

Non-Renewable Natural Resources and the Newfoundland and Labrador Economy

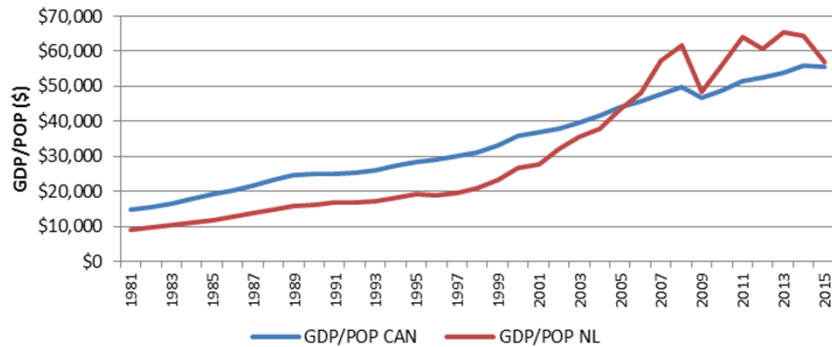
A Presentation to the Chartered Professional Accountants,
Newfoundland and Labrador

Wade Locke
Department of Economics, Memorial University

Thursday, February 23, 2017
Capital Hotel

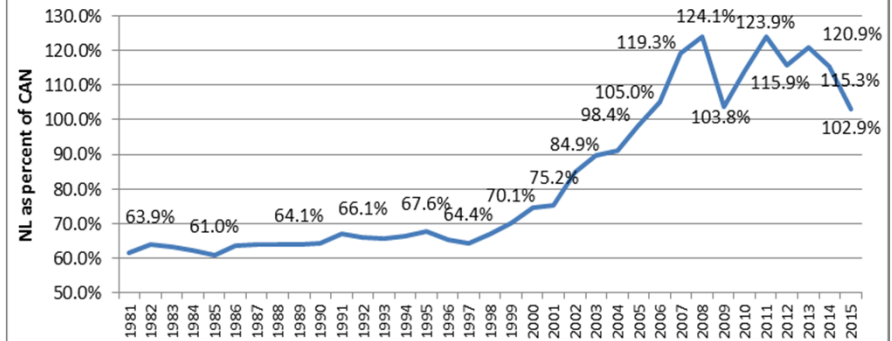
GDP per Capita

A Comparison of GDP per capita: Newfoundland and Labrador and Canada



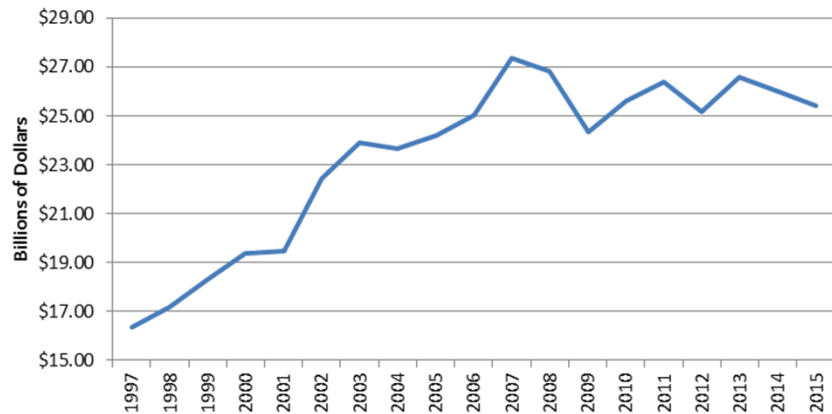
Data Source: Author's calculation based on Stats Can CANSIM Table 510001 and 3640038

Ratio of Nominal Newfoundland and Labrador GDP per capita to GDP per capita Canada-wide



Data Source: Author's calculation based on Stats Can CANSIM Data Tables 510001 and 3840038

NL Real GDP (Chained 2007 Dollars): Levels



CANSIM Data Series V624519

NL Real GDP (Chained 2007 Dollars): Rates of Change



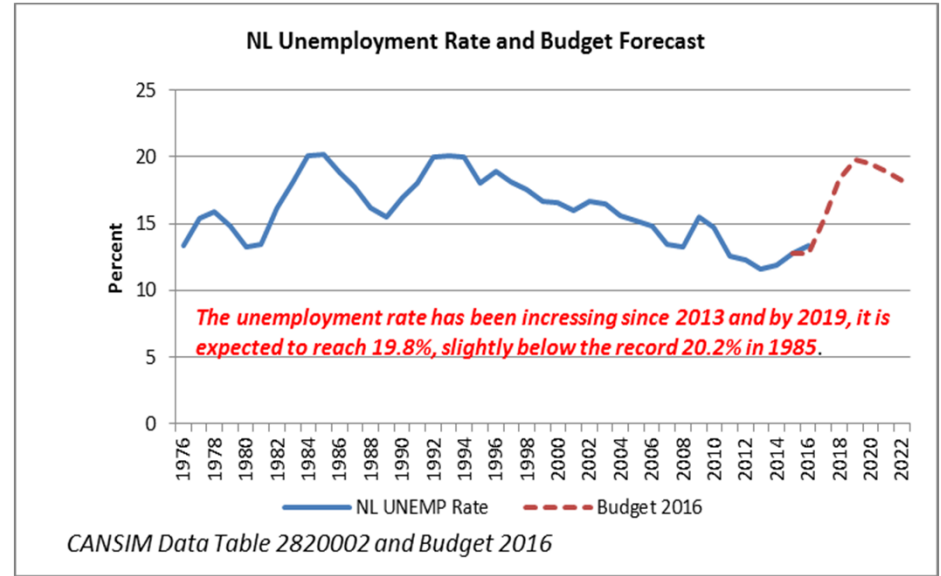
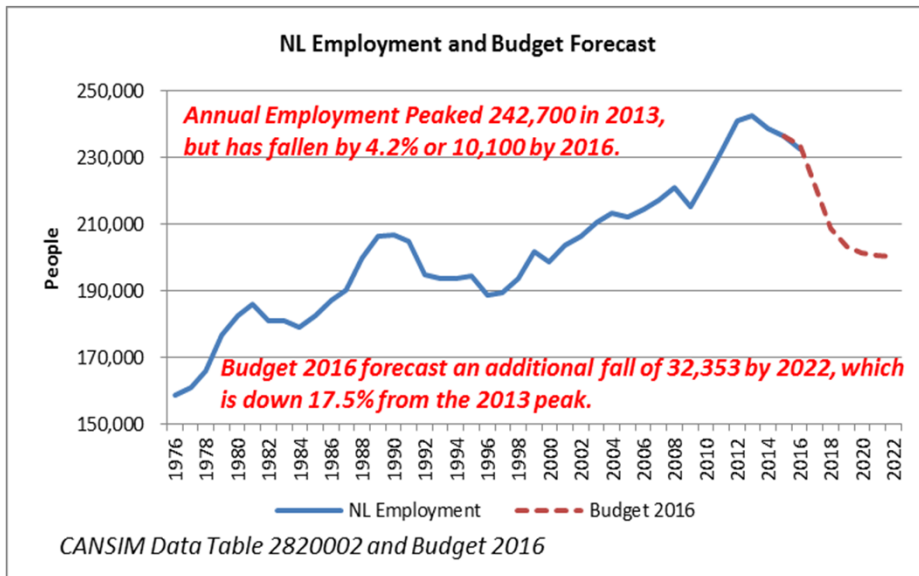
Calculated from CANSIM Data Series V624519 and Budget 2016

NL's absolute and relative position have improved over time, but they have been declining in recent years.

We are starting to see the impacts of lower oil prices with two years of real decline in GDP

The budget is forecasting several years of negative growth

Employment (1)



There is a noticeable decline in employment and a noticeable increase in the seasonally adjusted unemployment rate in the last three years, which pre-dates the fall in the price of oil.

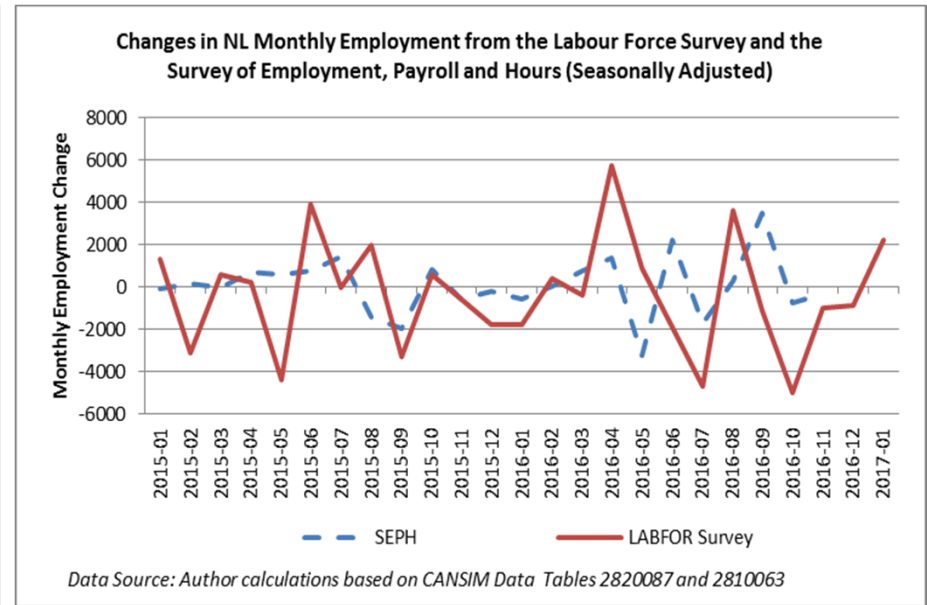
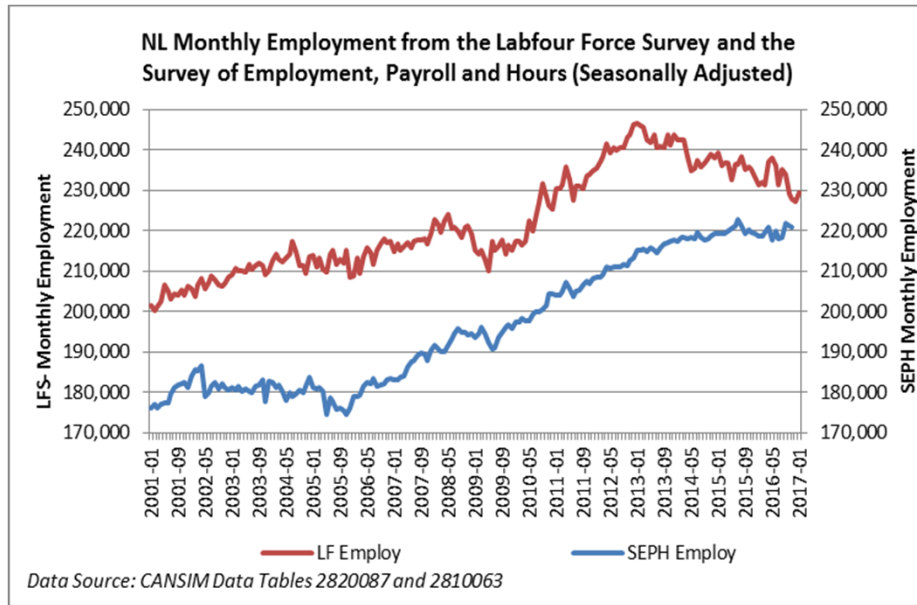
Employment levels expected to be 42,350 lower than they were in 2013, when annual and monthly employment peaked. This represents a 17.5% reduction in employment levels from 2013 to 2022.

To put this in perspective, in the last three years, employment fell by 4.2% from peak or there are 10,100 fewer people working in 2016 than in 2013

Unemployment rates have been increasing and by 2019, they are expected to increase to 19.8%, which is just below the 20.2% record in 1985

Hard to know how much of it is caused by oil price falls, but certainly some of the deterioration is due to a slow down in the oil economy

Employment (2)

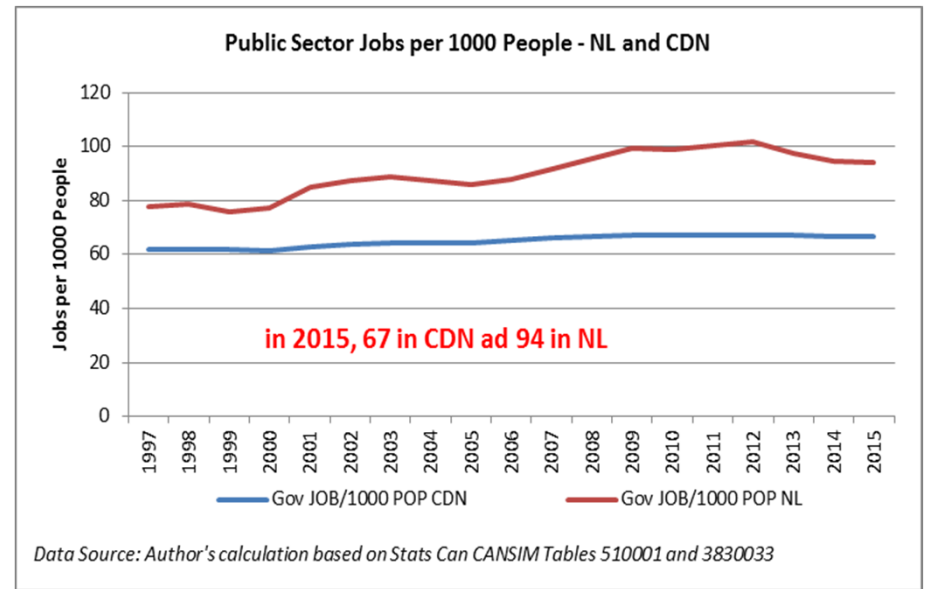
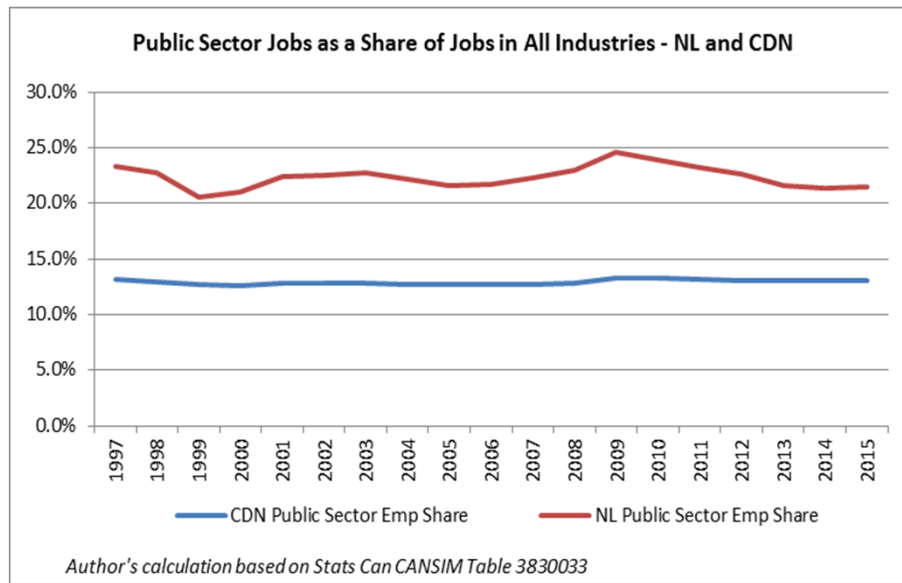


SEPH is employment in Newfoundland and Labrador and Labour Force Survey is employment of Newfoundlanders and Labradorians, whether within the province or outside

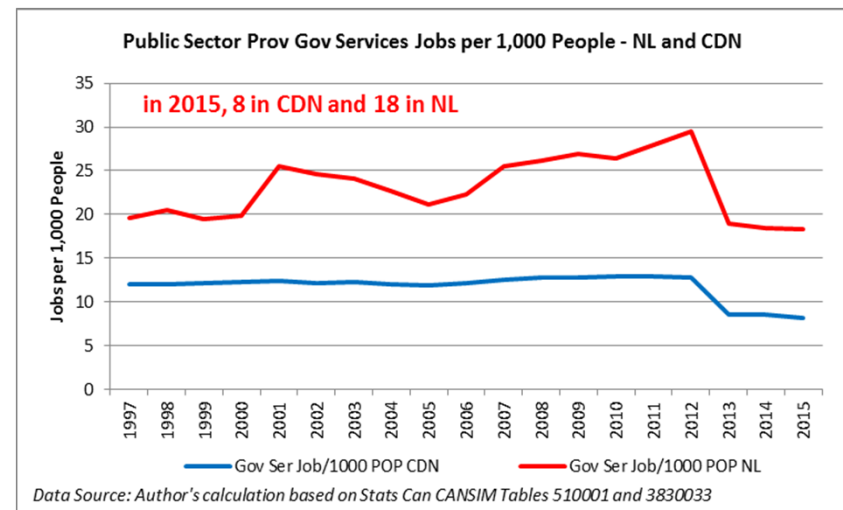
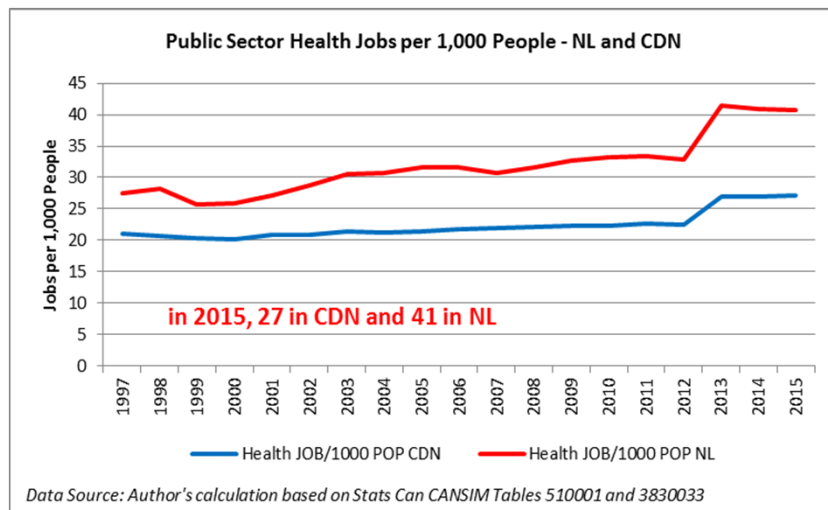
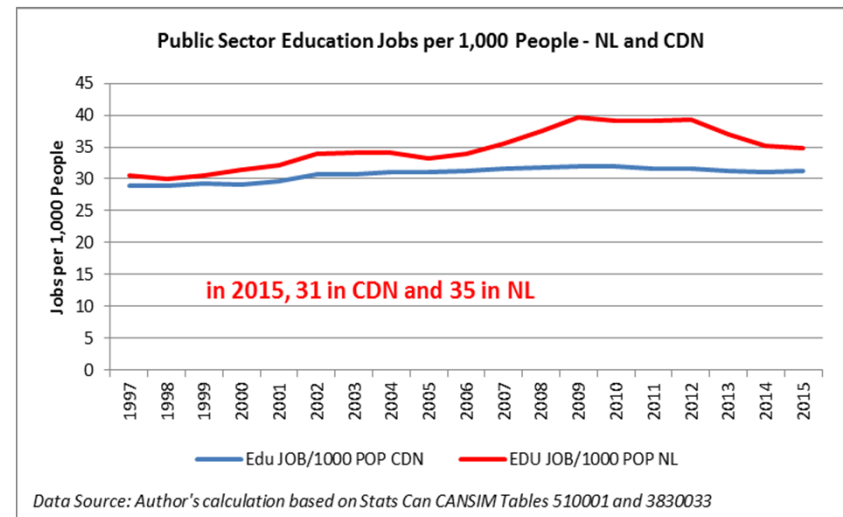
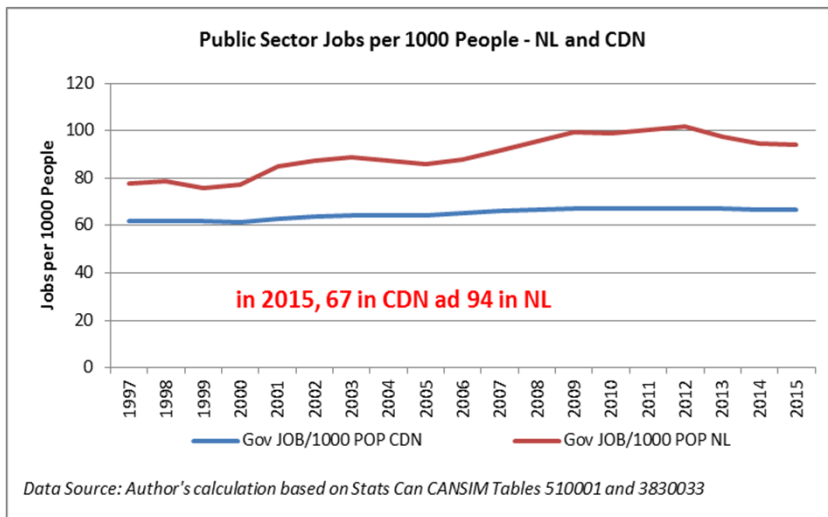
Both are starting to flatten out and decline

Public Jobs per 1,000 People

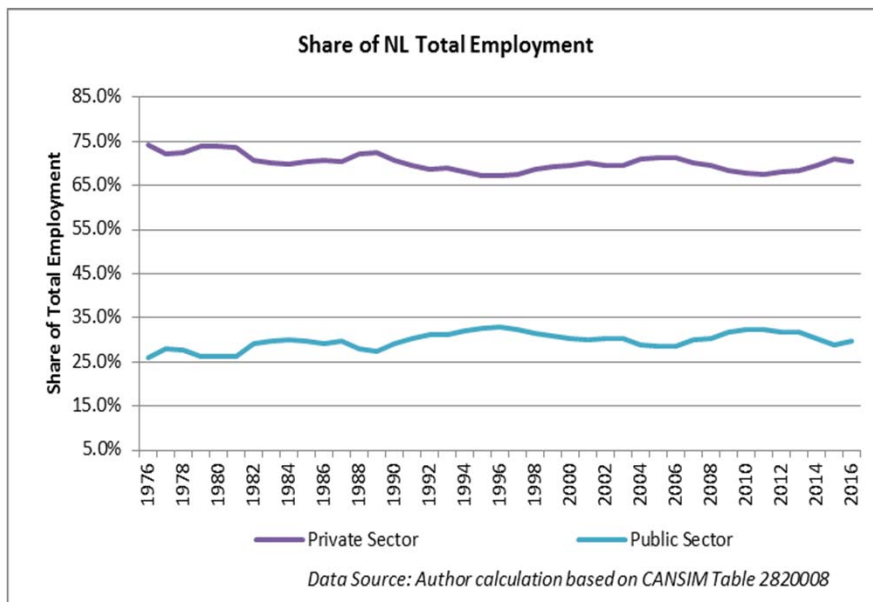
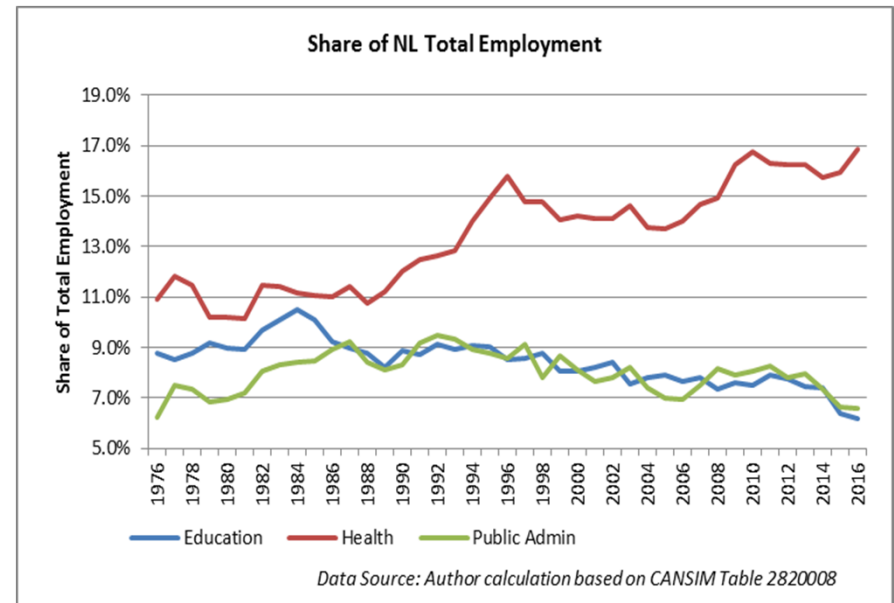
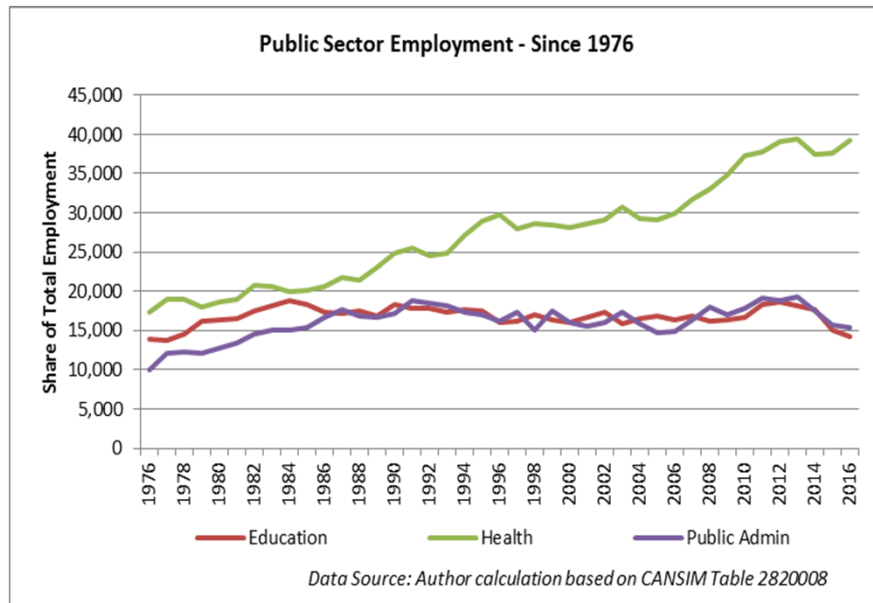
Geography	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Newfoundland and Labrador	78	79	76	77	85	87	89	88	86	88	92	95	99	99	100	102	97	95	94
Prince Edward Island	82	75	78	81	81	80	82	87	85	83	84	87	92	92	91	87	85	83	82
Nova Scotia	76	77	81	80	79	82	80	78	78	79	79	81	82	82	83	82	84	86	88
New Brunswick	71	71	72	72	76	72	74	72	75	77	77	78	80	82	79	75	73	72	71
Quebec	76	74	74	73	75	77	78	77	76	76	77	77	78	78	78	78	79	80	78
Ontario	49	49	49	48	50	51	52	53	54	54	55	56	55	56	55	55	55	55	55
Manitoba	73	75	76	78	78	82	85	86	85	83	84	87	88	87	89	88	88	87	87
Saskatchewan	77	78	81	83	85	84	84	85	87	89	90	90	92	92	90	89	88	88	86
Alberta	58	57	57	58	60	60	61	61	61	62	64	66	65	65	65	66	65	63	63
British Columbia	60	60	61	61	61	60	59	58	58	59	60	60	60	60	61	61	61	59	61
Canada (Provincial and Territorial Public Sector)	62	62	62	62	63	64	64	64	64	65	66	67	67	67	67	67	67	67	67



Public Sector Jobs per 1,000 People - Disaggregated



Public Employment (1)

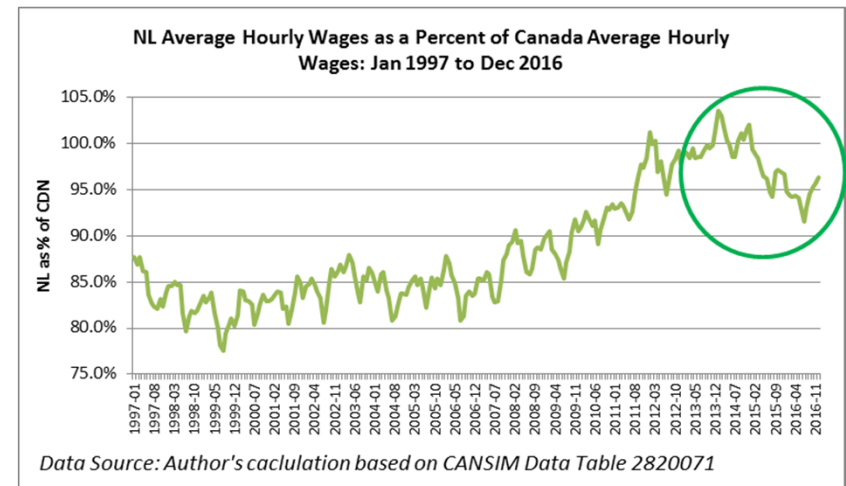
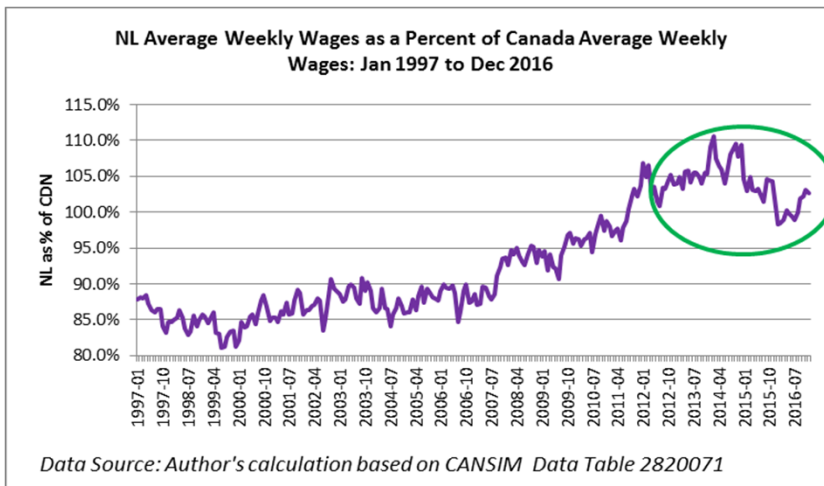
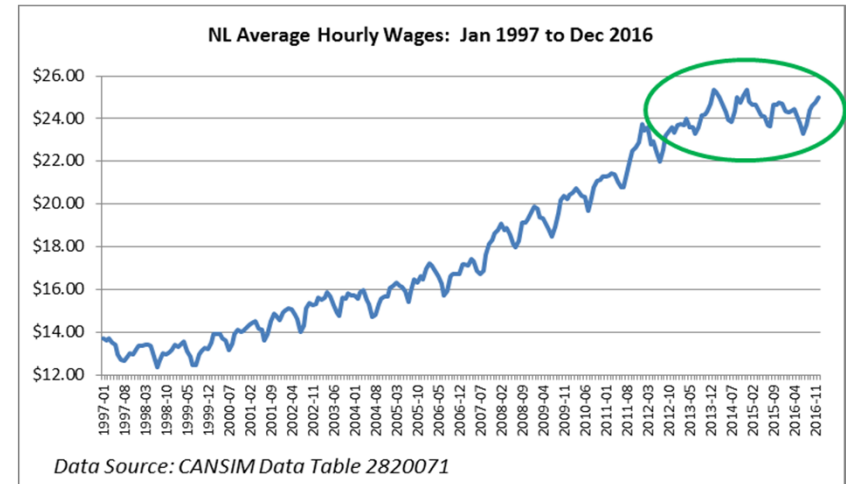
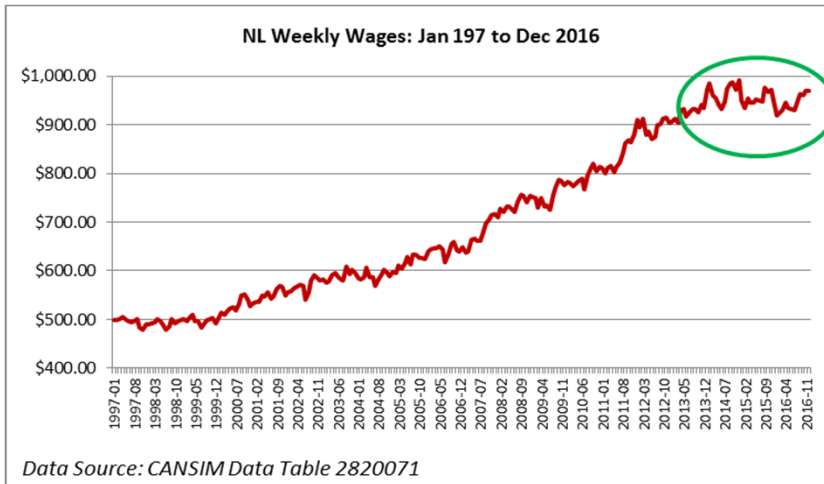


Public sector employment has grown by 67% from 1976, while private sector employment grew by 39% over the same period

Over period, share of public sector employment was 25.9% and has declined in recent years (currently at 29.6%)

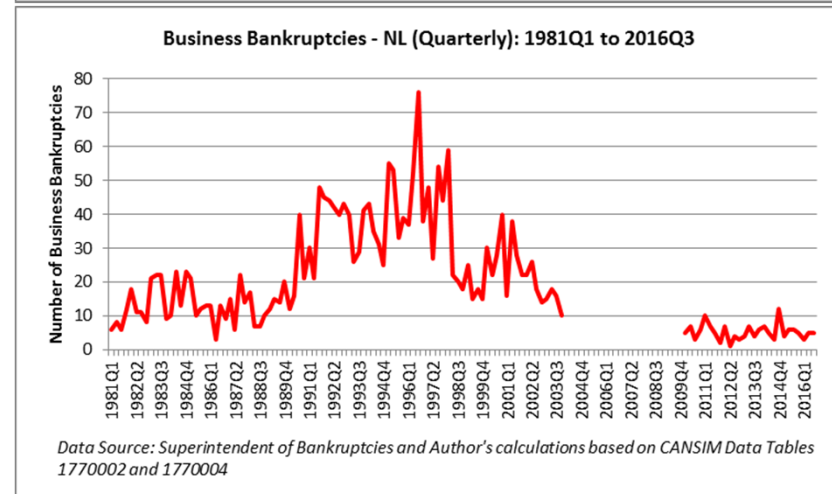
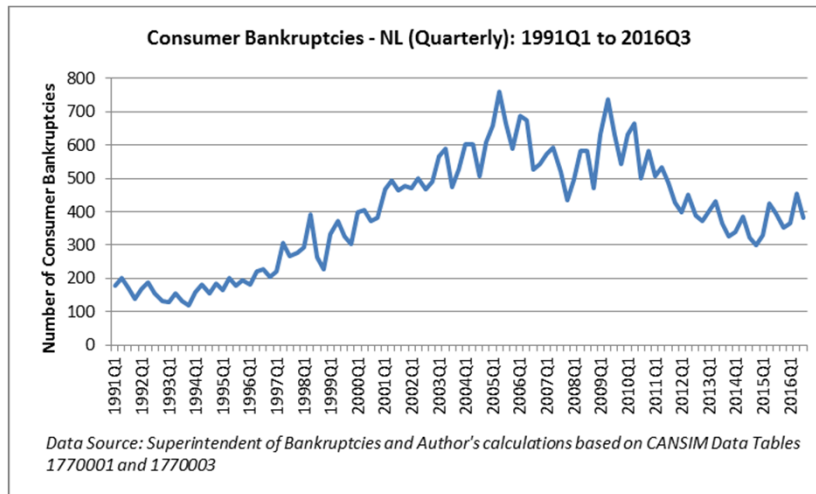
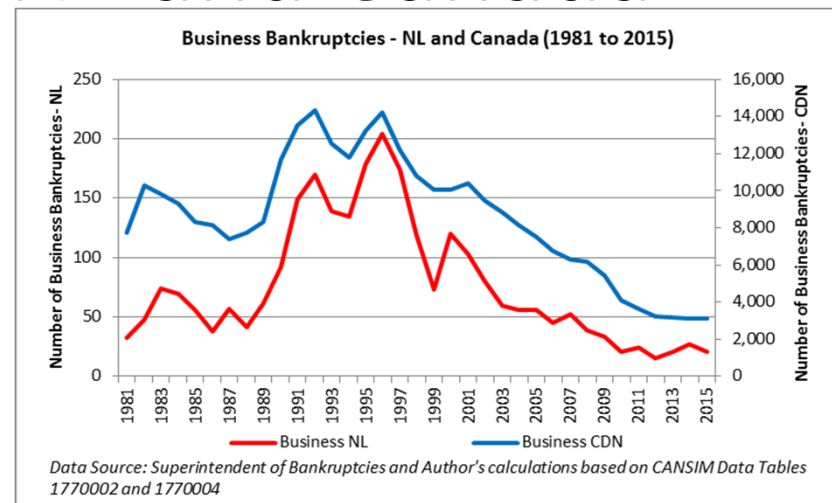
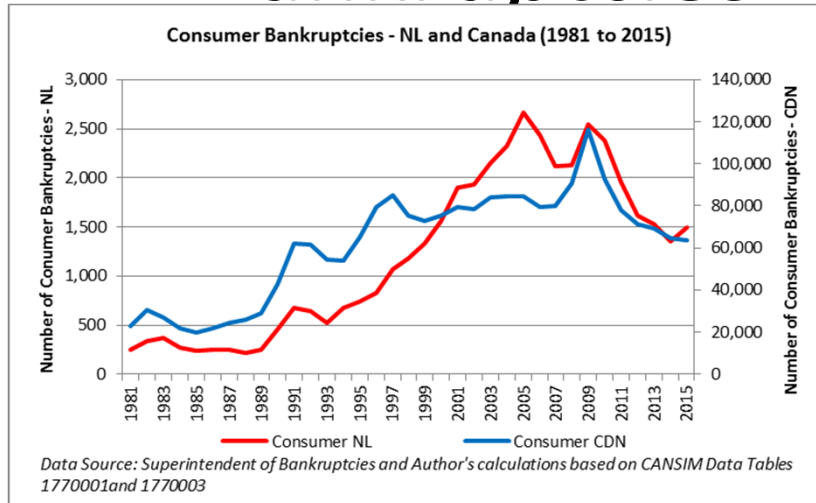
Clearly, health is driving growth in public sector employment

Wages – NL Relative to CDN



Wages starting to decline relative to CDN average and are flattening out in absolute terms. This will have implications for revenues measures introduced in the budget. That is, it will constrain the province's ability to raise revenues from PIT, HST, and Gas tax.

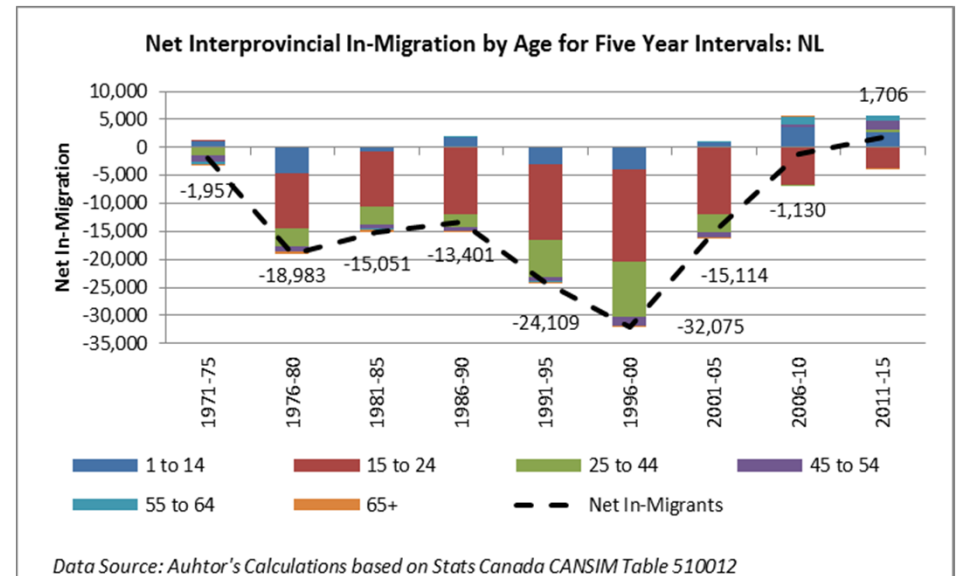
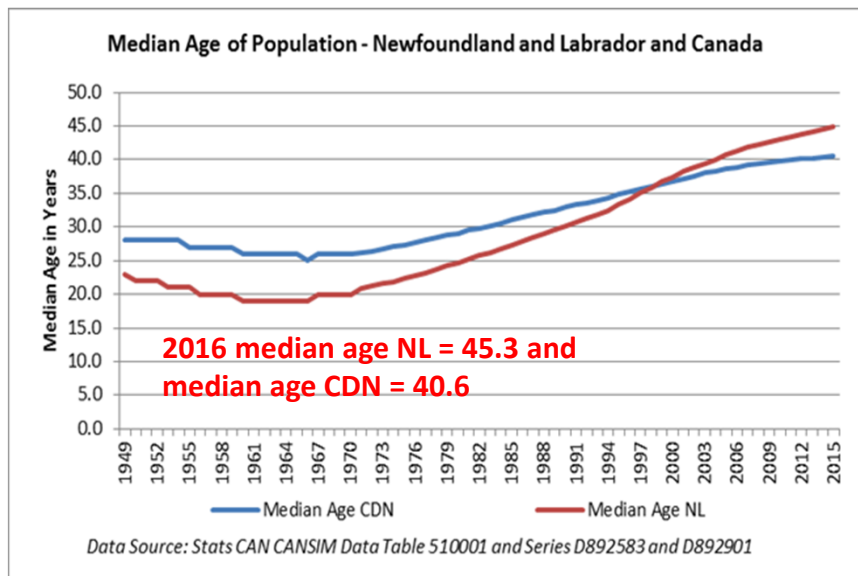
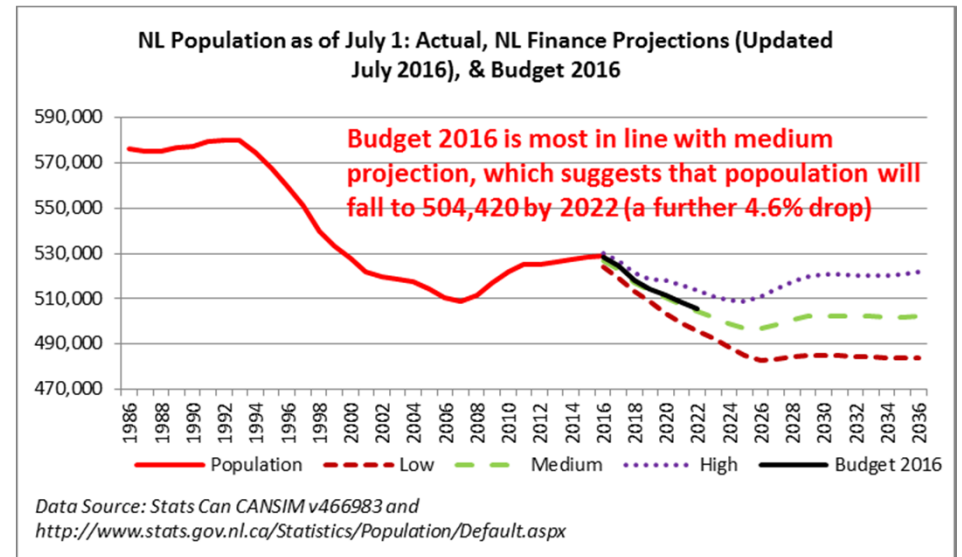
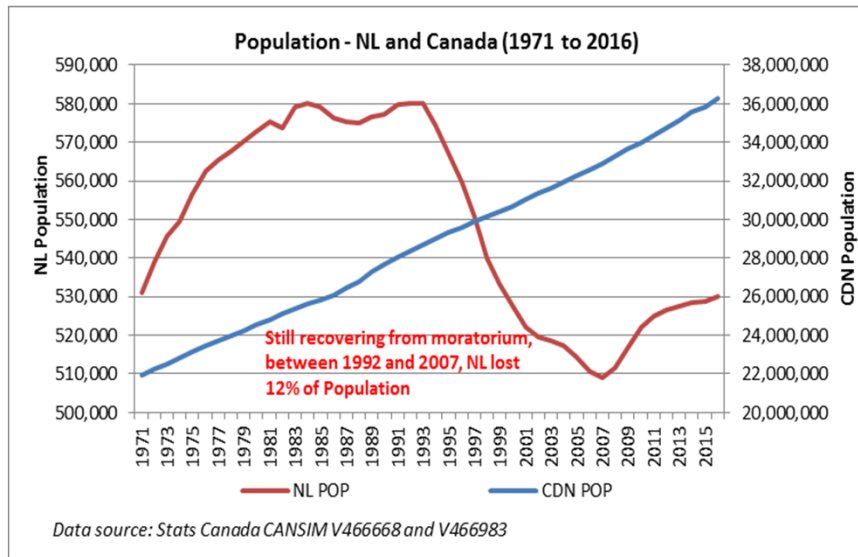
Bankruptcies – NL and Canada



Consumer bankruptcies up 11% in NL from 2014 to 2015 (but down 3.3% 2015Q3 to 2016Q3) and business bankruptcies down by 22% 2014 to 2015 (and down 17% 2015Q3 to 2016Q3).

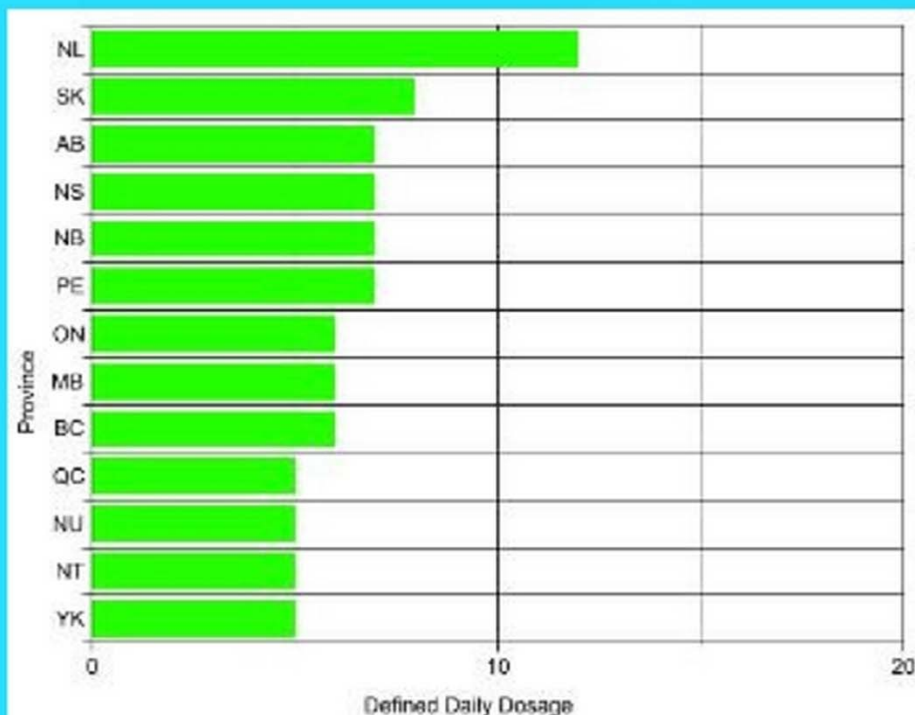
Consistent with strains on the economy as commodity prices have fallen, but it does not appear to be the crisis that some people have portrayed

Demographic Time Bomb: Declining Population



Between 1961 and 2016, 154,576 more people left NL than moved to NL from other provinces, which average 2,836 per year and between 2015 to 2038, population expected to fall by 8.5% with low, 5% with medium and 1.3% with high

HERE ARE THE NUMBERS...

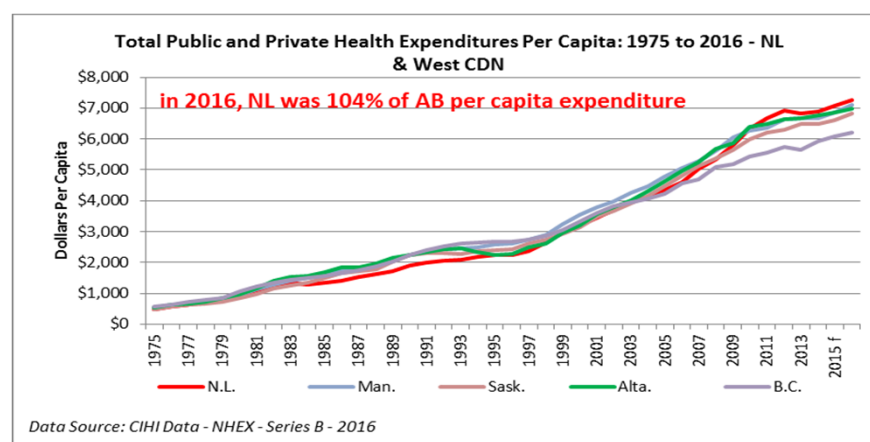
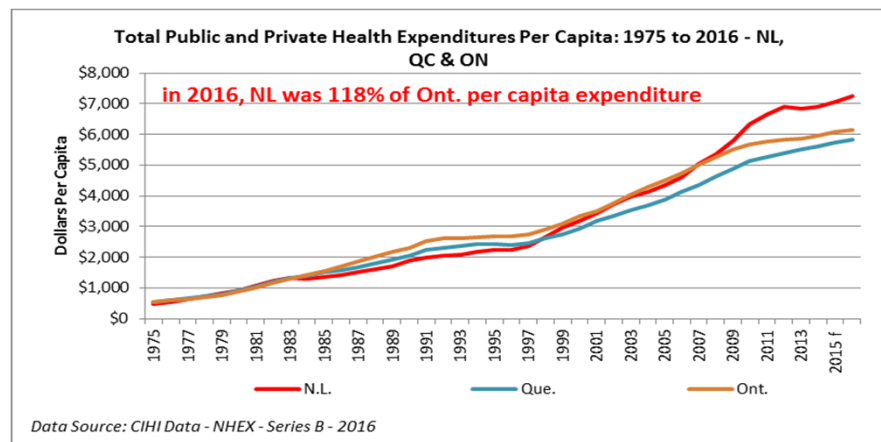
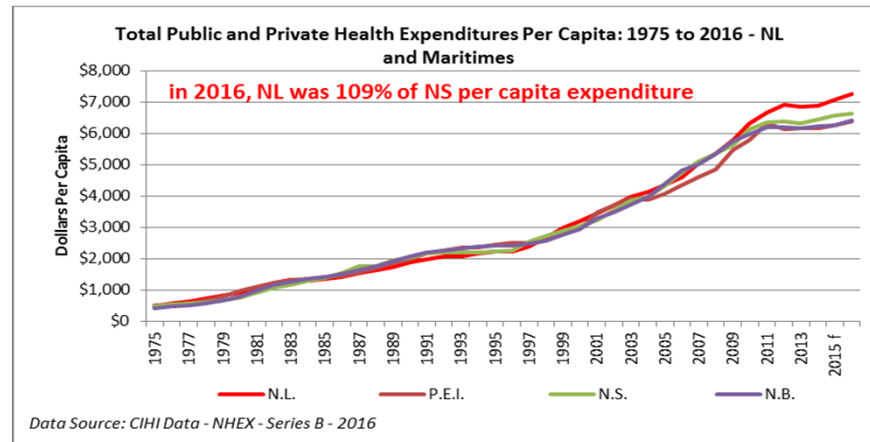
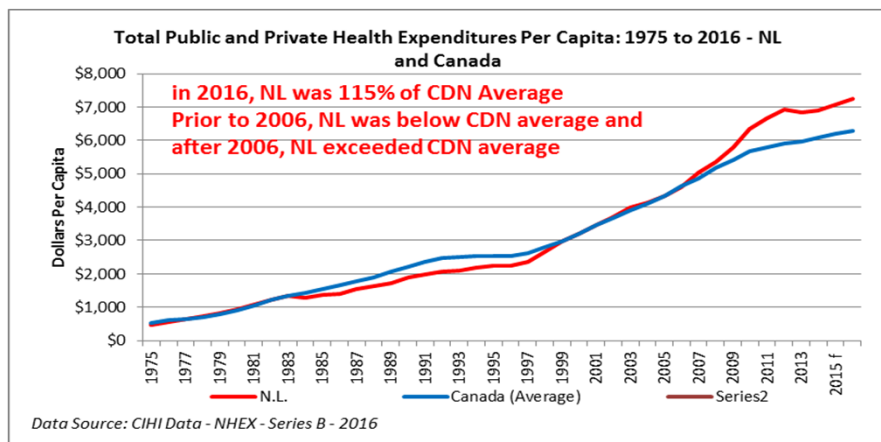


IN 2014, DOCTORS IN NEWFOUNDLAND & LABRADOR GAVE MORE ANTIBIOTICS THAN DOCTORS IN ANY OTHER PROVINCE
ONE-THIRD HIGHER THAN THE SECOND HIGHEST USE RATE



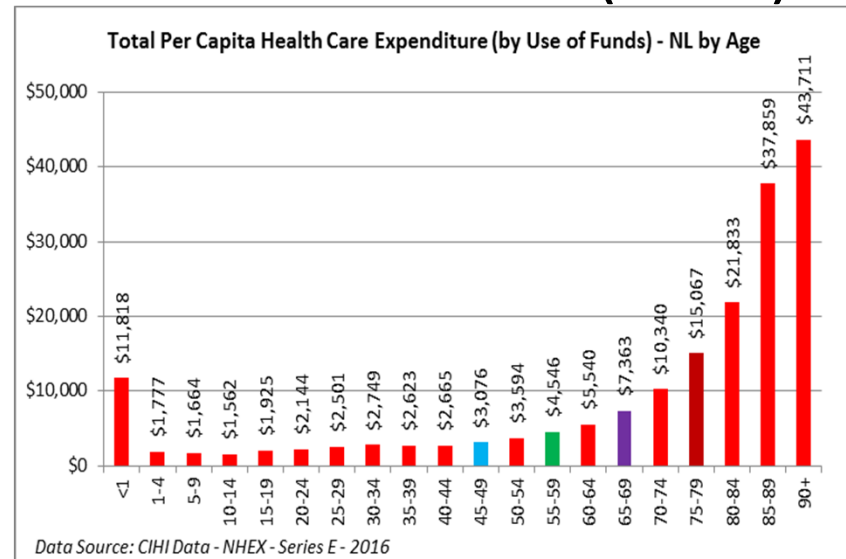
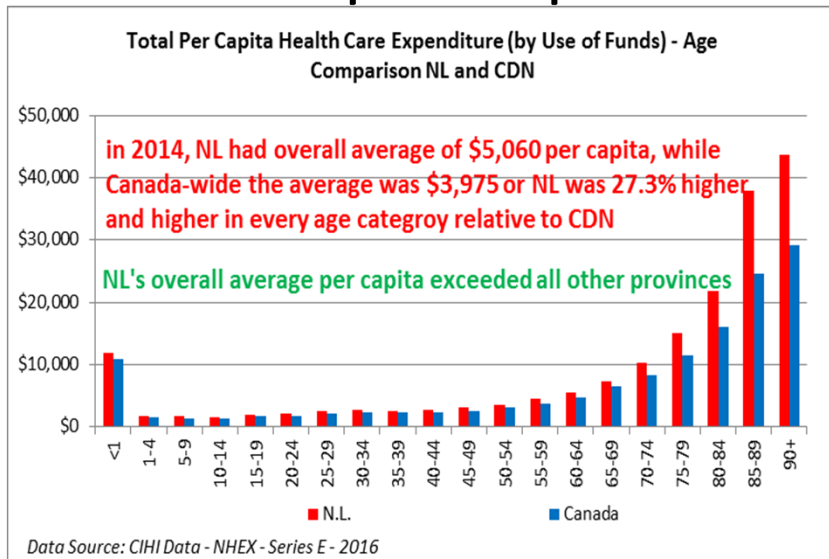
Source: Pat Parfev's Choosing Wisely NL presentation to MUN Economics February 16, 2017

Per Capital Health Care Expenditures



NL per capita expenditures on total health exceeds that in any other provinces

Per Capita Expenditure on Health Care – NL (2014)



An aging population would normally be expected to put more pressure on health care costs

On average, it costs NL \$5,060 per capita for health care costs in 2014, which compares to \$3,975 per capita Canada-wide or we were 27.3% higher in per capita terms in 2014. We exceed all other provinces on average – closest is Alberta where we were 8.5% higher in 2014

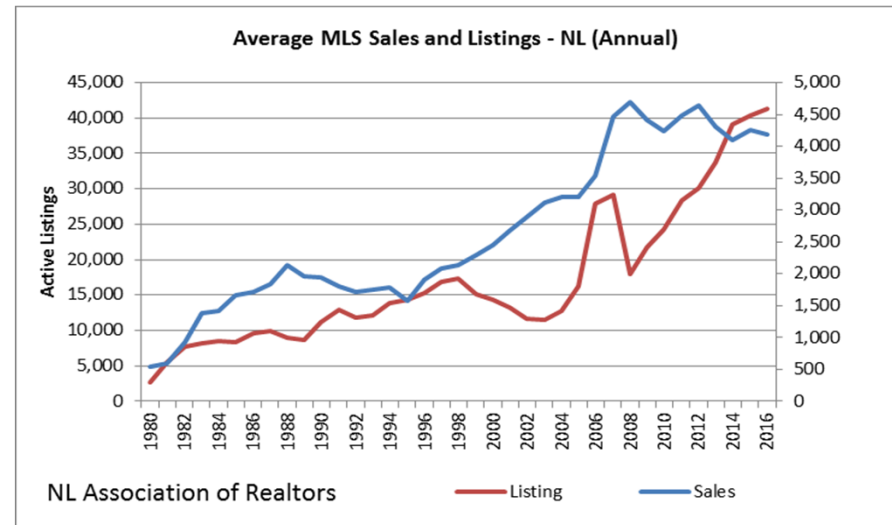
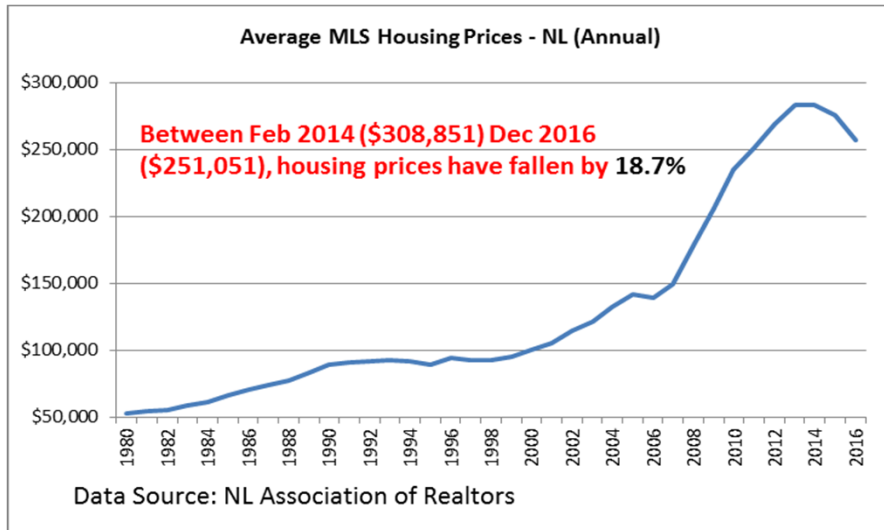
Also, NL exceed CDN average in every age category, with the older categories representing the biggest difference. For example, NL per capita cost for the 85-89 category is 54% higher than Canadian average

If no other cost drivers change (doctor's salaries, cost of band aids, etc.), then the median age (currently 45 years) person's health cost will increase by 48% in 10 years, increase by a further 61% in the next 10 years or in 20 years time, it will cost 139% (\$3,706 to \$7,363) more to treat that person

Health care is so important to Newfoundlanders and Labradorians and is the biggest expenditure in the budget (36% of expenditure on the Health Care Sector)

It is one of the most significant cost drivers for the government and it may be time to have a Royal Commission to look at all aspects of health care (funding, delivery, infrastructure and what we want and can pay for) seems to make a lot of sense at this point in time

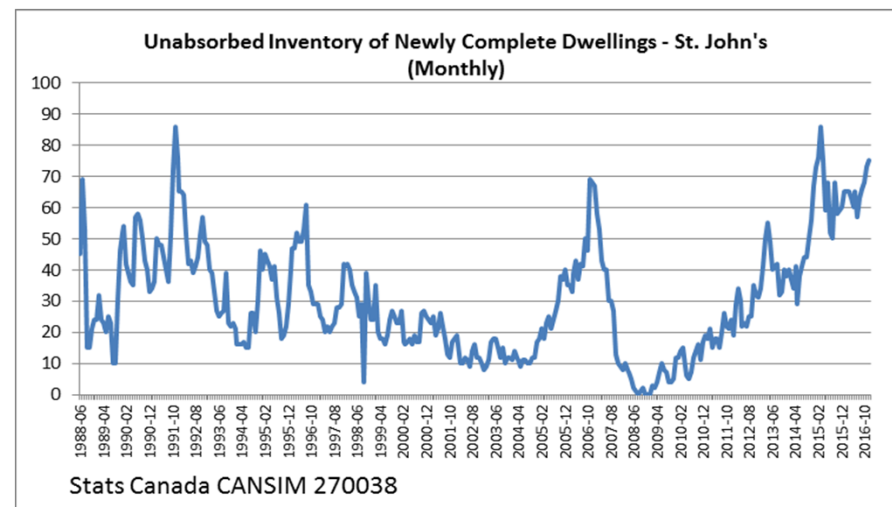
NL Housing Market



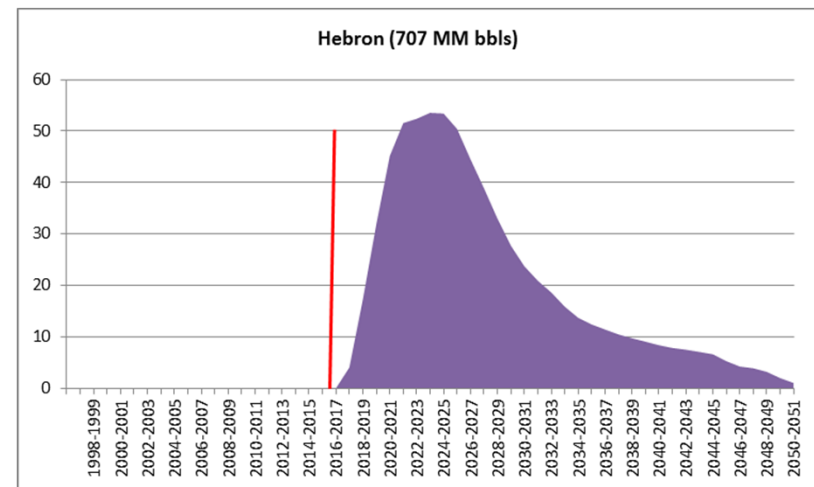
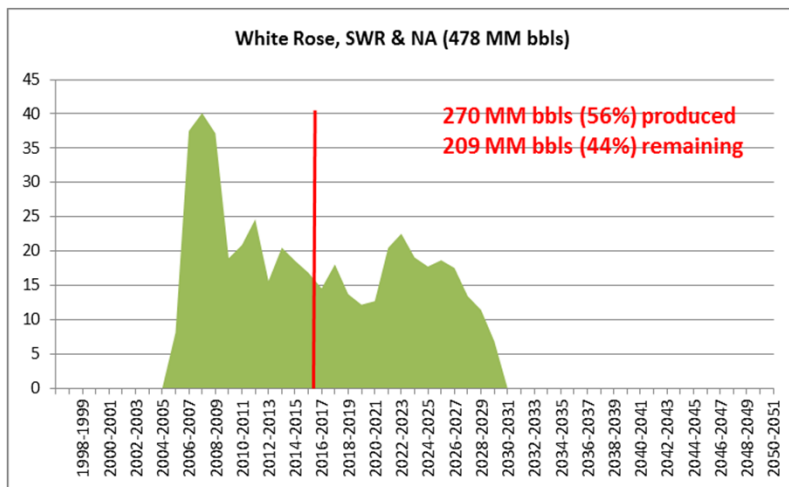
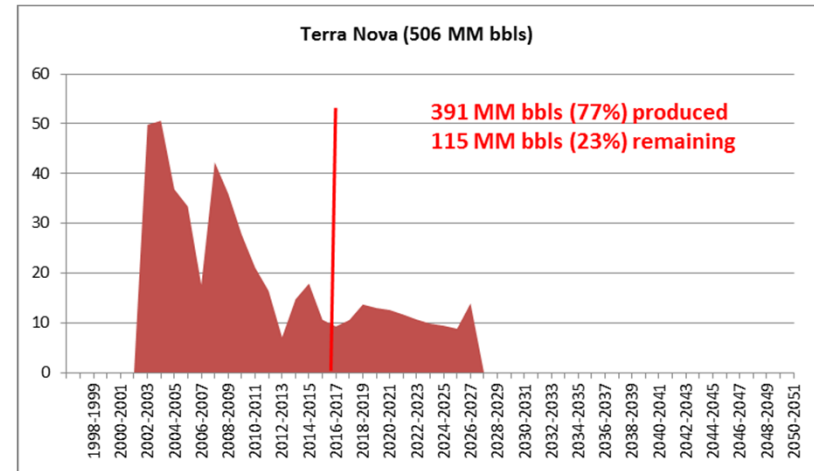
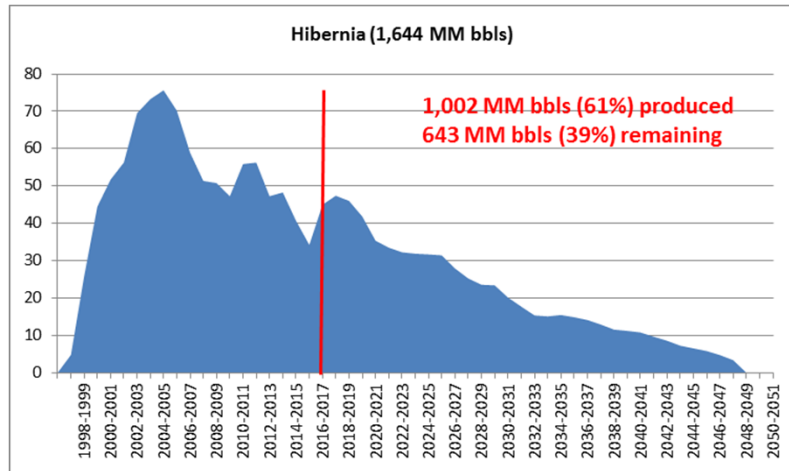
Aging population, lower employment, higher taxes (including HST), lower expenditures and lower confidence do not bode well for the housing market

Provincial expenditure cuts in the range of \$240 to \$250 M would have a significant and negative impact on the housing market

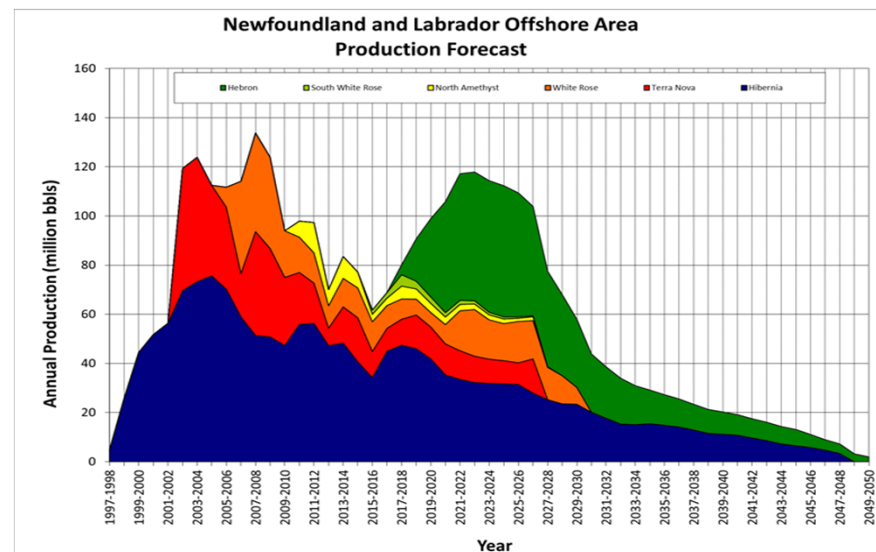
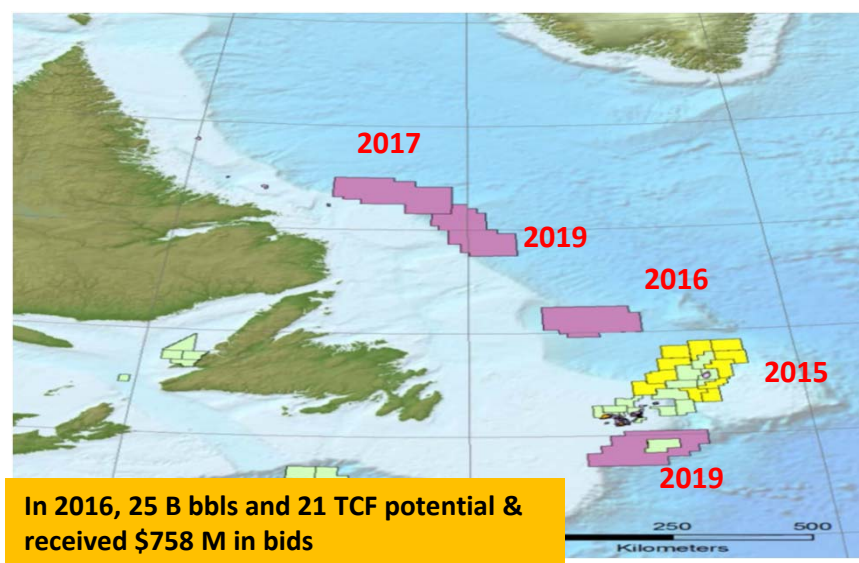
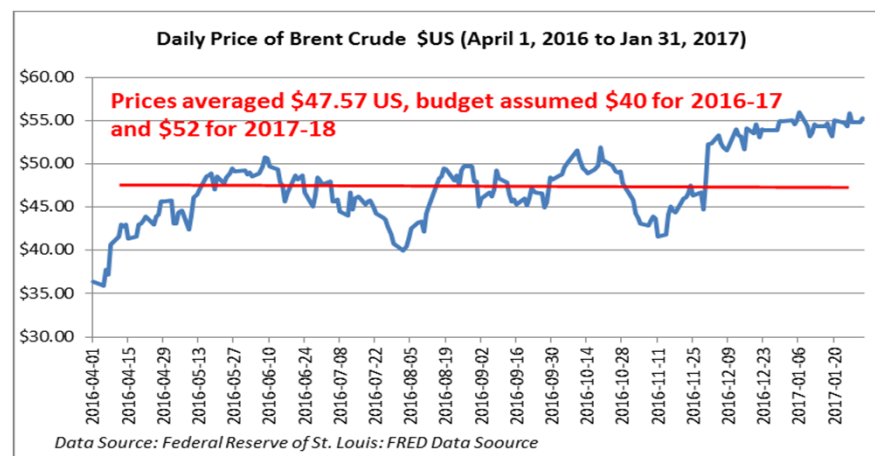
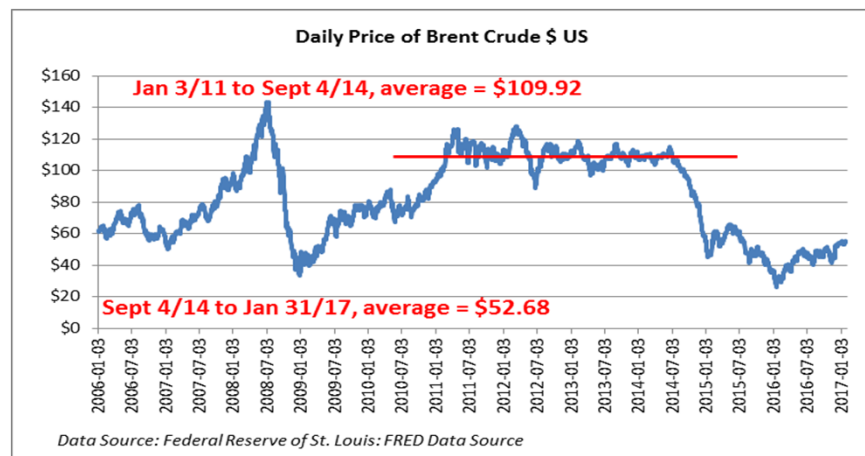
At \$60,000 average wages and 50% of expenditure on wages, this could translate into in excess of 2,000 fewer people working directly for government



Existing and Approved Projects



Oil and Gas



Statoil exploration plans for the Flemish Pass and the White Rose WHP are indeed good news and will create some short term economic stimulus if they proceed, but we are a long ways away from any significant contribution to the current fiscal situation faced by the province

In 2016, land sales for identified 25 B bbls & 21 TCF resulted in \$768 M in bids. In 2015, land sales for identified 12 B bbls & 113 TCF resulted in \$1.2 B in bids

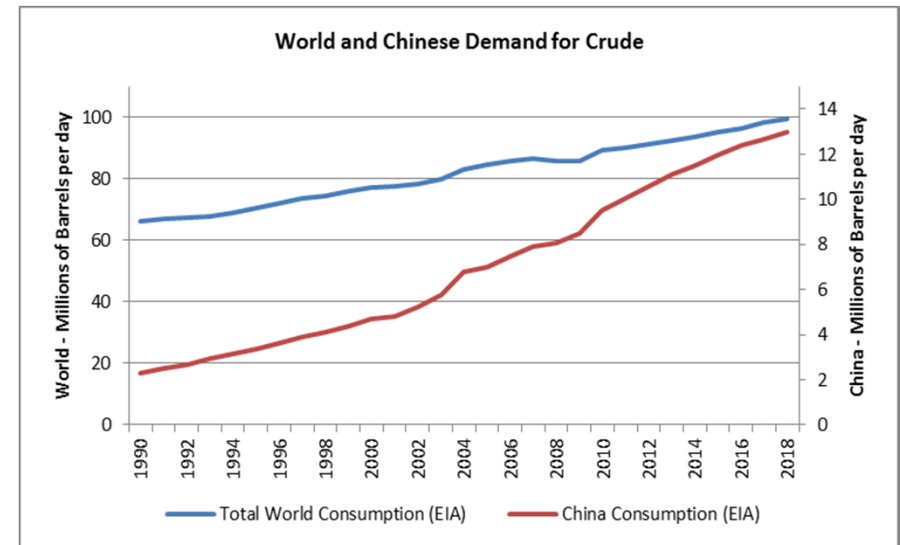
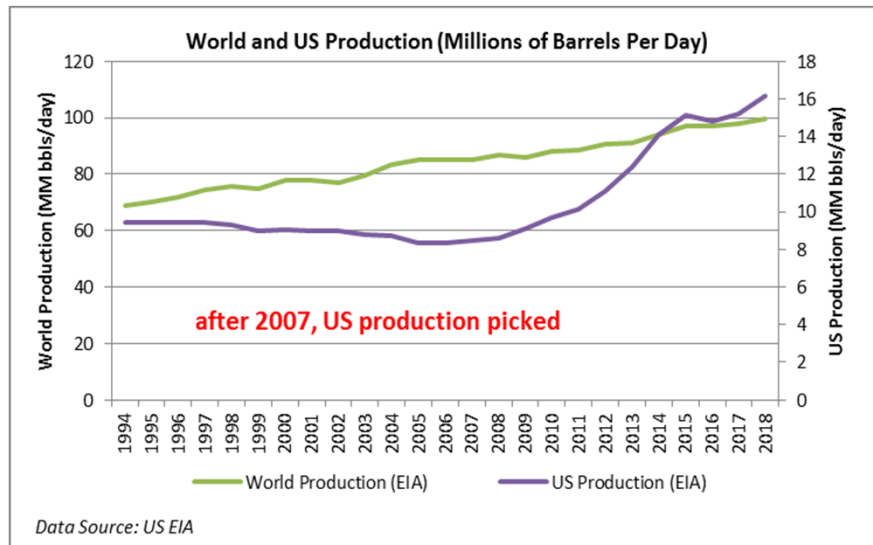
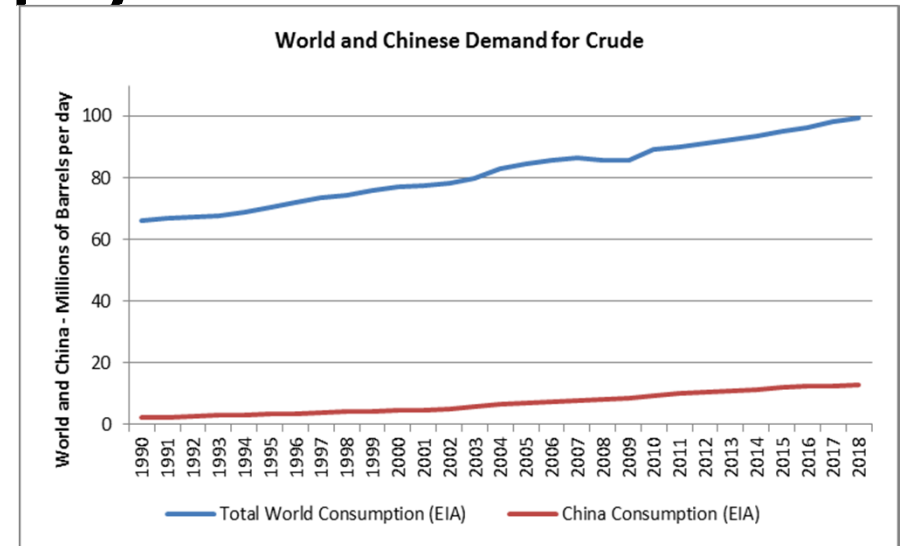
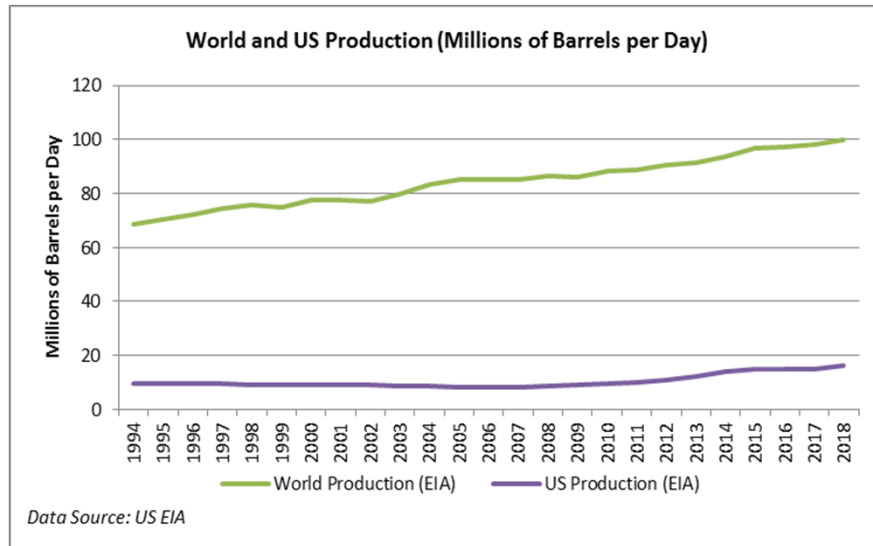
United Nations Convention on the Law of the Sea

Article 82

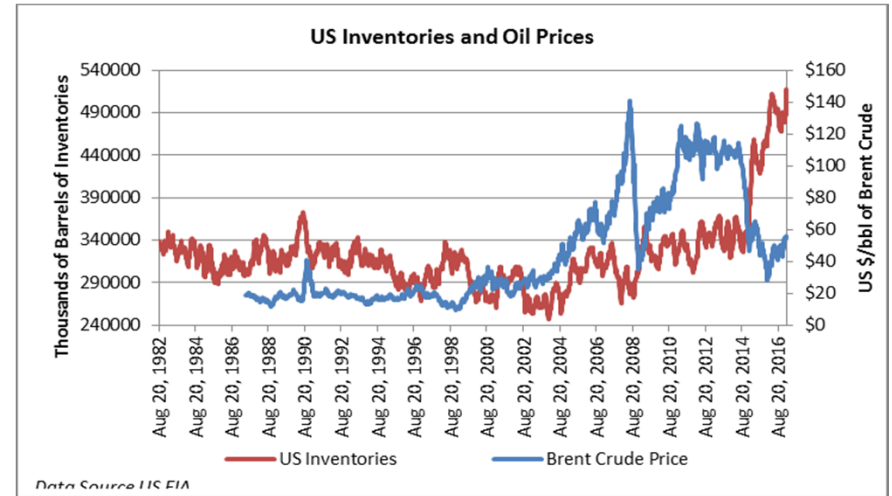
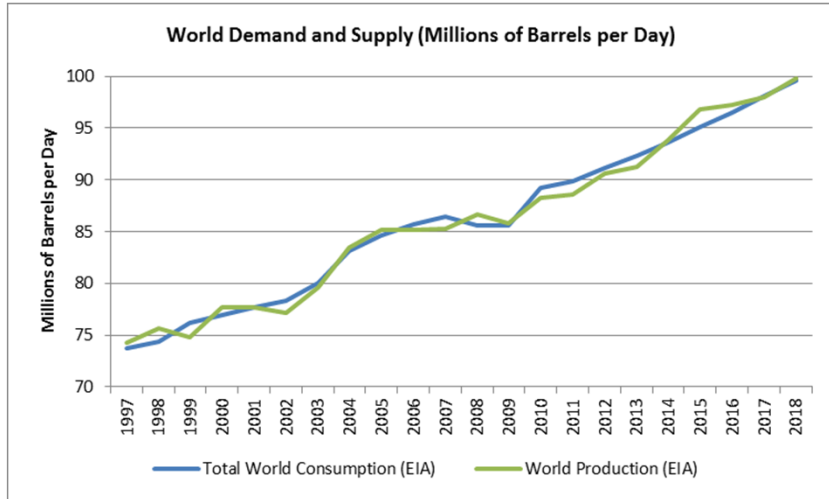
- The coastal State shall make payments or contributions in kind in respect of the exploitation of the **non-living resources of the continental shelf beyond 200 nautical miles** from the baselines from which the breadth of the territorial sea is measured.
- 2. The payments and contributions shall be made annually with respect to all production at a site **after the first five years of production** at that site. **For the sixth year, the rate of payment or contribution shall be 1 per cent of the value or volume of production at the site. The rate shall increase by 1 per cent for each subsequent year until the twelfth year and shall remain at 7 per cent thereafter.** Production does not include resources used in connection with exploitation.
- 3. A developing State which is a net importer of a mineral resource produced from its continental shelf is exempt from making such payments or contributions in respect of that mineral resource.
- 4. The payments or contributions shall be made through the Authority, which shall distribute them to States Parties to this Convention, on the basis of equitable sharing criteria, taking into account the interests and needs of developing States, particularly the least developed and the land-locked among them.

This has real implications for NL and for intergovernmental fiscal relations within Canada

Demand and Supply Affect Price

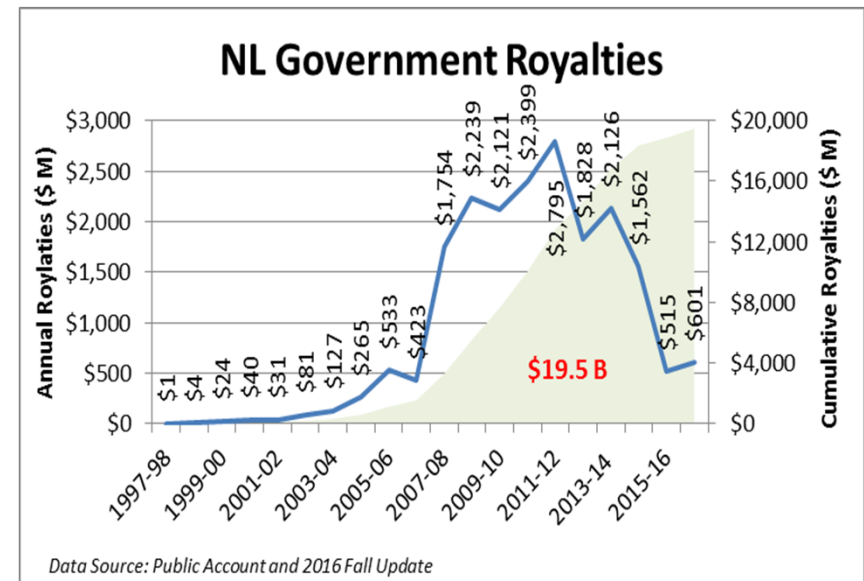
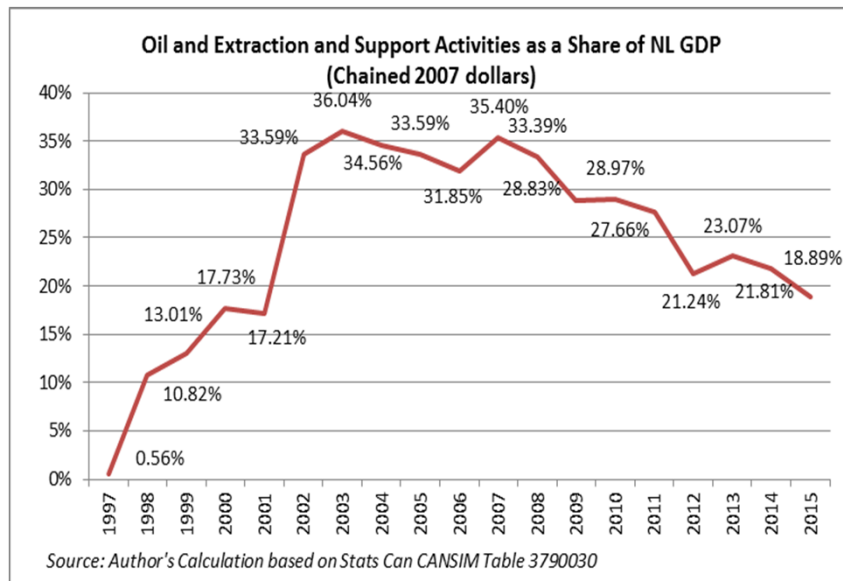


Demand and Supply – Not Always in Balance



When supply exceeds demand, inventories build and prices fall

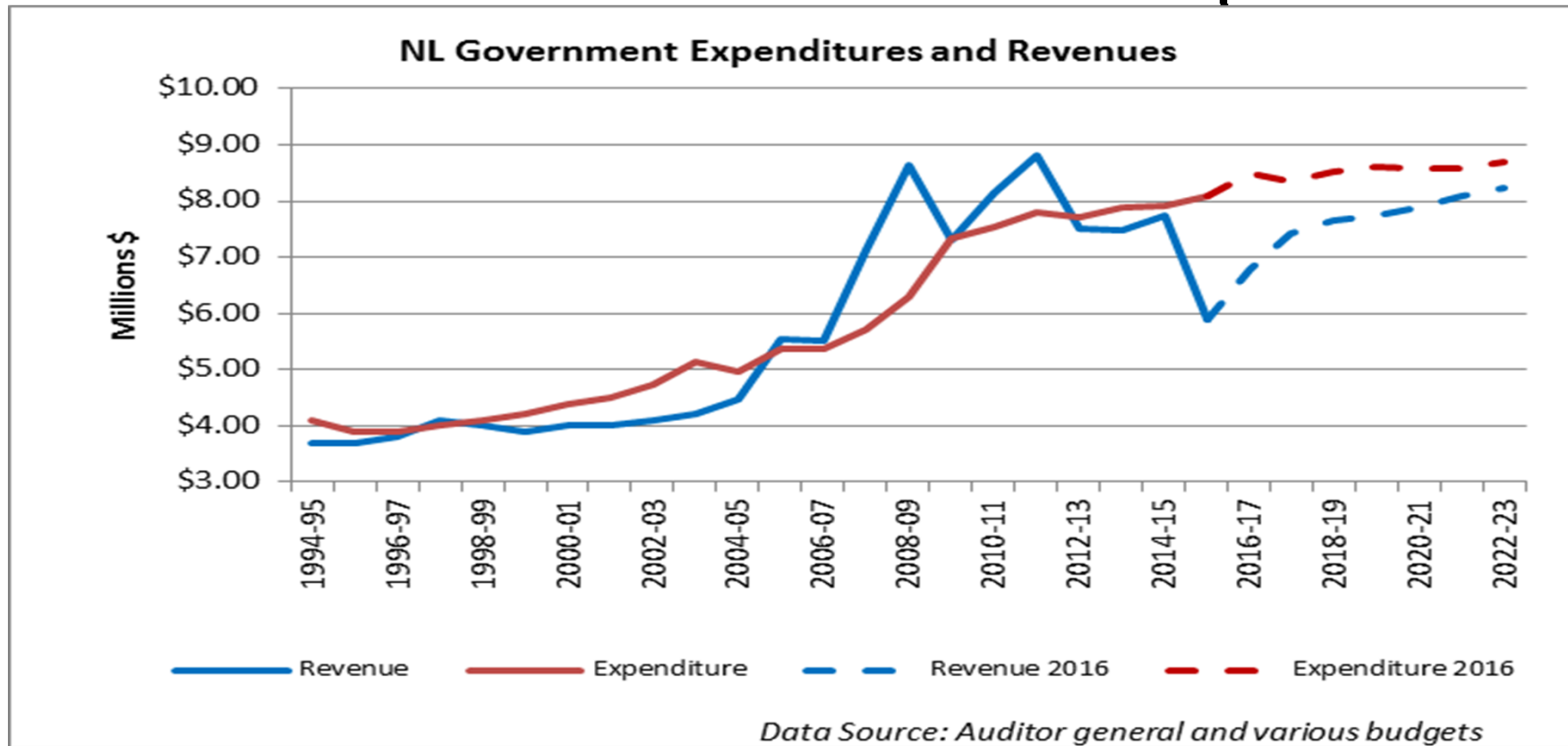
Oil, GDP and Royalties



From its peak in 2011-12, oil royalties have fallen by 79% and since 2003, oil as a share of the economy has fallen by half

There has been over \$51 B invested in the offshore up to the end of 2015

Government Revenues and Expenditures

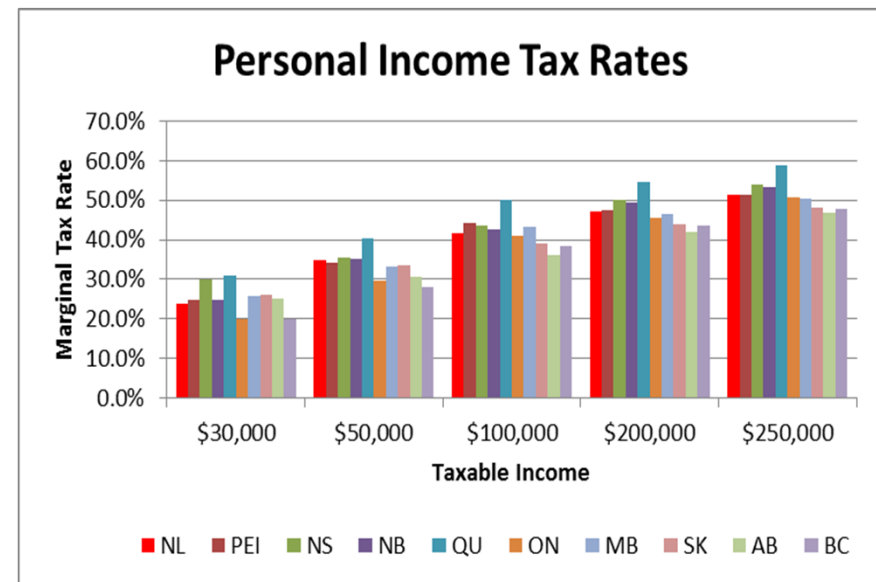
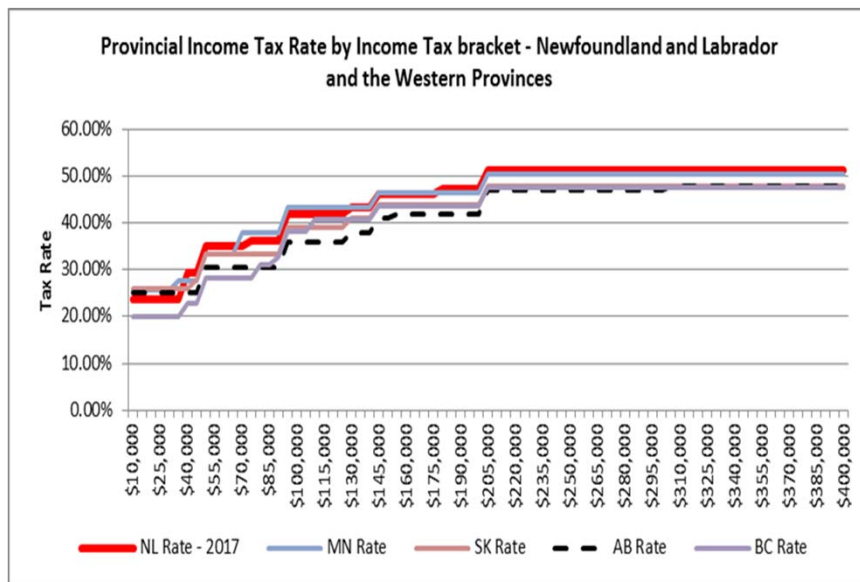
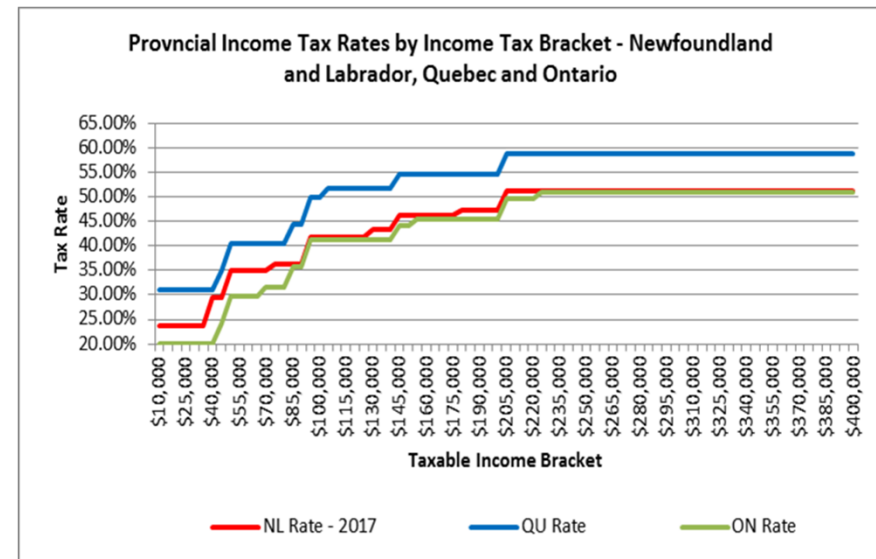
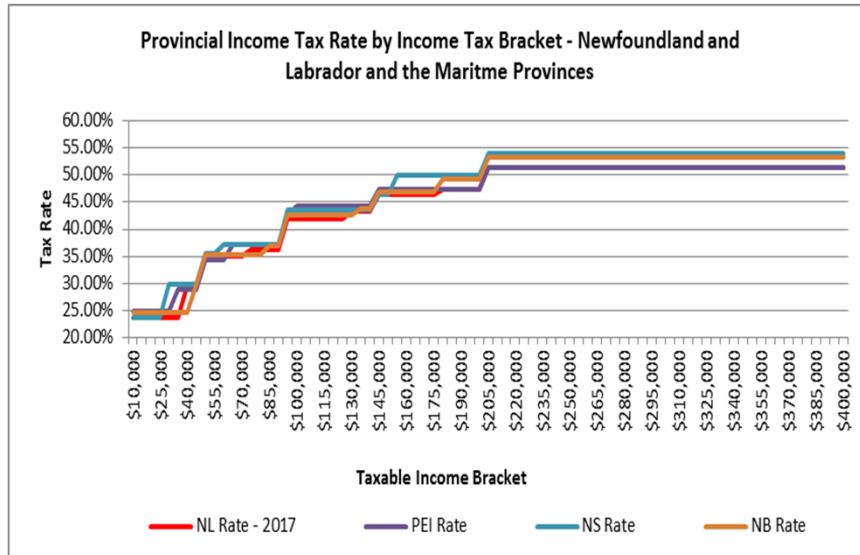


Between 2011/12 and 2015/16, royalties have fallen from 38.7% of provincial revenues to 10.5%

Between 2004-05 and 2014-15, revenues increased by 73% and expenditures increased by 59%.

Most of the heavy lifting in Budget 2016 was done through revenue increases, rather than expenditure cuts. However, if revenue is not sustained in the future, then we will be in the same spot as we are currently.

PIT – NL and Other Provinces



NL is now in the middle of the pack on PIT for taxable income brackets

Implied Budgetary Changes to Meet Stated Targets

	Forecast Revenue Budget 2016	Forecast Program Expenditure Budget 2016	Forecast Debt Serving Expenditure Budget 2016	Revenue Risk Adjustment (Fudge Factor)	Revenue minus Expenditure or Implied Deficit	Target Deficit Budget 2016	Additional Adjustment Required to Meet Target Deficit (Either Reduced Expenditure or Enhanced Revenue)
2016-17	\$6,776.30	-\$7,499.00	-\$982.30	-\$125.00	-\$1,830.00	-\$1,830.00	\$0.00
2017-18	\$7,409.60	-\$7,307.30	-\$1,033.50	-\$125.00	-\$1,056.20	-\$800.00	-\$256.20
2018-19	\$7,659.20	-\$7,390.30	-\$1,125.20	-\$125.00	-\$981.30	-\$650.00	-\$331.30
2019-20	\$7,737.00	-\$7,432.50	-\$1,166.70	-\$125.00	-\$987.20	-\$500.00	-\$487.20
2020-21	\$7,871.80	-\$7,406.70	-\$1,181.80	-\$125.00	-\$841.70	-\$250.00	-\$591.70
2021-22	\$8,096.60	-\$7,362.90	-\$1,229.10	-\$125.00	-\$620.40	\$0.00	-\$620.40

Implied Annual Changes in Variables to Meet Target Deficit

	Forecast Revenue Budget 2016	Forecast Program Expenditure Budget 2016	Forecast Debt Serving Expenditure Budget 2016	Revenue Risk Adjustment (Fudge Factor)	Revenue minus Expenditure or Implied Deficit	Target Deficit Budget 2016	Additional Adjustment Required to Meet Target Deficit (Either Reduced Expenditure or Enhanced Revenue)
2016-17							
2017-18	\$633.30	-\$191.70	\$51.20	\$0.00	-\$773.80	-\$1,030.00	\$256.20
2018-19	\$249.60	\$83.00	\$91.70	\$0.00	-\$74.90	-\$150.00	\$75.10
2019-20	\$77.80	\$42.20	\$41.50	\$0.00	\$5.90	-\$150.00	\$155.90
2020-21	\$134.80	-\$25.80	\$15.10	\$0.00	-\$145.50	-\$250.00	\$104.50
2021-22	\$224.80	-\$43.80	\$47.30	\$0.00	-\$221.30	-\$250.00	\$28.70
Cum Total	\$1,320.30	-\$136.10	\$246.80	\$0.00	-\$1,209.60	-\$1,830.00	\$620.40

To get to balance, \$1.3 B (\$8.1 B - \$6.8 B) in extra revenue plus \$140 M (\$7.50 B - \$7.36 B) in indicated program reductions (1.8%) and another \$620 M in implied program program expenditure cuts (8.3% reduction) for a total implied reduction on program expenditure of \$760 M (10.1% reduction) If the expenditure were made up by cutting labour costs, then, utilizing an average wage of \$60,000, this would imply a reduction of 1,667 full-time equivalent jobs for \$200 M reduction in program expenditure, assuming half comes from wages.

Fiscal Update and Way Forward

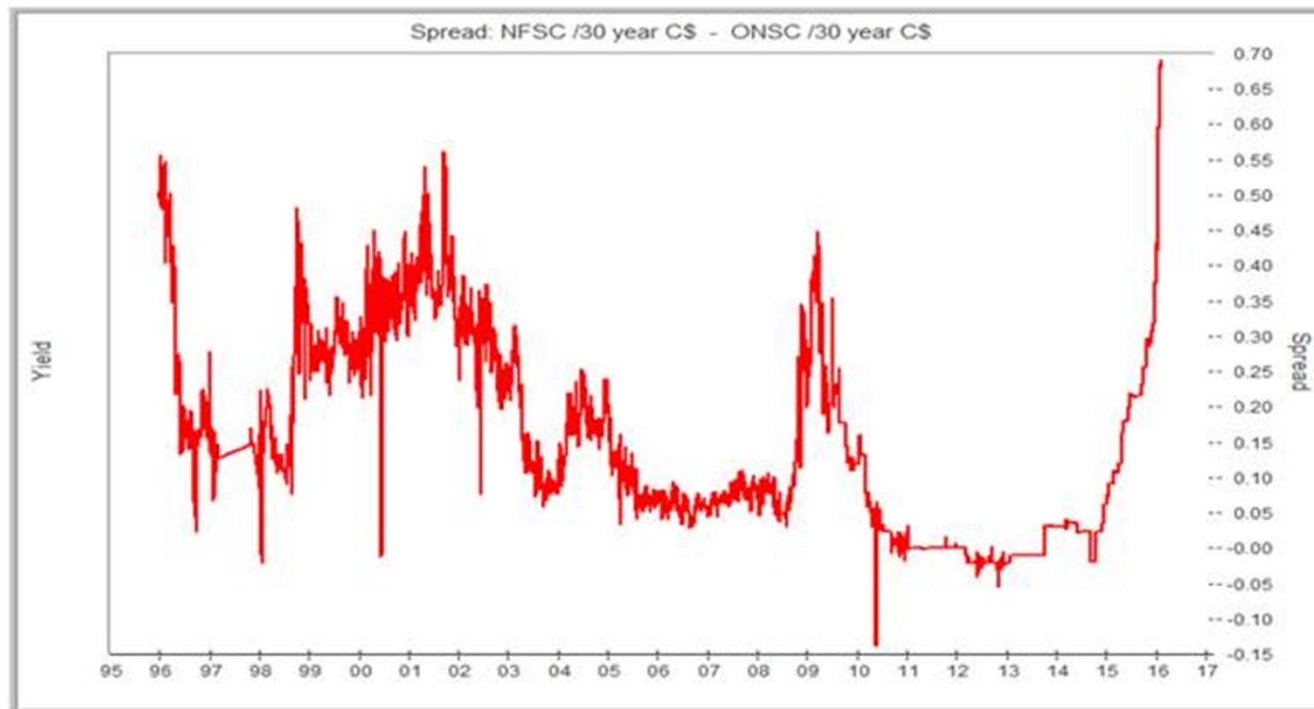
Summary of Fiscal Update - Relevant Parameters			
	Change Since Budget 2016		Change Since Budget 2016
oil revenues (royalties and CIT from higher prices)	\$120	Oil Prices	\$5
Government Business Enterprises	\$17	Oil Production (MM bbls)	\$4
Prior Year Base Adjustments (PIT and CIT)	\$80	Exchange Rate	?
Total Change in Revenue	\$217	Real GDP	-0.4%
Program Expenditures	-\$111	Household Income	-0.5%
Debt Servicing Expenses	\$132	Retail Sales	-0.7%
Total Change in Expenses	\$21	Housing Starts	-0.3%
Revised Change in Deficit	\$197	Capital Investment	-1.3%
Change in Accounting Assumption (reduce \$125M to \$75M)	-\$50	Employment	-0.3%
		Unemployment Rate	0.4%
Change in Adjusted Deficit	\$247	Participation Rate	-0.2%
		Population	0.3%
		HST Over Payment \$140 M (while \$89 M already included in estimates, there is still \$51 M that needs to be taken into account)	

Note: with the fiscal update, all the indicators appear to be going in the wrong direction. It does not bode well for hitting future budget targets. The 2016 AG report states: “Most economic indicators have deteriorated in the 6 months since the economic forecast released as part of Budget 2016 – this indicates there may be some risk for the revenue forecast for the remainder of 2016-17 and, also, future years.”

The Way Forward lays out a vision, but one that does not appear to be fully integrated with the economic and fiscal realities of the province. It is certainly not a roadmap. It appears to be more in line what the government hopes will transpire.

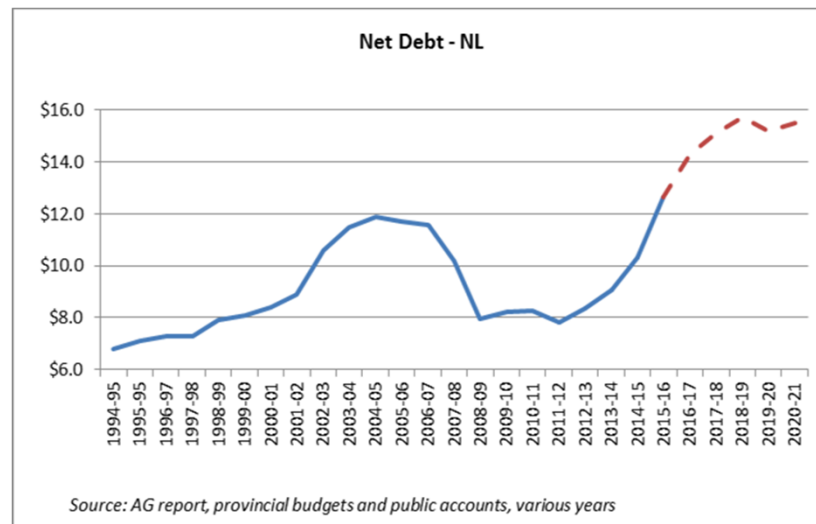
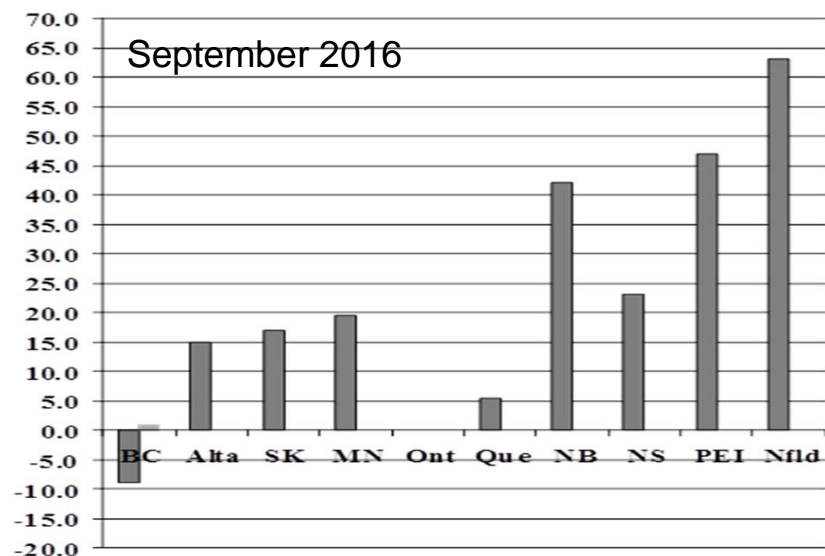
NL Borrowing Challenges: Another Risk

NFLD 30-yr Spreads vs. Ontario



Clearly, the risk associated with NL long term debt has increase relative to Ontario since 2015 when the yield was basically the same, but now the premium required to attract financing is higher by 65 to 70 basis points

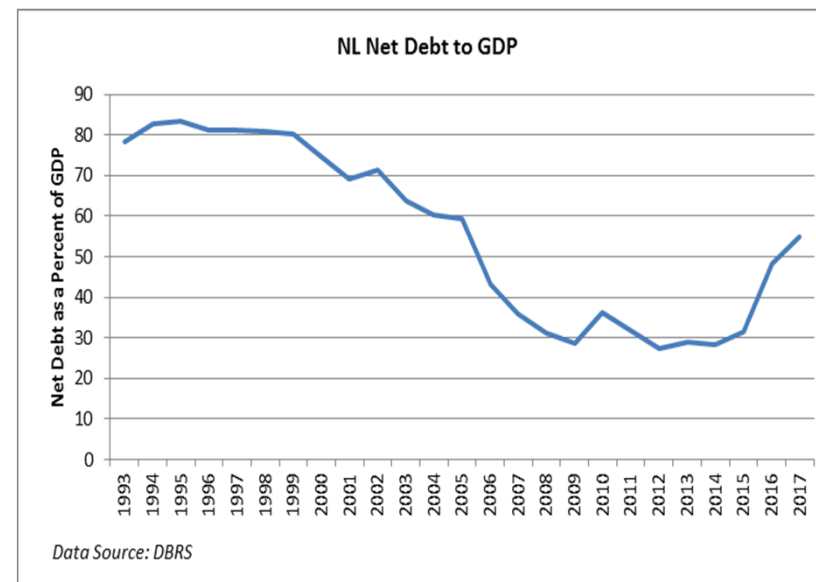
NL Borrowing Challenges: Another Risk



Risk associated with NL long term debt has increase relative to Ontario since 2015 (premium required to attract financing is higher by 65 basis points and about 50 basis points currently currently)

Net debt has come down in recent years, but with lower oil prices, deficits are higher and net debt is rising. If the 2016 budget targets are met, we will see a slowdown in debt accumulation; it will not result in debt being reduced. Net debt, if everything goes well, will set in about \$15 to \$16 B

Net debt as a percent of GDP is increasing which will enhance the likelihood of a credit downgrade (we are the lowest in the country currently)

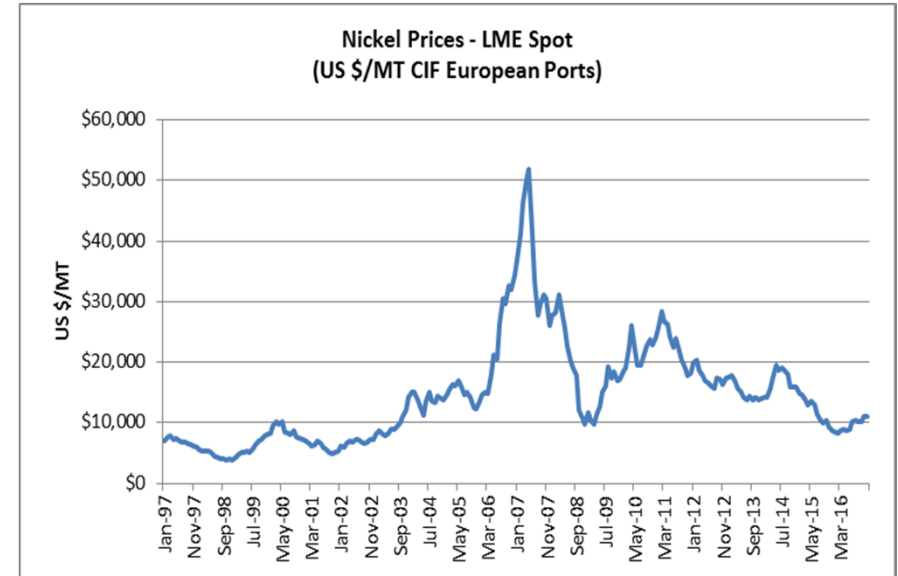
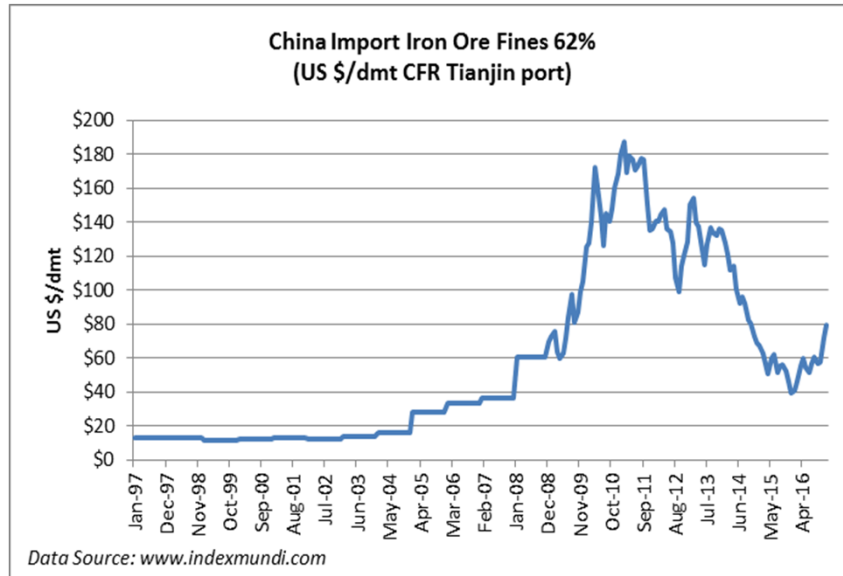


NL is Already Challenged in terms of Borrowing

Long Term Debt Credit Rating Systems				
Investment Quality	Moody's	Standard and Poor's	DBRS	Fitch
Highest Quality	Aaa	AAA	AAA	AAA
Substantial Payment Capacity	Aa1	AA+	AA(High)	AA+
	Aa2	AA	AA(Middle)	AA
	Aa3	AA-	AA(Low)	AA-
High Payment Capacity	A1	A+	A(High)	A+
	A2	A	A(Middle)	A
	A3	A-	A(Low)	A-
Adequate Payment Capacity	Baa1	BBB+	BBB(High)	BBB+
	Baa2	BBB	BBB(Middle)	BBB
	Baa3	BBB-	BBB(Low)	BBB-
Non-investment grade: BB, B, CCC, CC and C categories				
In Default	C	D	D	D

Canadian Provincial Ratings, December 31 st , 2016			
	DBRS	S&P	Moody's
British Columbia	AA(high)	AAA	Aaa
Alberta	AA(high)	AA (negative)	Aa1 (negative)
Saskatchewan	AA	AA+ (negative)	Aaa
Manitoba	A(high)	AA- (negative)	Aa2
Ontario	AA(low)	A+	Aa2
Quebec	A(high)	A+(positive)	Aa2
New Brunswick	A(high)	A+	Aa2
Nova Scotia	A(high)	A+	Aa2
Prince Edward Island	A(low)	A	Aa2
Newfoundland & Labrador	A(low)	A (negative)	Aa3 (negative)

Iron Ore and Nickel Prices



Iron ore prices starting to recover. Currently around \$80/DMT and this may help iron ore developments in Labrador

Nickel prices relatively stable and this should help with Voisey due to go underground

Conclusion

- **We have Demographic Challenges**
- **We have Economic and Employment Challenges**
- **We have Fiscal Challenges**
- **We have Debt and Borrowing Challenges**
- **We have a Temporal Challenge – Is Waiting a Real Option?**
- **There is significant energy and non-renewable resource potential**
- **We are short-term challenged, we are medium-term challenged and the longer-term is positive, but depends upon how we react in the short and medium terms**
- **Even though people seem recognize the current fiscal and economic circumstances, it seems to me that we, as a province, have not fully appreciated just how difficult the solution will have to be and that waiting may make the adjustment costs more unmanageable.**
- **There is hope with the offshore and that oil prices will rise, but these are medium to longer term and we do not know by how much they will rise and for how long. Yet, we do need to do something now and the political will and social acceptability may not be there to cut expenditures.**
- **This might be a good time for a Royal Commission on Health Care**
- **We need to move beyond a vision statement for the province. We need a firm grounding in the economic and fiscal realities of the province. We need to have the will to implement it.**