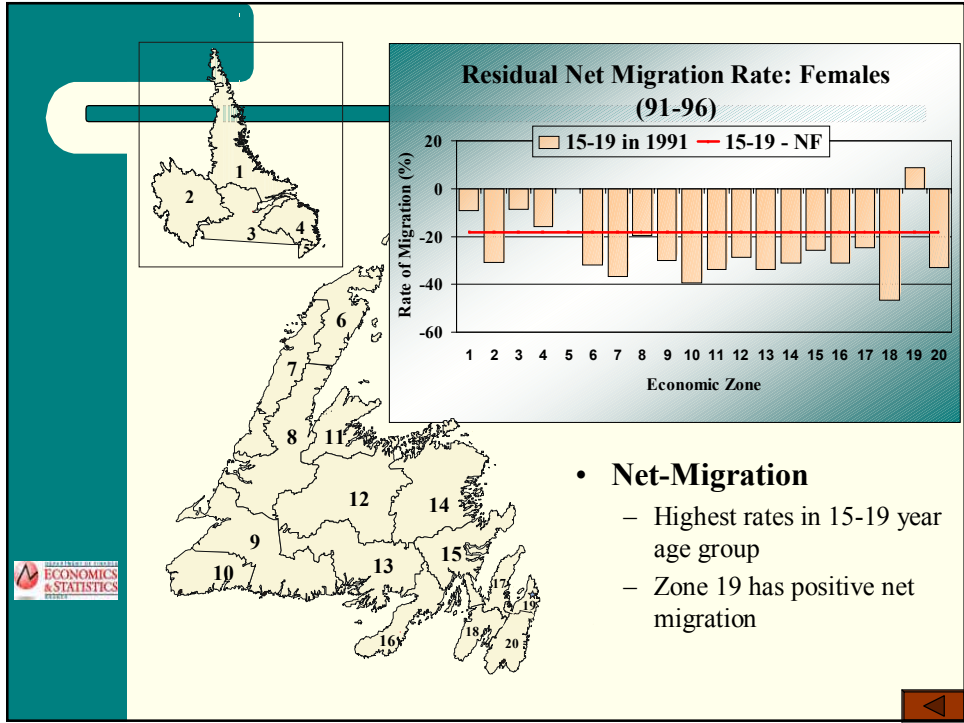
### Total Fertility Rate:

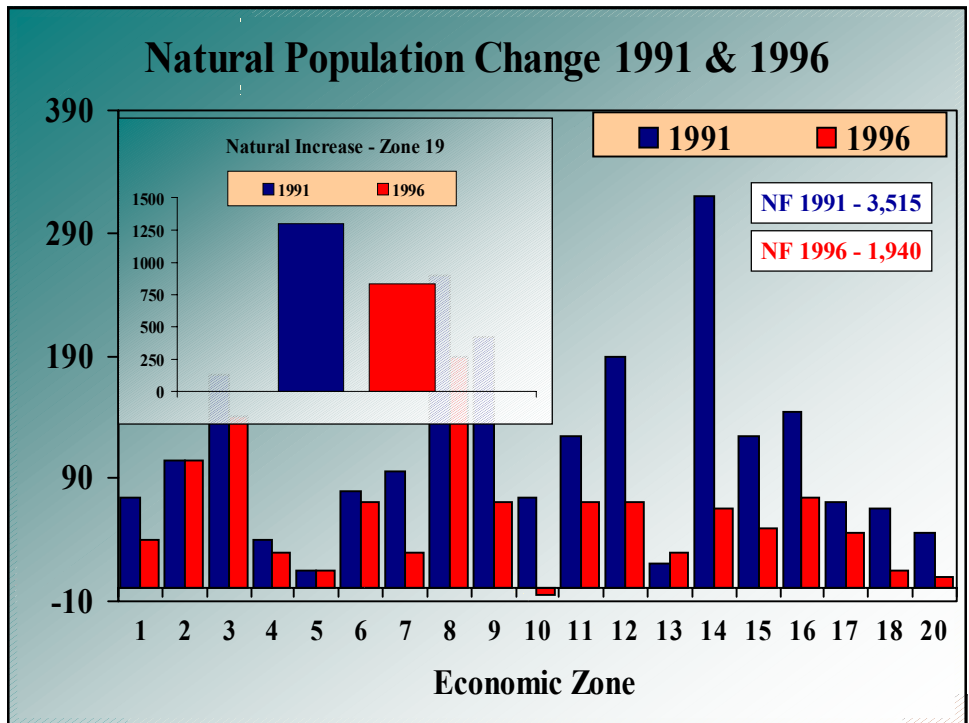
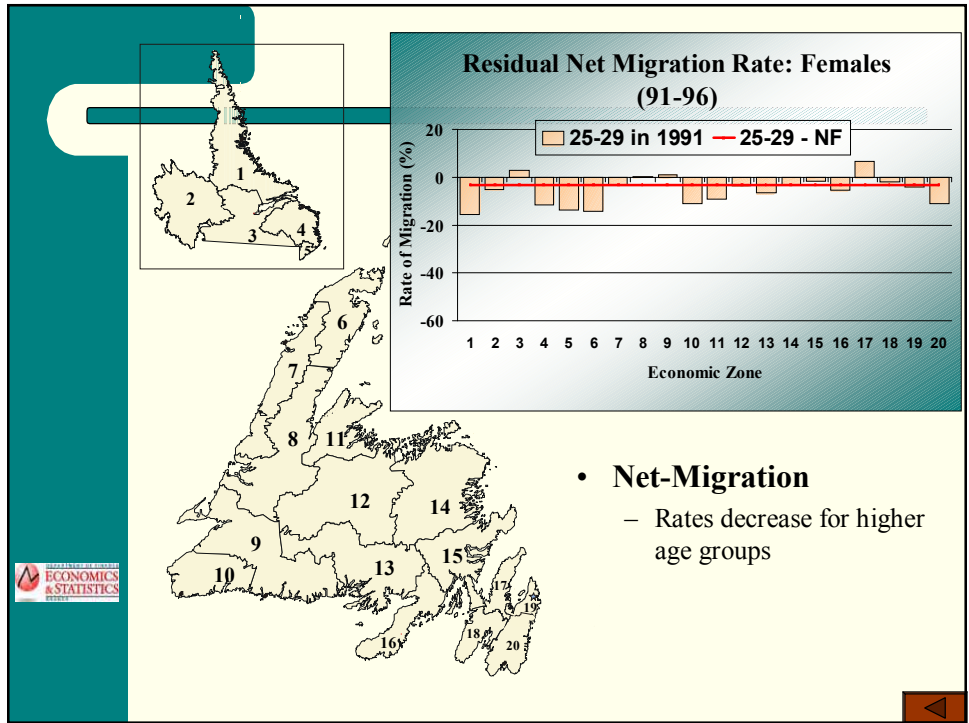
Average number of children a woman can expect to have in her lifetime, based on the fertility rates of a given year. It is equal to the sum of the age-specific fertility rates (ages 15 to 49).

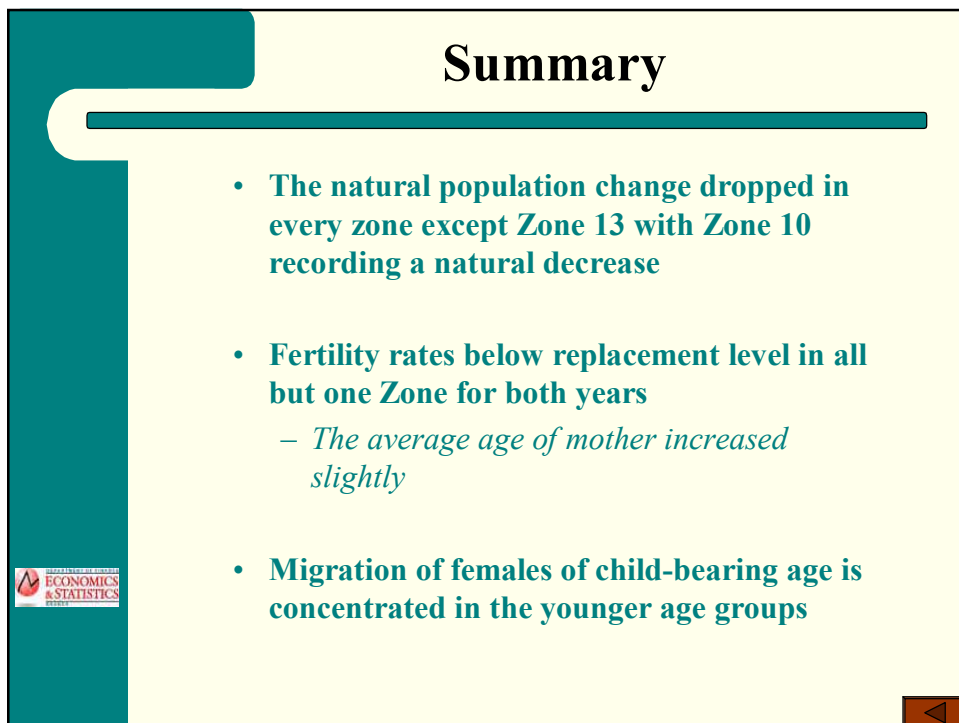
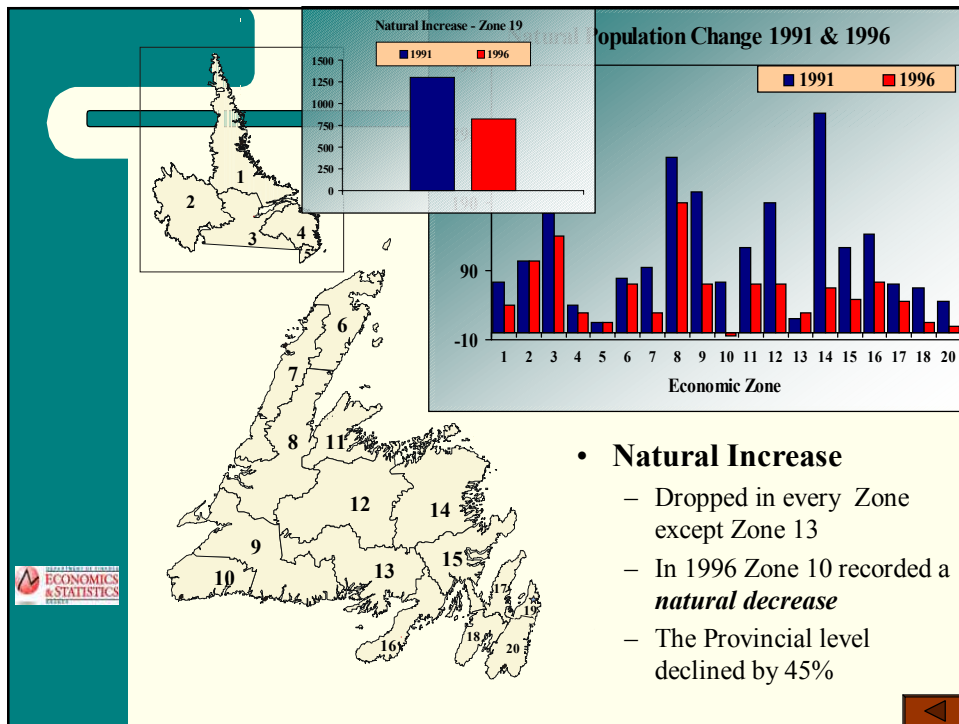












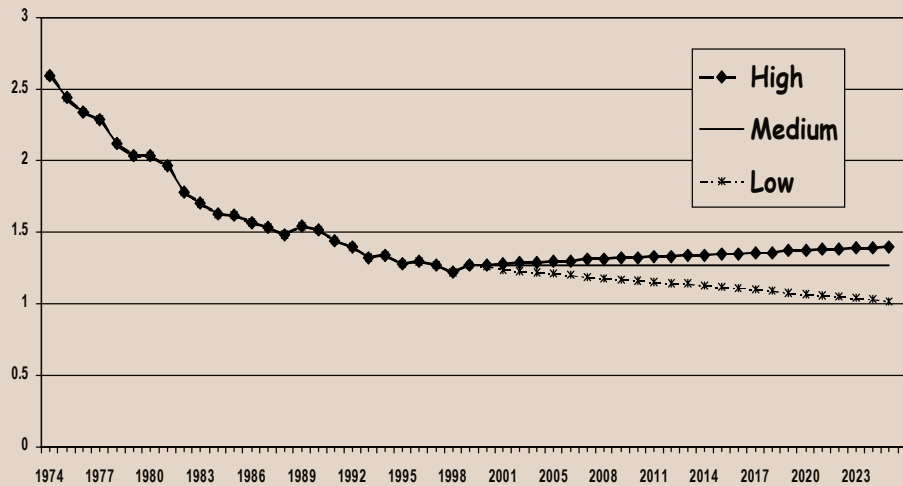
# Demographic Projections

Presentation to  
Panel of Experts on Demography

St. John's  
January 2001

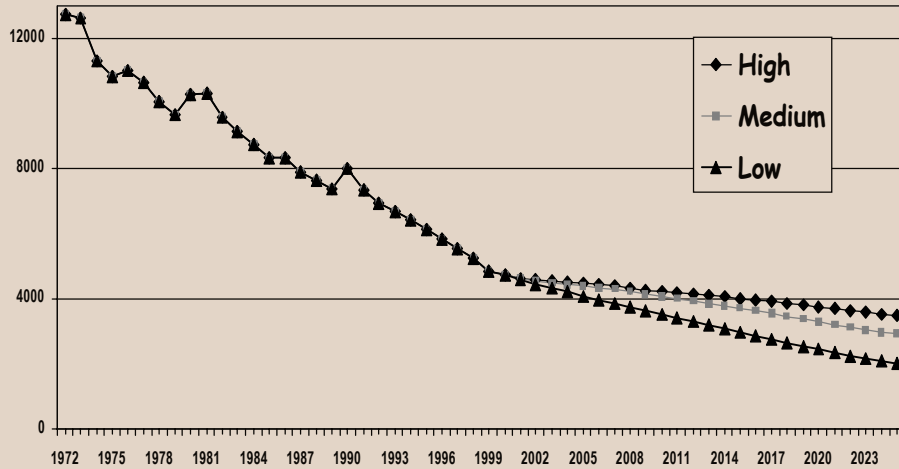
Economics and Statistics Branch, Department of Finance, January 2001

## Total Fertility Rate Newfoundland & Labrador



Economics and Statistics Branch, Department of Finance, January 2001

## Births Newfoundland & Labrador

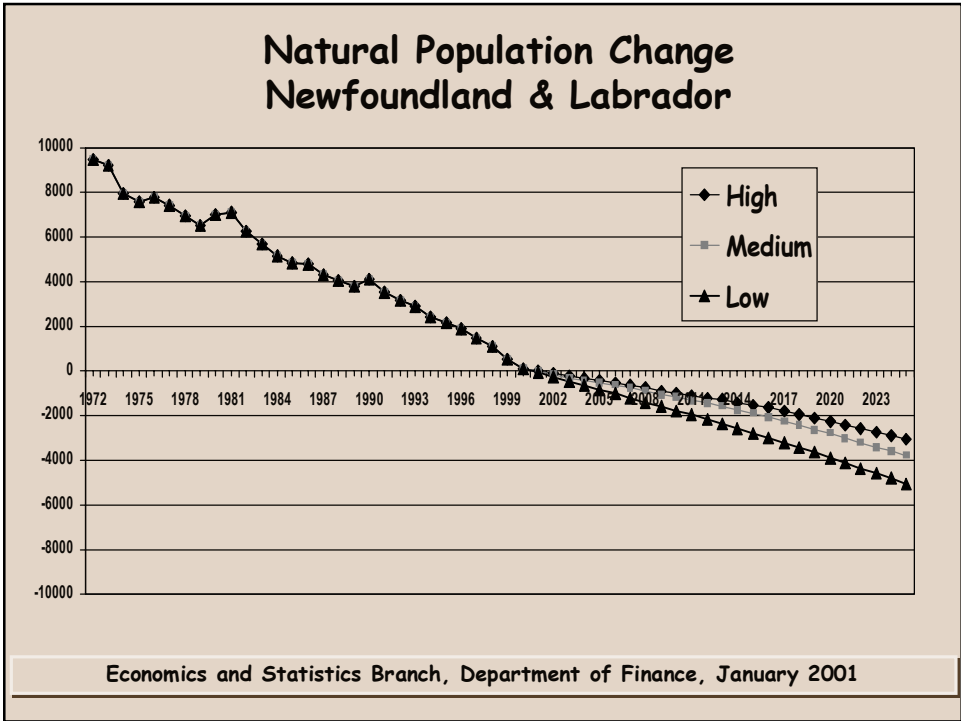
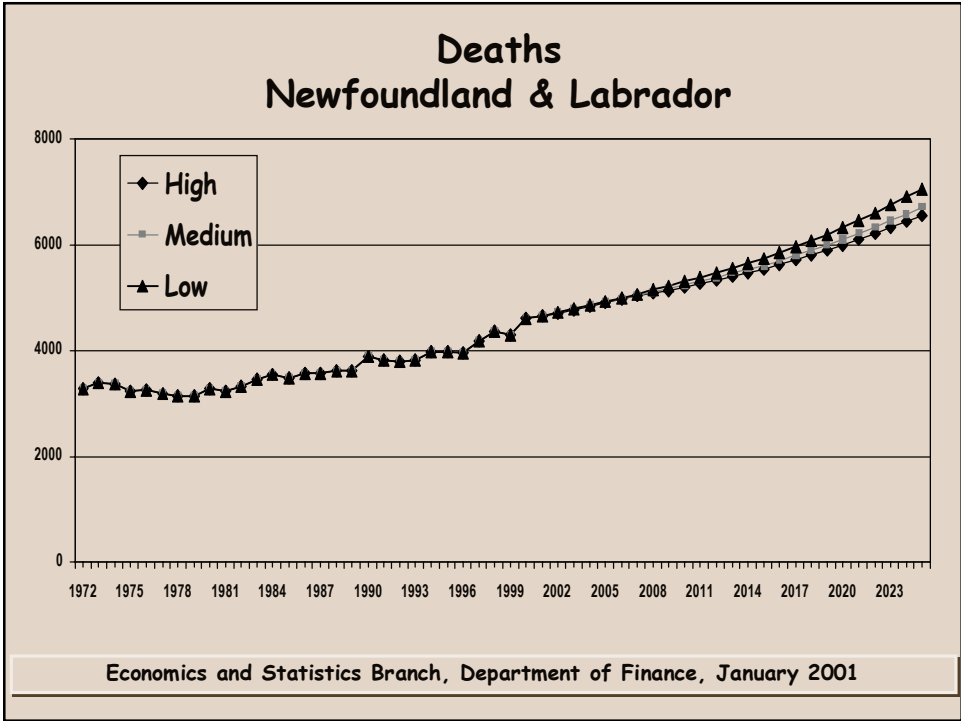


Economics and Statistics Branch, Department of Finance, January 2001

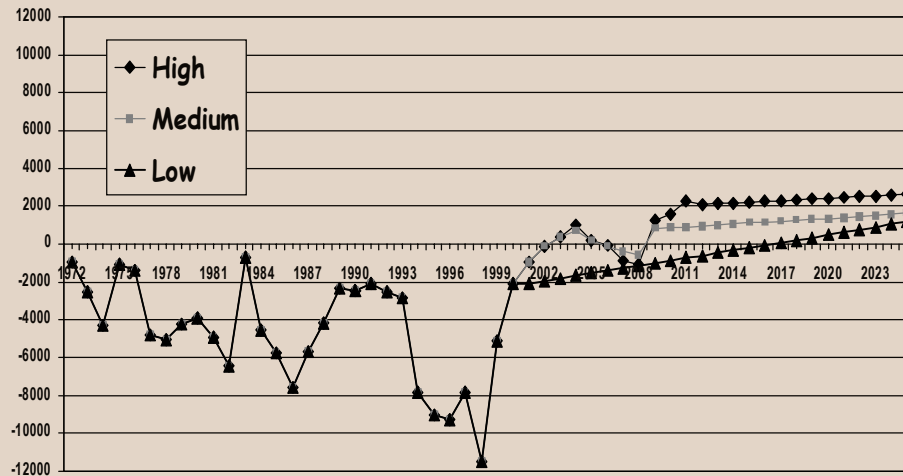
## Life Expectancy Gains by 2025 (Years) Newfoundland & Labrador

	<u>Low</u>	<u>Medium</u>	<u>High</u>
Males	1.9	3.3	3.7
Females	1.6	2.4	2.9

Economics and Statistics Branch, Department of Finance, January 2001

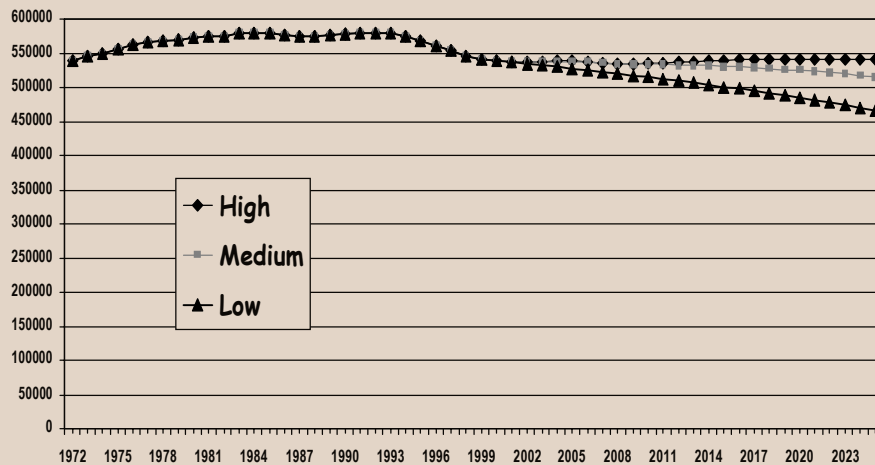


## Net Migration Newfoundland & Labrador

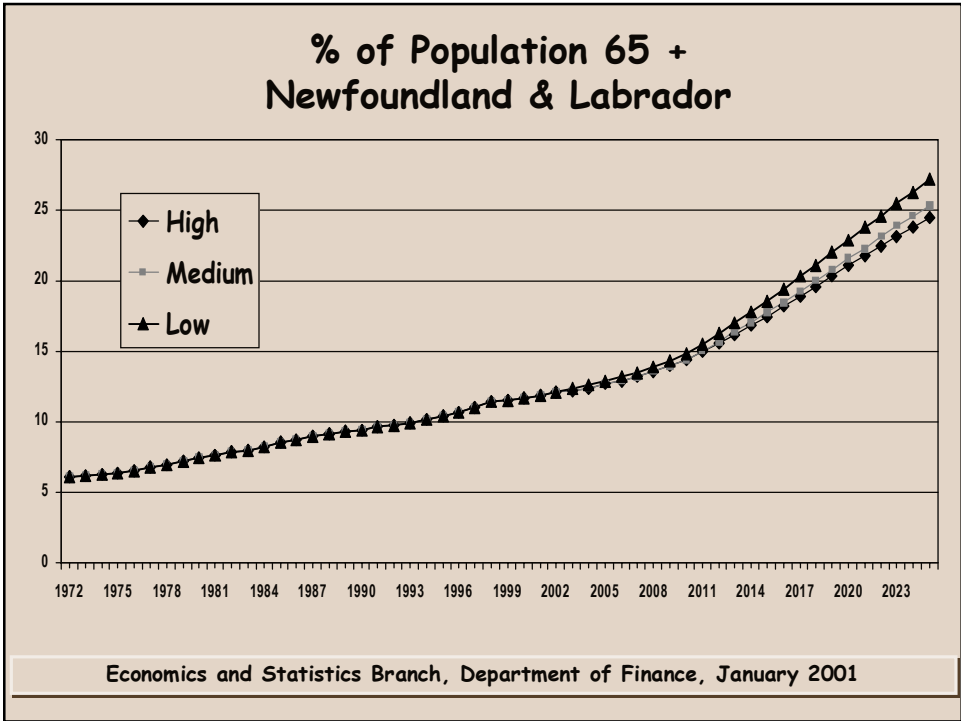
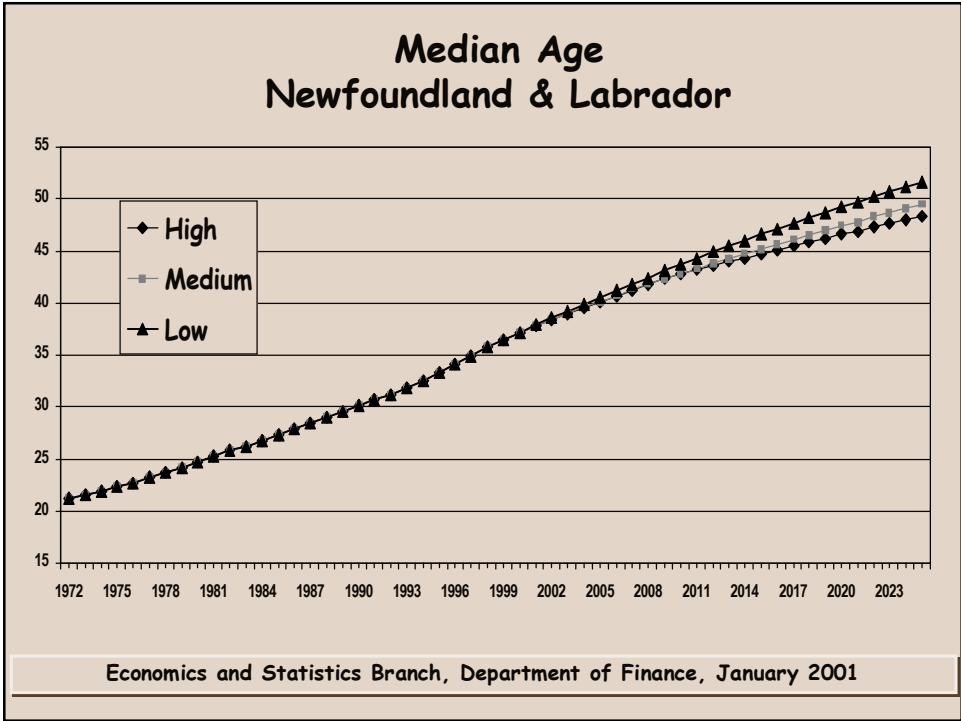


Economics and Statistics Branch, Department of Finance, January 2001

## Population Newfoundland & Labrador



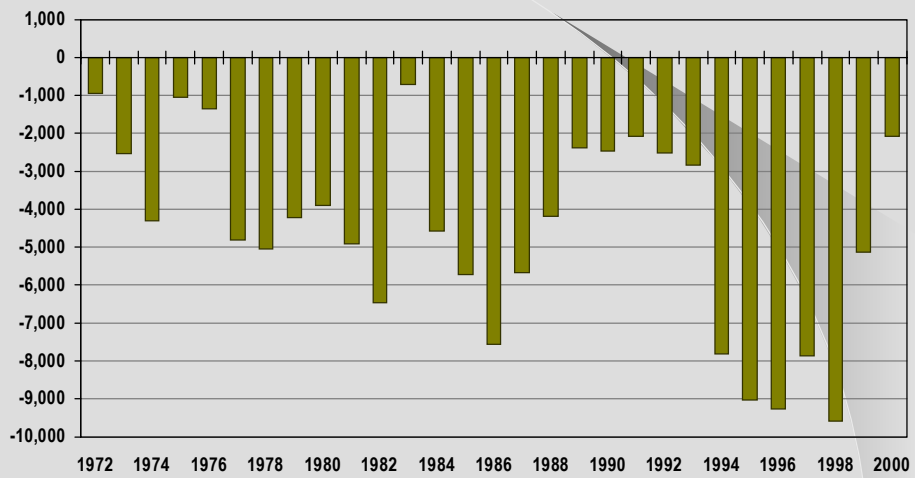
Economics and Statistics Branch, Department of Finance, January 2001



# Components of Population Change Newfoundland and Labrador

• Migration

## Change in Population by Component Newfoundland and Labrador

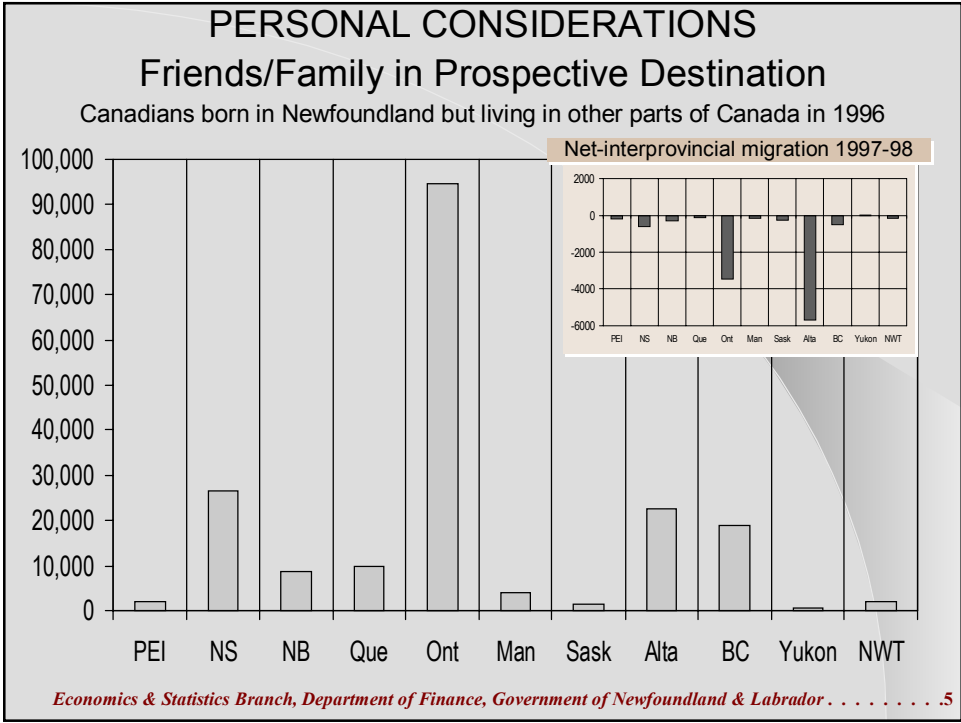


## Factors Thought to Influence Migration Trends

- PERSONAL CONSIDERATIONS
  - Friends/Family in prospective destination
- SOCIOECONOMIC STATUS
  - Age/Education
  - Marital/Occupational status
  - Dependent Children/Home ownership status
- ECONOMIC FACTORS
  - Employment prospects (home community/elsewhere)
  - Industry failure (e.g., collapse of groundfishery)
  - Hiring practices of fish plant in community
  - Workforce age structure (attrition profile in future)
  - Business cycle (e.g., recession, economic growth)
- GOVERNMENT PROGRAMS AND POLICIES
  - UI/EI/Makework program and policy change
  - Government Spending/Presence/Municipal Financing
  - Fisheries Policy

*Economics & Statistics Branch, Department of Finance, Government of Newfoundland & Labrador . . . . . 3*

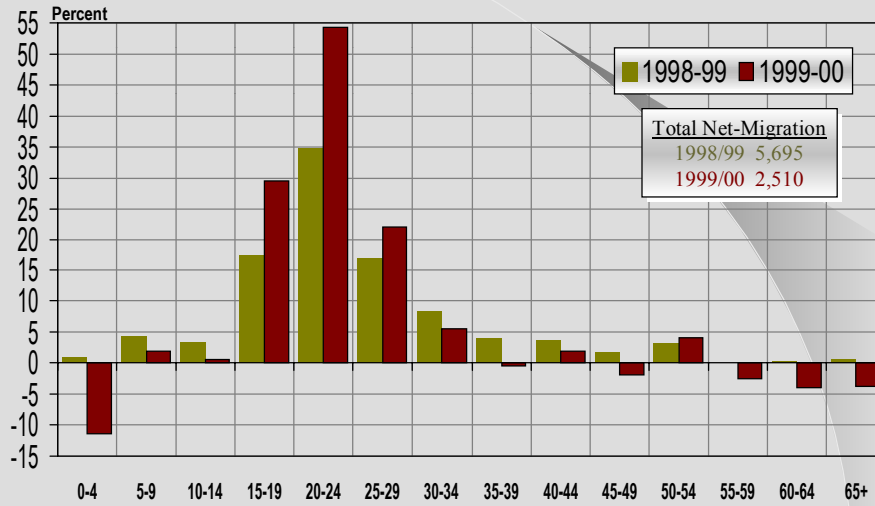
## Personal Considerations



## Socioeconomic Status

## SOCIOECONOMIC STATUS: Age

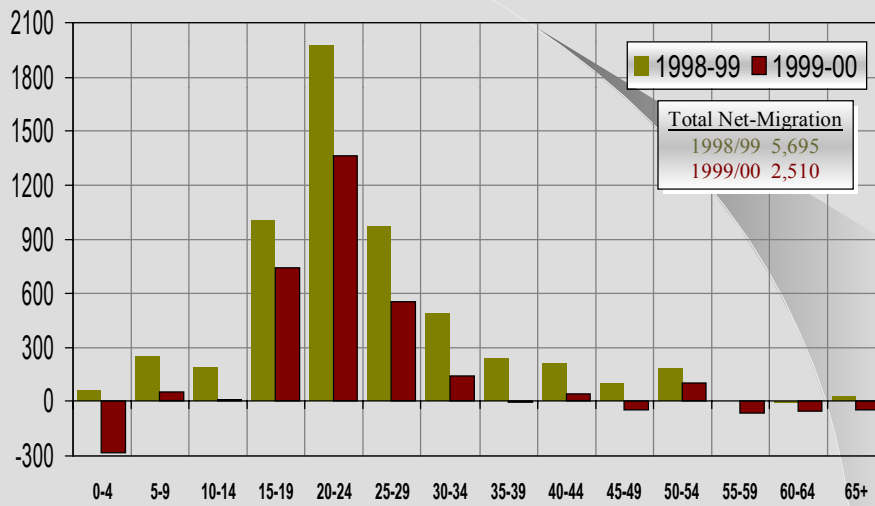
95% of net out-migrants in 1998-2000 were 29 or less



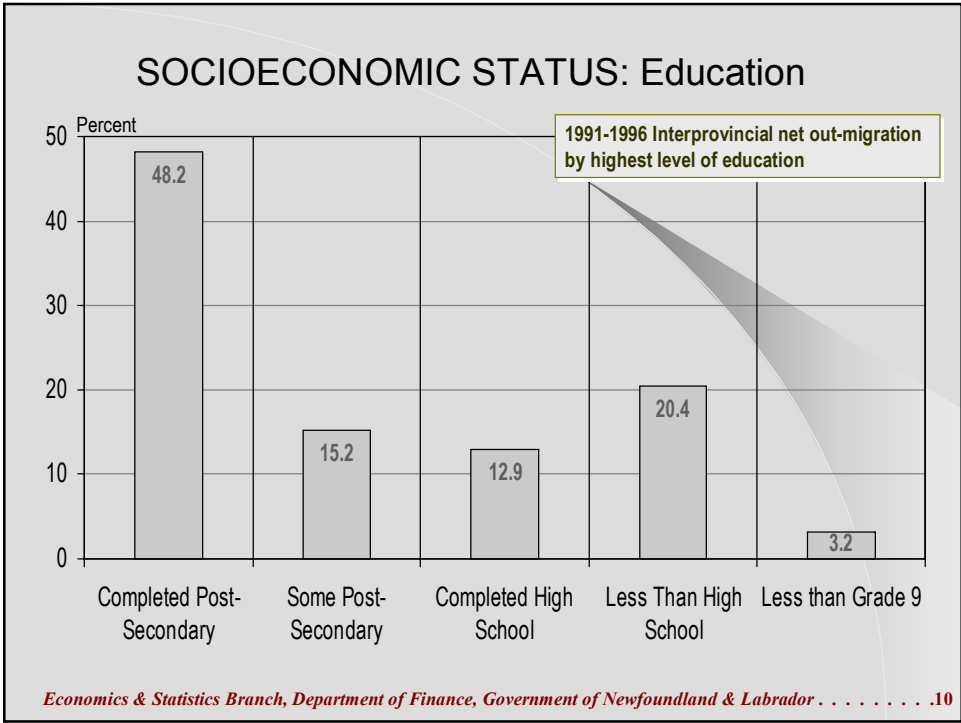
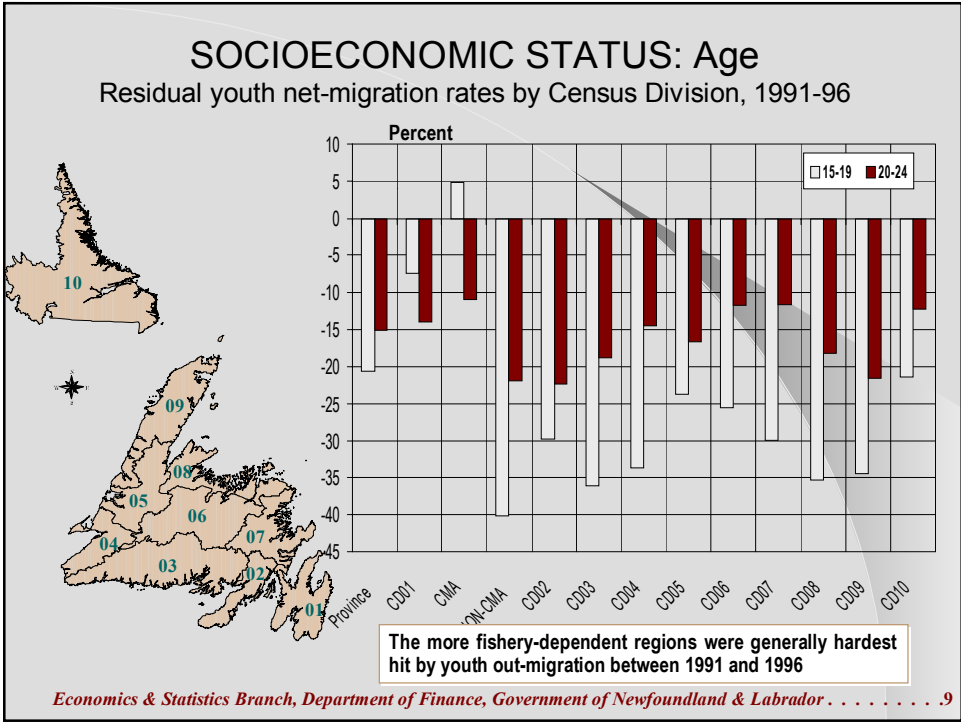
Economics & Statistics Branch, Department of Finance, Government of Newfoundland & Labrador . . . . .7

## SOCIOECONOMIC STATUS: Age

95% of net out-migrants in 1998-2000 were 29 or less



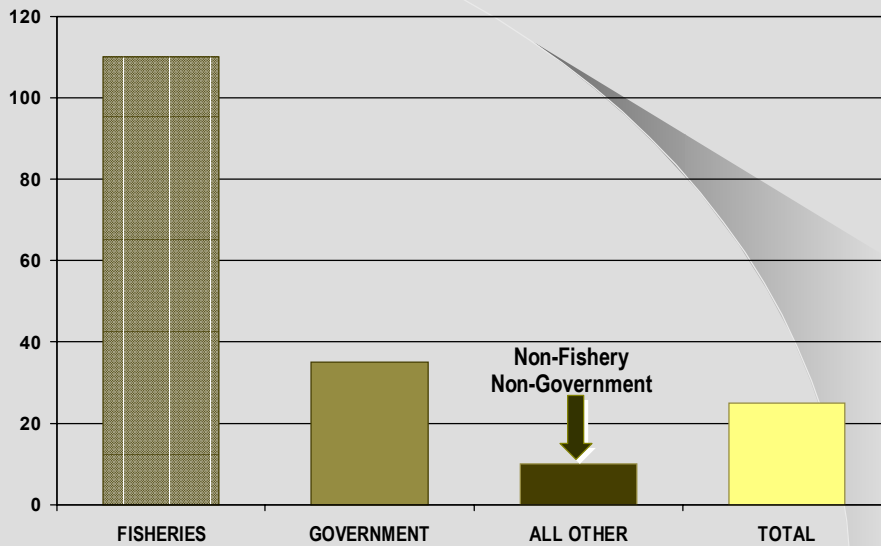
Economics & Statistics Branch, Department of Finance, Government of Newfoundland & Labrador . . . . .8



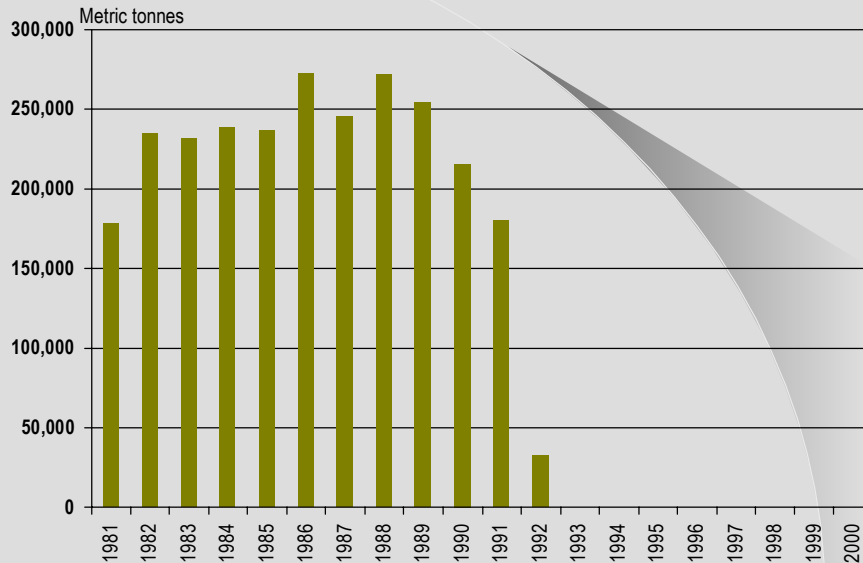
# Factors Thought to Influence Migration

- Economic Factors

## Employment Growth, Mid-70s to Late-80s Newfoundland and Labrador



## ECONOMIC FACTORS: 2J+3KL Landings (Northern Cod Stock)



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## Population Change By Census Division Newfoundland and Labrador 1991-1996

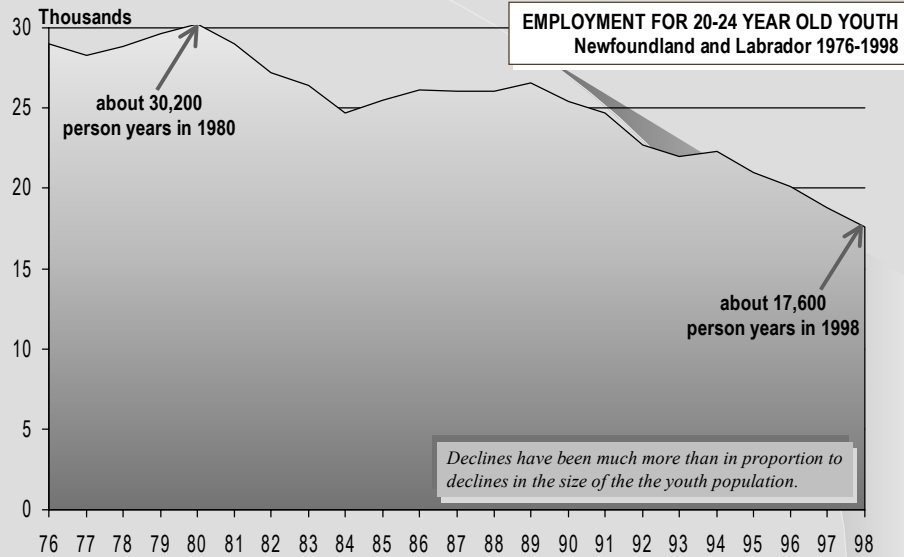
Census Division	Population Change (1991-1996)			Total	1991 Fishery as % of Total Labour Force
	<1,000	1,000 -4,999	5,000+		
CD-01 Avalon Peninsula	-5.5	-2.9	0.9	-0.7	7.4
CD-02 Burin Peninsula	-7.5	-6.9	0.0	-5.5	30.3
CD-03 South Coast	-7.6	-7.2	-7.1	-7.3	35.3
CD-04 St. George's	-9.3	0.7	1.9	-3.4	6.4
CD-05 Humber District	-2.9	-3.3	-1.7	-2.2	4.4
CD-06 Central	-3.7	-4.2	-2.0	-2.8	0.1
CD-07 Bonavista/Trinity	-8.0	-4.4	19.3	-3.8	23.2
CD-08 Notre Dame Bay	-7.6	-6.0	n/a	-7.0	22.4
CD-09 Northern Peninsula	-9.6	-6.0	n/a	-8.7	34.8
CD-10 Labrador	-3.0	-13.4	-3.2	-3.9	6.6
<b>TOTAL PROVINCE</b>	<b>-6.8</b>	<b>-4.6</b>	<b>0.3</b>	<b>-2.9</b>	<b>12.3</b>

n/a Not applicable; no community of this size in the Census Division

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## ECONOMIC FACTORS: Youth Employment

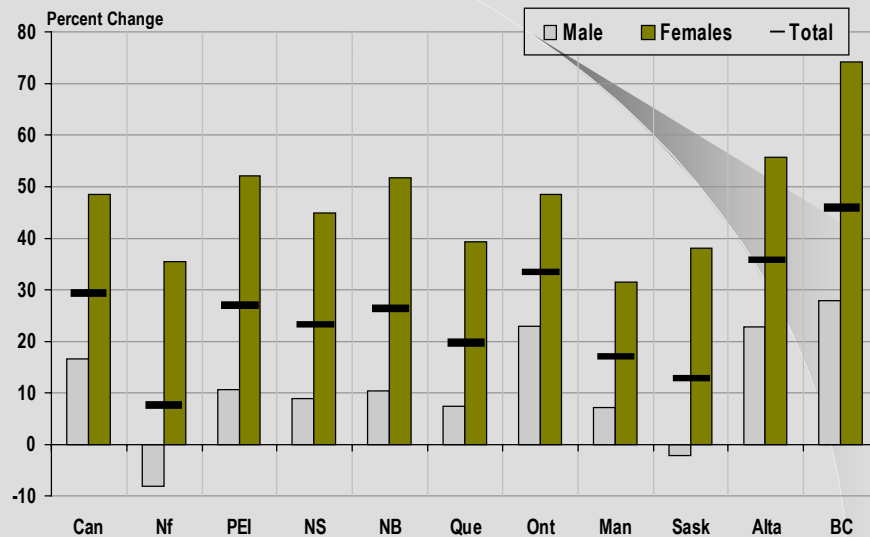
the fishery was a significant employer of young people in the 1970s and 1980s



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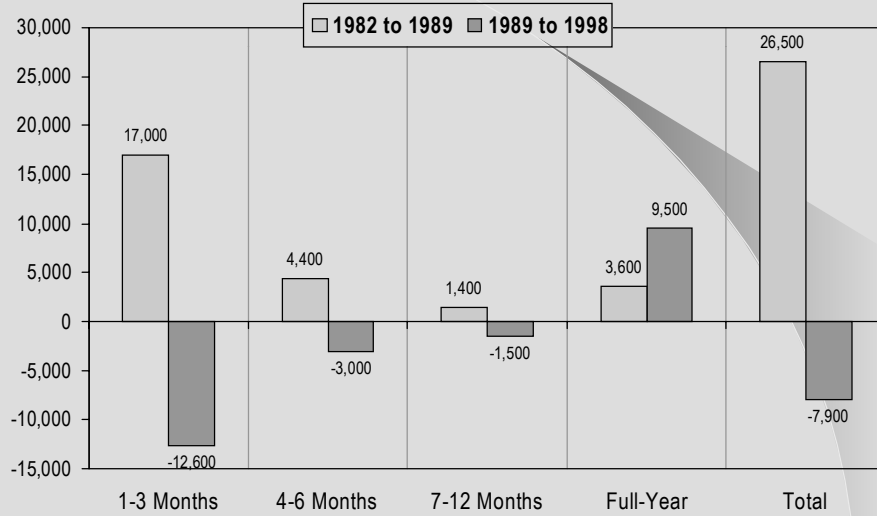
## ECONOMIC FACTORS: Changes in Employment

Canada and the Provinces 1980-1998



Economics & Statistics Branch, Department of Finance, Government of Newfoundland & Labrador . . . . .16

## ECONOMIC FACTORS: Full/Part-Year Employment Change in Employment by Tenure: 1980'S and 1990'S Newfoundland and Labrador

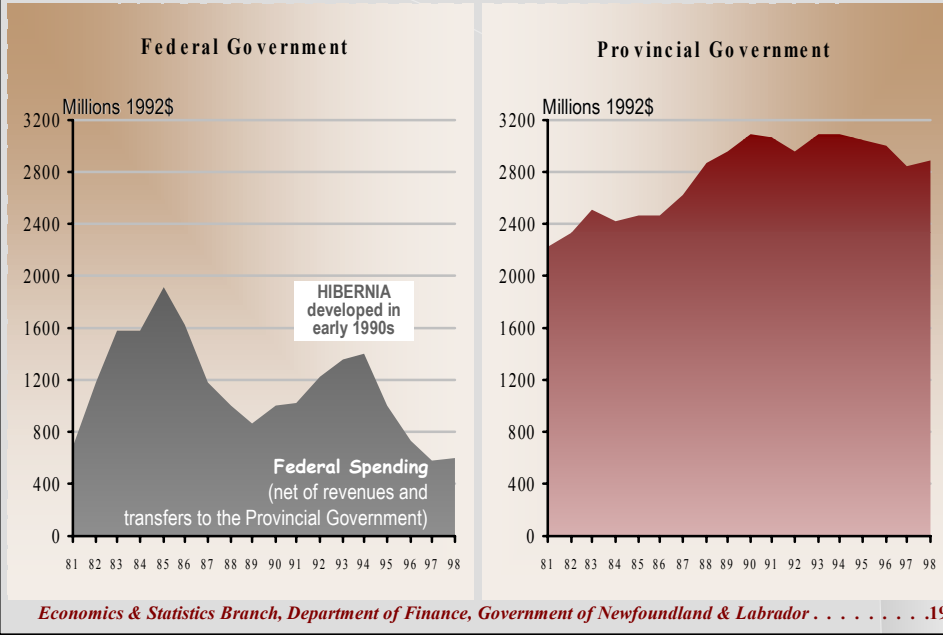


*Economics & Statistics Branch, Department of Finance, Government of Newfoundland & Labrador . . . . . 17*

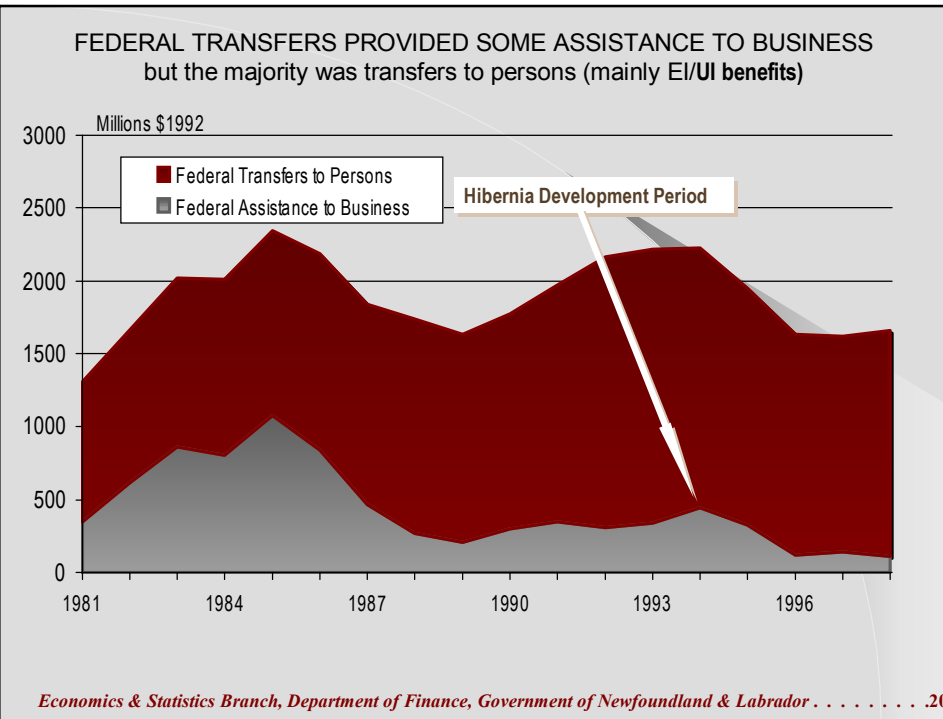
## Government Programs & Policies

# GOVERNMENT POLICIES AND PROGRAMS

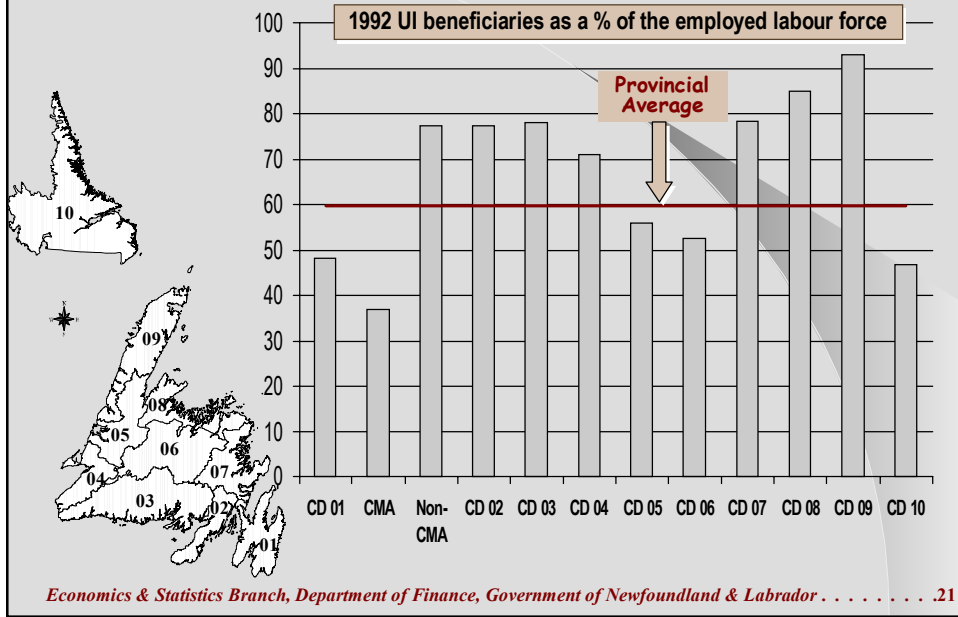
(Estimates exclude debt related items)



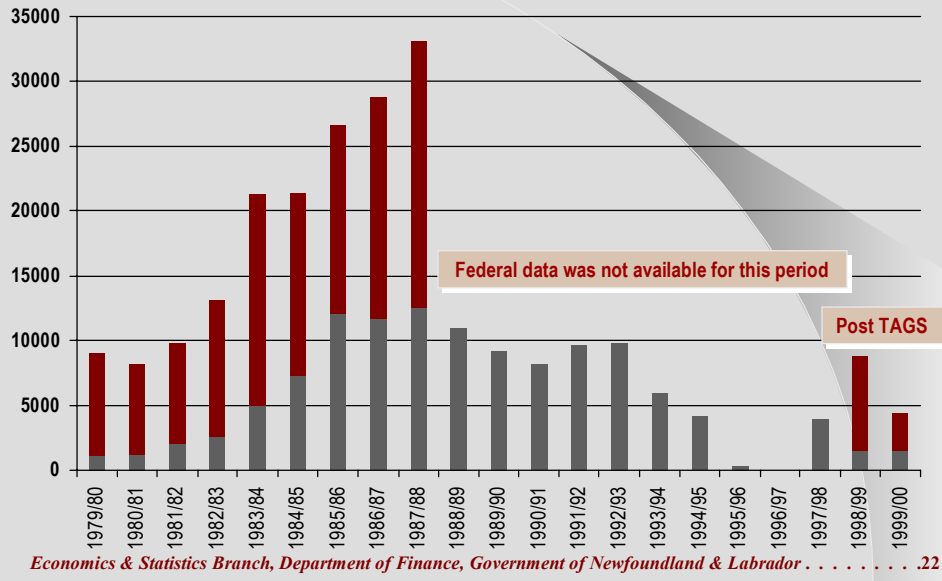
## FEDERAL TRANSFERS PROVIDED SOME ASSISTANCE TO BUSINESS but the majority was transfers to persons (mainly EI/UI benefits)



EI/UI dependency was greater in some regions than other, consequently some regions were more affected by UI reductions than others



### GOVERNMENT PROGRAMS AND POLICIES: Makework Job Placements



## Future Labour Market Requirements 1999 versus 2026

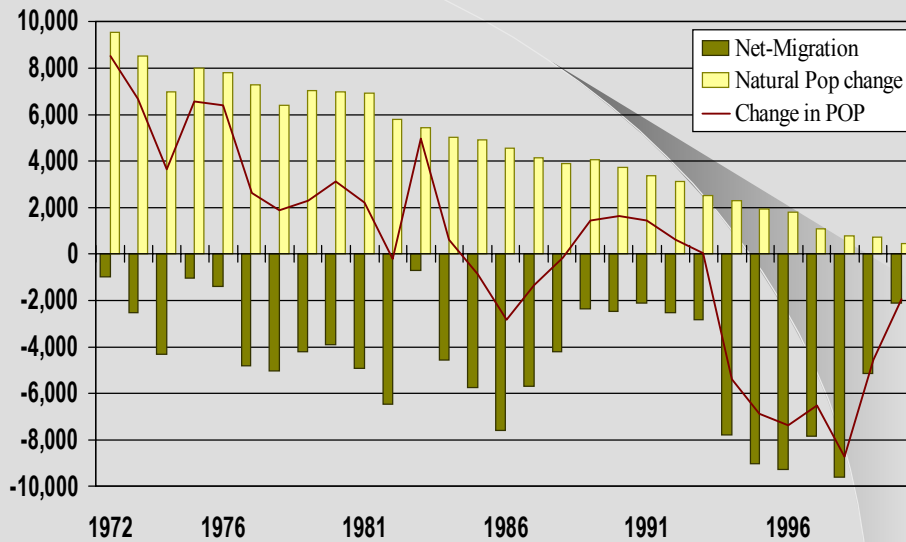
128,000 of the monthly average employment in 1999 were comprised of persons 35 years and up

- 150,000+ different people
- all 62+ by 2026 and most will be retired

Even with no employment growth, Province likely to need net in-migration to meet demand for workers over a one-generation projection period, otherwise employment would have to decline substantially.

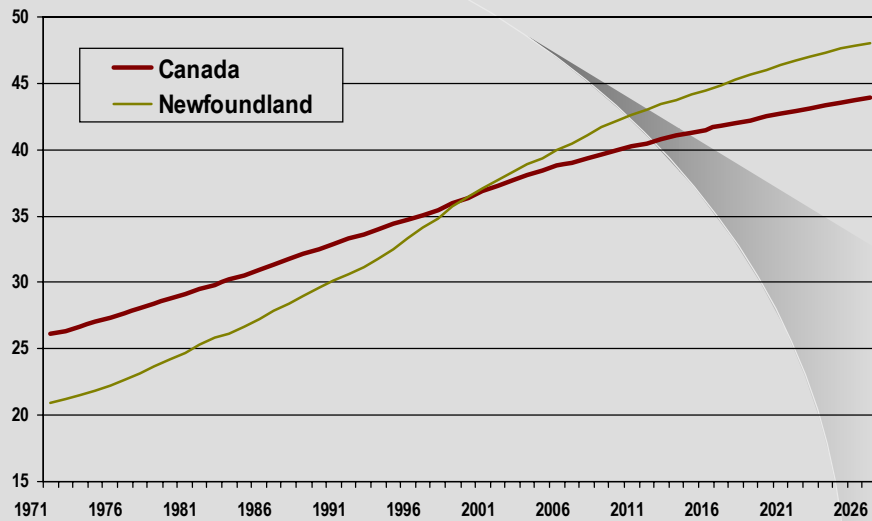
Ken to address in his presentation

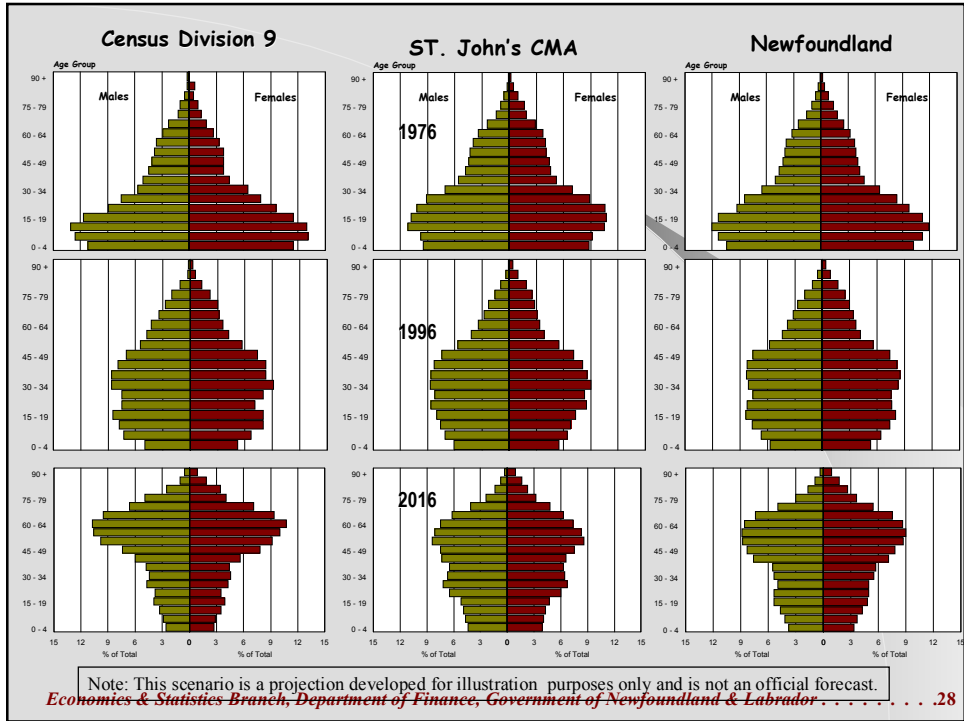
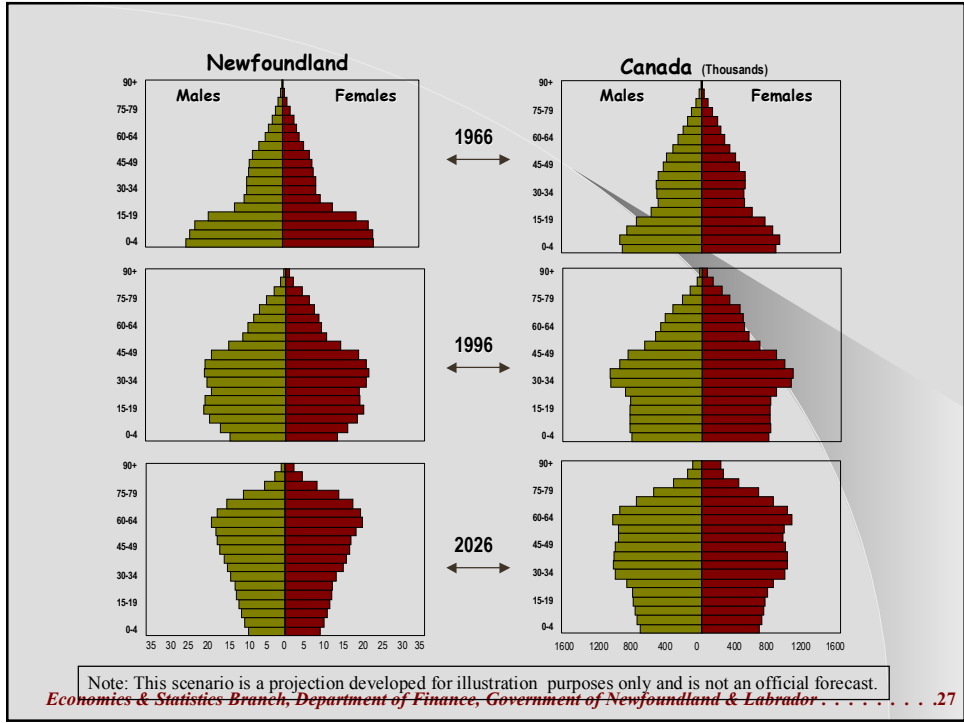
## Change in Population by Component Newfoundland and Labrador



# Aging of the Population

## Median Age of the Population Newfoundland and Canada





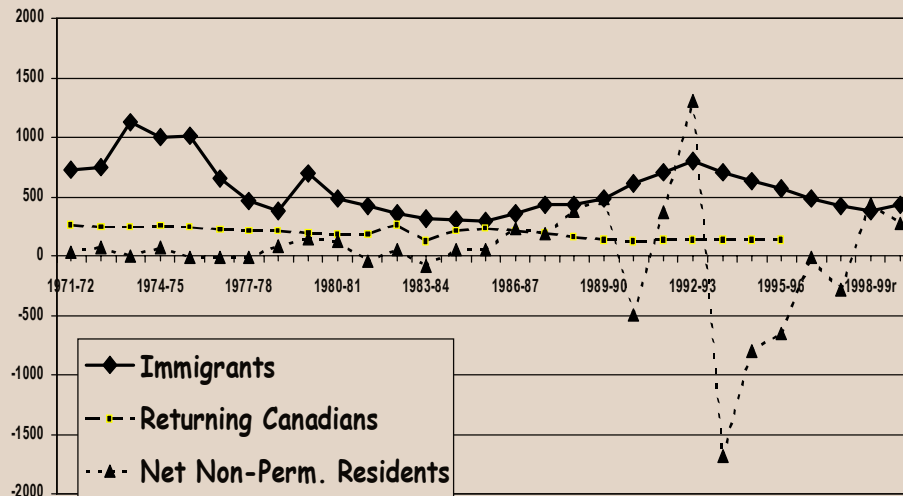
# In-Migration: Gross Flows

Presentation to  
Panel of Experts on Demography

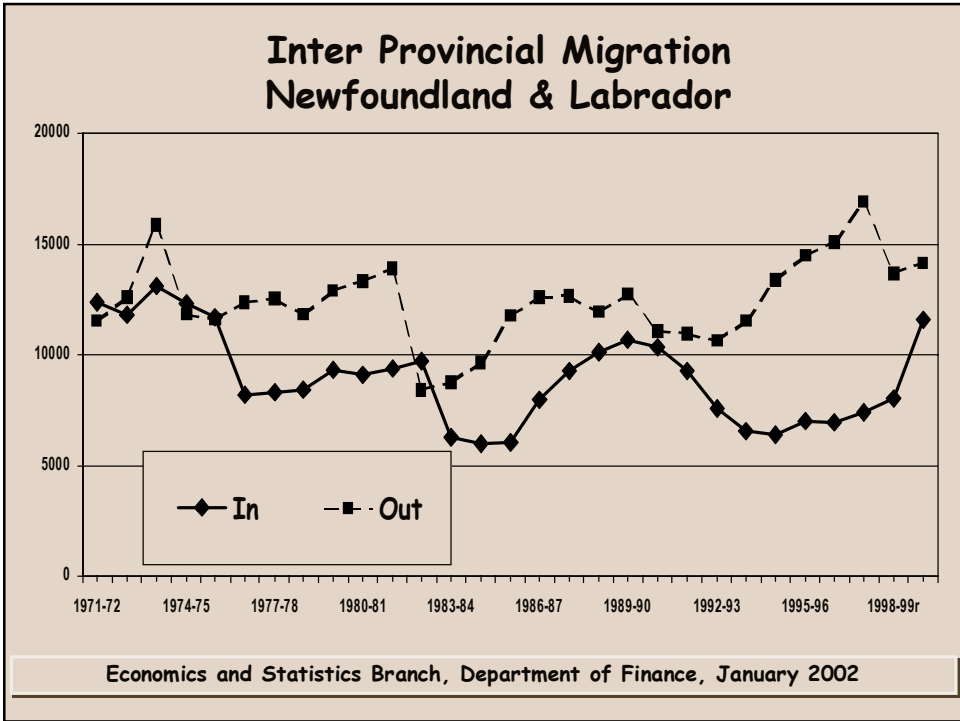
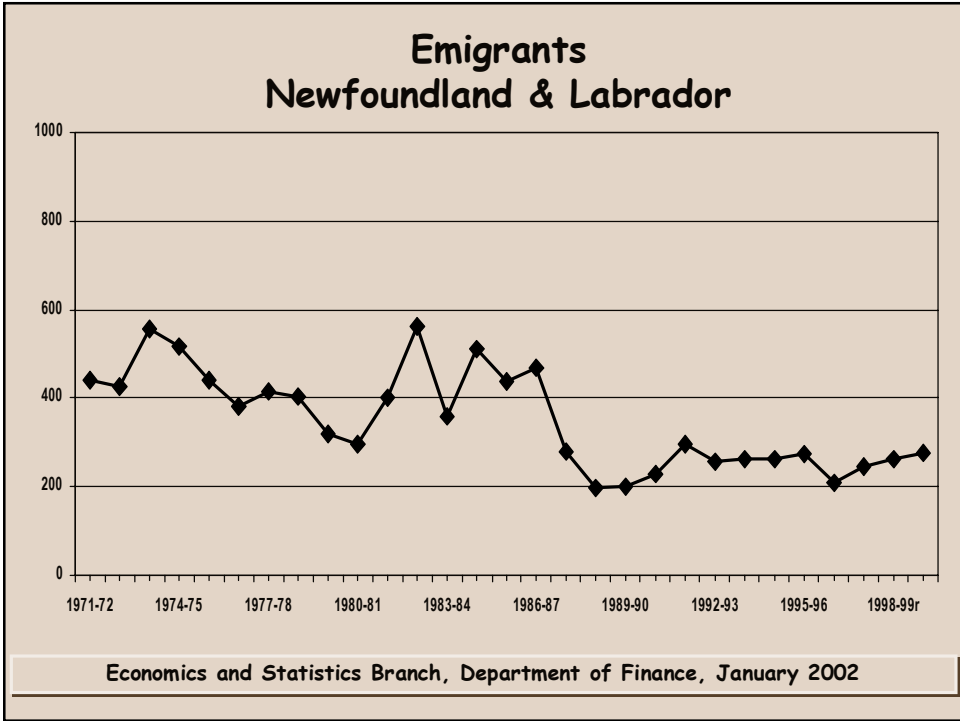
St. John's  
January 2001

Economics and Statistics Branch, Department of Finance, January 2002

## International In-Migration Newfoundland & Labrador



Economics and Statistics Branch, Department of Finance, January 2002



## Replacement Demand & Supply Newfoundland & Labrador

	1976		2000	
	15 to 34	35 Plus	15 to 34	35 Plus
<b>Employment</b>	91,900	67,400	77,000	127,600

	1976		2000	
	10 to 34	35 to 59	10 to 34	35 to 59
<b>Population</b>	267,374	119,158	193,465	202,887

	1976		2000	
	0 to 9 + Births 76 to 85	15 to 34	0 to 9 + Births 00 to 09*	15 to 34
<b>Population</b>	216,215	200,114	104,000	156,946

Economics and Statistics Branch, Department of Finance, January 2002

# The Newfoundland and Labrador Survey of Out-Migrants

Selected Results

Panel of Experts - January 13, 2001



## The Survey

Since 1996, The Newfoundland Statistics Agency has been conducting an ongoing survey of people leaving Newfoundland and Labrador.

The survey is administered using information provided by the Newfoundland Medical Care Commission (MCP).



## Major Topics

- Reason for Leaving
- Household Size and Composition
- Level of Education
- Labour Activity (Before and After Move)
- Moving History

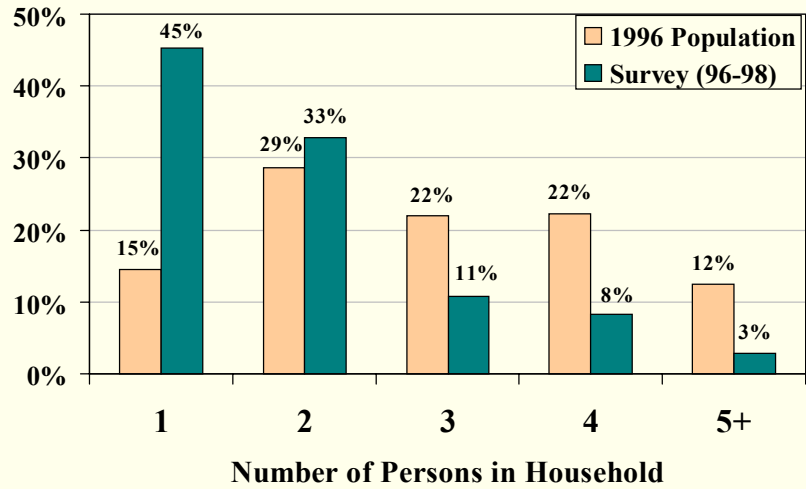


## Why do People Leave?

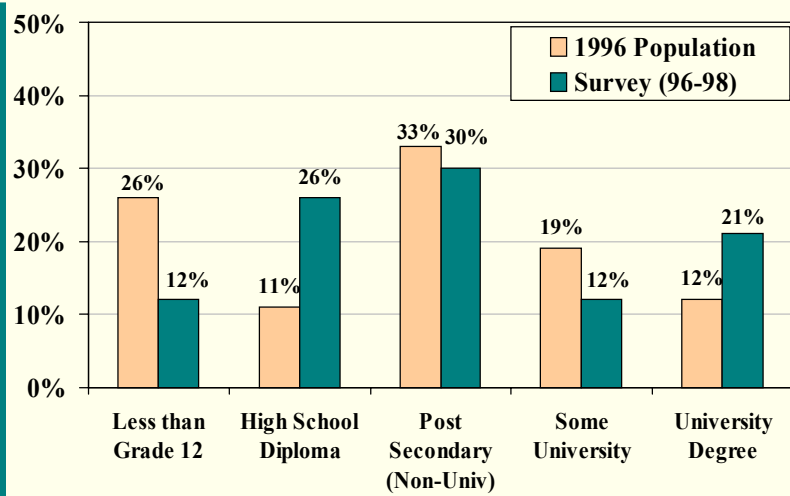
	Age Group		
Reason for Leaving	18-24	25- 54	55+
<b>Job Related</b>	<b>82%</b>	<b>77%</b>	<b>19%</b>
Job Transfer	2%	8%	4%
To accept a new job	21%	25%	6%
To look for a job/work	59%	43%	9%
<b>Family/Retirement</b>	<b>12%</b>	<b>18%</b>	<b>71%</b>
<b>School</b>	<b>6%</b>	<b>2%</b>	<b>0%</b>
<b>Other</b>	<b>1%</b>	<b>3%</b>	<b>10%</b>
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



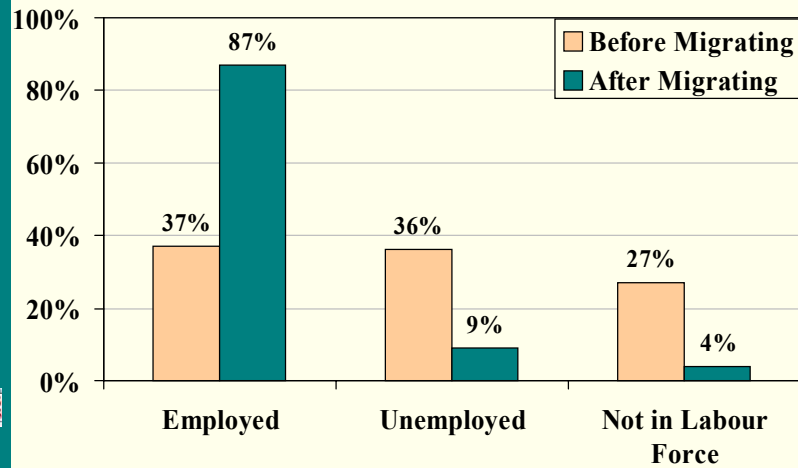
## Household Size



## Highest Level of Education-Age 20 to 34



## Labour Force Status - Age 20 to 34



## Other Findings from the Survey

- **24%** of migrants said children were included in their move
- **30%** of migrants said it was not the first time they moved from the province
- **83%** of migrants were born in the province

## Future Directions

- Newfoundland Statistics will continue the Survey of Out-Migrants indefinitely
- Newfoundland Statistics and ACOA have begun work on a similar Survey of In-Migrants to the Province

# **Economic & Demographic Scenarios Newfoundland and Labrador**

**Presentation to  
Panel of Experts on Demography**

**St. John's  
January 2001**

Economic and Statistics Branch, Department of Finance, January 2001

## **Key Forecast Issues**

- Mega Projects
- Outlook for individual industries
- Output per worker growth
- Participation rates and unemployment rate

Economic and Statistics Branch, Department of Finance, January 2001

## Potential Mega Projects

Projects	LOW	MEDIUM	HIGH
Voisey's Bay	L <sup>1</sup>	M	H
Labrador Power		M	H
Terra Nova	L	M	H
Whiterose	L	M	H
Hebron/Ben Nevis		M	H
Undis. Oil 1		M	H
Undis. Oil 2			H
Gas Project		M <sup>2</sup>	H <sup>3</sup>

1. Surface void portion only.
2. Starts in 2015.
3. Starts in 2011.

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## Major Industry Assumptions

Agriculture	Grows with local demand for products
Primary Forestry	Stable
Fish Harvesting	Slight increase: groundfish increase marginally, shellfish stable
Mining (excluding Voisey's Bay)	Stable
Fish Products	Slight increase with small increase in groundfish landings
Newsprint	Stable
Other Manufacturing	Grows in line with demand for products
Construction	Mega projects and core capital spending
Utilities	Stable
Trade	Grows in line with real consumer spending
Transportation Storage & Comm.	Grows in line with overall economic activity
FIRE	Grows in line with overall economic activity
Other Commercial Services	Grows in line with overall economic activity
Education	Declines, but at a slower rate than enrollment
Health & Social Services	Increases with real health care spending
Public Administration	Stable real spending

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**Output Per Worker  
All Industries  
Average Annual Compound Growth**

	1947 - 99	1976 - 99	last 10 Yrs	last 5 Yrs
United States	1.81%	1.37%	1.70%	2.18%
Canada	n.a.	1.01%	1.12%	1.20%
Newfoundland	n.a.	1.07%	1.50%	0.85%

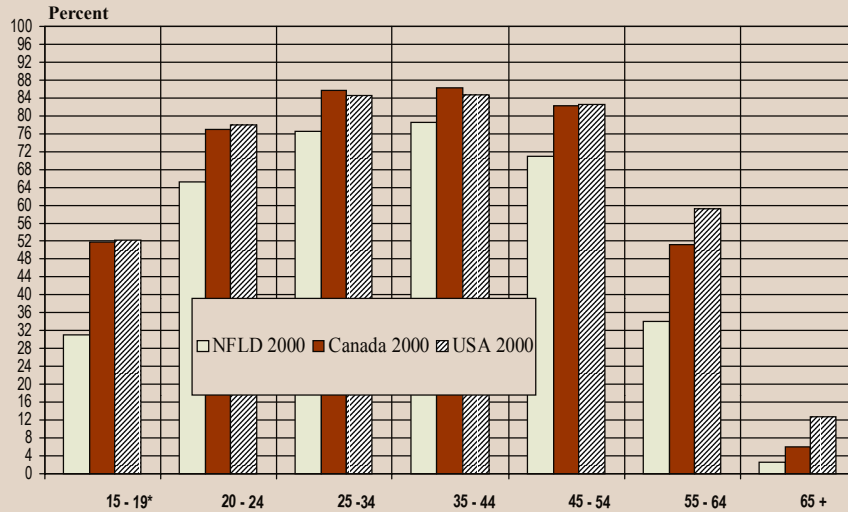
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**Output per Person Year of Employment  
Average Annual Growth Rates  
Newfoundland & Labrador  
2000 to 2025**

	<u>1984 - 99</u>	<u>High</u>	<u>Medium</u>	<u>Low</u>
Agriculture	0.5	1.0	1.5	2.0
Primary Forestry	-1.7	1.0	2.0	2.0
Fish Harvesting	-4.8	1.0	2.0	2.0
Mining	2.9	1.5	2.0	2.5
Fish Products	-0.7	1.0	2.0	2.0
Newsprint	0	1.5	2.0	2.5
Other Manufacturing	-0.1	1.0	1.5	2.0
Construction	-1.9	0.5-1	1-1.5	2.0
Utilities	-1.5	1.0	1.5	2.0
Trans Storage & Comm	2.2	1.0	1.5	2.0
Fire	2.2	1.0	1.5	2.0
Trade	1.7	1.5	1.8	2.0
Other Commercial Services	-1.1	0.5	1.0	1.5
Education	-0.8	0.0	0.0	0.0
Health & Social Services	-2.9	0.0	0.5	1.0
Public Admin.	1.6	0.5	0.5	1.0

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### Age Specific Participation Rates NFLD's Participation rates are generally lower than Canada's



\* note USA is 16 to 19

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### Participation Rate Assumptions

Age & Gender	
<u>Participation Rates in 2025</u>	
Low	Increase by 25% of 2000 Can-NF Gap*
Medium	Increase by 50% of 2000 Can-NF Gap*
High	Increase by 75% of 2000 Can-NF Gap*

\* NFLD - US gap for 55 to 64 age groups.

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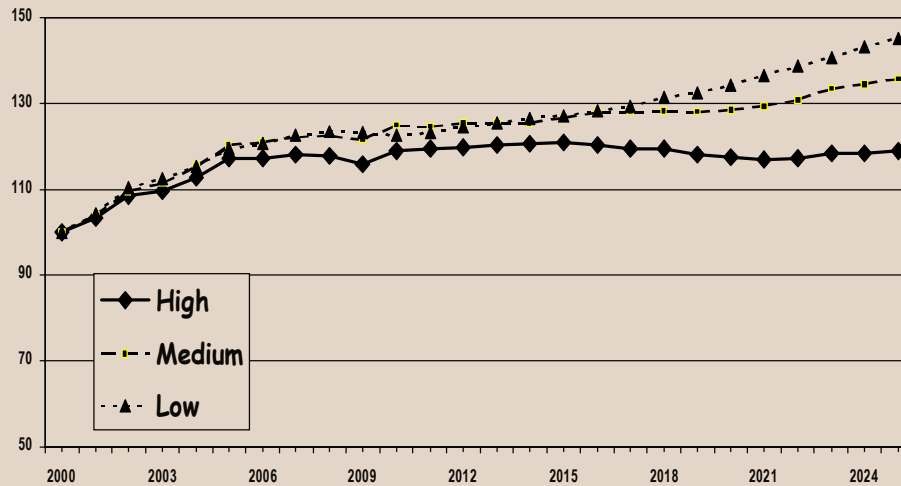
## Economic Scenarios Main Indicators 2025

	2000*	High	Medium	Low
Real GDP (\$M92)	11,786	15,914	15,901	14,249
Compound Growth	2.3%	1.21%	1.21%	0.76%
Employment (000's)	204.6	232	204	170
Compound Growth	1.0%	0.51%	-0.01%	-0.73%
Unemployment Rate %	16.7	8.2	10.1	12.0
Labour Force (000's)	245.6	253	227	193
Compound Growth	1.2%	0.1%	-0.3%	-1.0%
Population (000's)	538.8	540.6	515.3	466.3
Compound Growth	-0.2%	0.0%	-0.2%	-0.6%
Average Output/PY (\$92's)	57,605	68,565	77,832	83,719
Compound Growth	1.2%	0.70%	1.21%	1.51%
TFR	1.27	Trend to 1.4	Constant (1.27)	Trend to 1.0

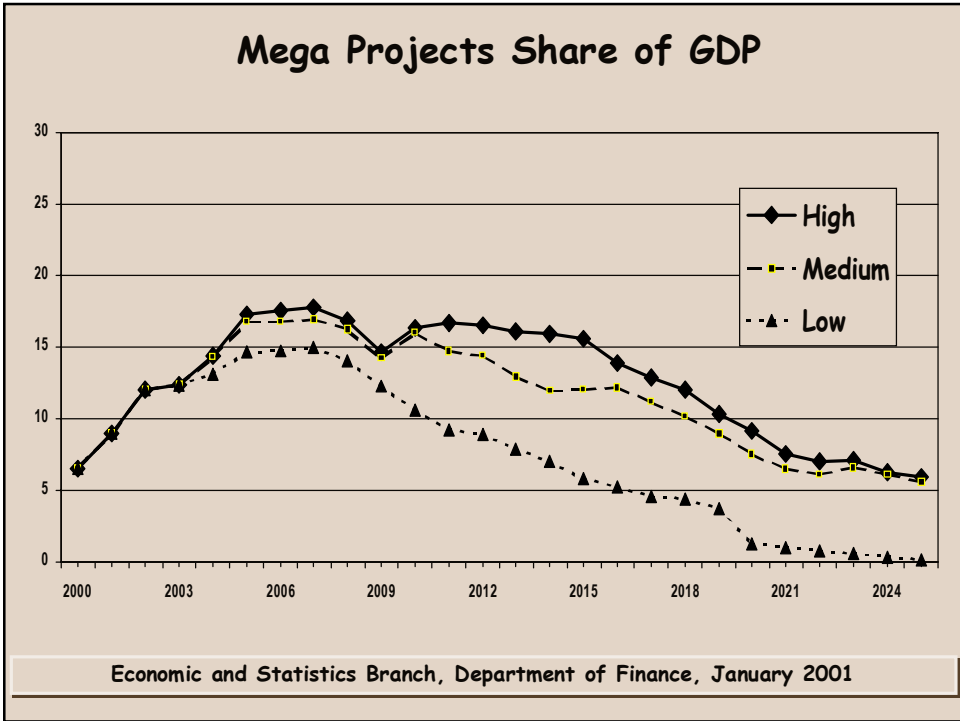
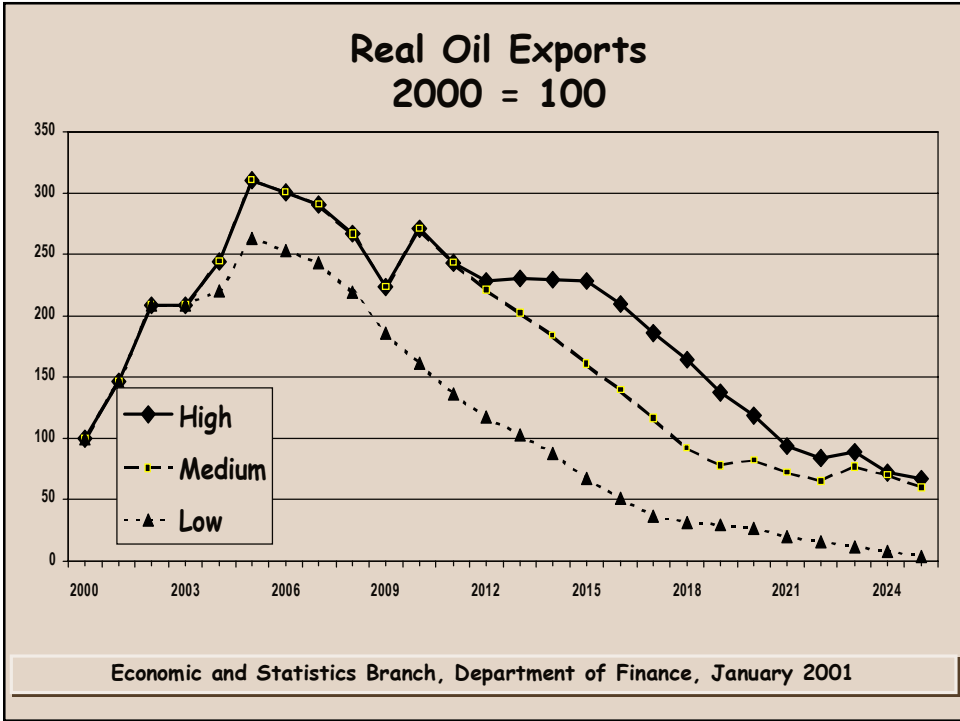
\* Percent Change is average compound growth rate from 1976 to 2000.

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## Average Output Per Worker 2000 = 100



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# Changing Industry Demands Newfoundland and Labrador

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## Major Industry Assumptions

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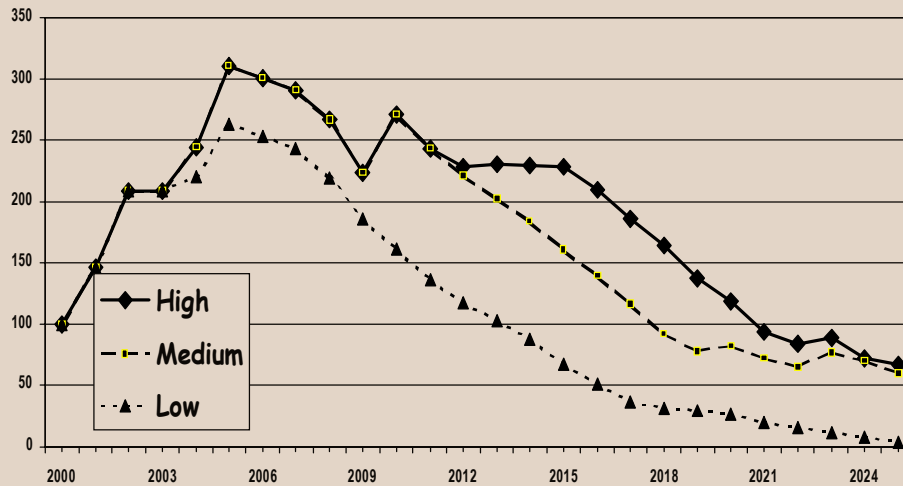
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## Output per Person Year of Employment Average Annual Growth Rates Newfoundland & Labrador 2000 to 2025

	1984 - 99	High	Medium	Low
Agriculture	0.5	1.0	1.5	2.0
Primary Forestry	-1.7	1.0	2.0	2.0
Fish Harvesting	-4.8	1.0	2.0	2.0
Mining	2.9	1.5	2.0	2.5
Fish Products	-0.7	1.0	2.0	2.0
Newsprint	0	1.5	2.0	2.5
Other Manufacturing	-0.1	1.0	1.5	2.0
Construction	-1.9	0.5-1	1-1.5	2.0
Utilities	-1.5	1.0	1.5	2.0
Trans Storage & Comm	2.2	1.0	1.5	2.0
Fire	2.2	1.0	1.5	2.0
Trade	1.7	1.5	1.8	2.0
Other Commercial Services	-1.1	0.5	1.0	1.5
Education	-0.8	0.0	0.0	0.0
Health & Social Services	-2.9	0.0	0.5	1.0
Public Admin.	1.6	0.5	0.5	1.0

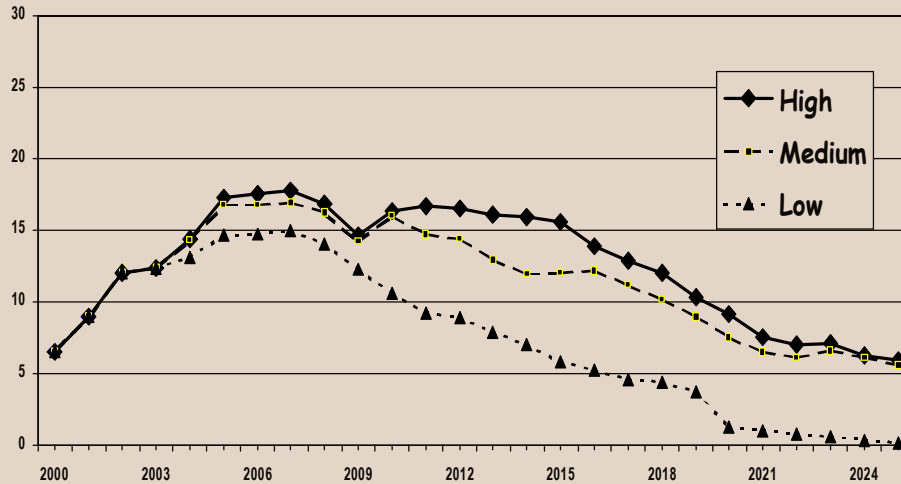
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## Real Oil Exports 2000 = 100



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## Mega Projects Share of GDP



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## Employment Shares Newfoundland & Labrador 1999 & 2025

Industry	1999	2025		
		High	Medium	Low
Agriculture	0.5	0.5	0.5	0.5
Primary Forestry	0.9	0.5	0.4	0.5
Fish Harvesting	5.0	3.3	3.0	3.8
Mining less Mega Projects	1.7	1.3	1.3	1.4
Mega Projects	1.1	0.9	1.0	0.1
Fish Products	4.0	2.3	2.0	2.4
Newsprint	1.0	0.7	0.7	0.8
Other Manufacturing	3.5	3.5	3.6	3.5
Construction less Mega Projects	5.0	4.1	4.2	4.0
Utilities	1.5	1.0	1.0	0.8
Trans Storage & Comm.	7.5	8.7	8.9	8.5
Fire	3.1	4.1	4.2	4.1
Trade	16.6	17.0	16.0	16.7
Other Commercial Services	18.8	21.4	21.2	20.7
Education	7.9	5.0	5.5	6.0
Health & Social Services	13.7	18.5	18.1	17.4
Public Admin.	8.3	7.2	8.2	8.7

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