

Appendix N: New Brunswick Public Automobile Insurance Model - Economic Impact Assessment

An Economic Impact Analysis of the New Brunswick Public Automobile Insurance Model

Prepared for :

**The New Brunswick Select Committee
On Public Automobile Insurance**

Submitted by :

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Introduction

The Select Committee on Public Automobile Insurance was appointed by resolution of the House and adopted August 5, 2003. After a comprehensive process, the Committee is recommending a specific model for public automobile insurance in New Brunswick. This study analyzes the economic impact of the implementation and operation of the recommended model. Using an input-output model, this study estimates the impact during the start-up year as well as the impact of the new system for a regular operating year.

Results

Results were generated using an input-output model, the principles of which are presented in Appendix 1. In order to make such an analysis, a variety of assumptions have to be made. The detailed assumptions used in the present analysis are found in Appendix 2. Detailed results – on a county-by-county basis – are presented in Appendix 3.

Before presenting the results, the reader has to be reminded that the present exercise is an economic simulation. We are confident that the overall results do represent an acceptable estimate of the economic impact of the proposed public automobile insurance system, based on the assumptions that were made. Statistics theory teaches us, however, that the smaller the object of analysis, the greater the risk of error. Consequently, results on a county-by-county basis – as opposed to province-wide results – while offering important and interesting information, should be used with caution.

The Start-Up Year

The economic impact of the start-up phase of the proposed public automobile insurance system would be positive. The most significant factors during this initial stage would be the construction of the headquarters and of the five claim centres, the staggered hiring of personnel by the public insurance corporation and implementation related expenditures.

As we explain in Appendix 2, we chose Moncton as the location for the new headquarters to be consistent with a previous study completed on this issue, by Shift Central. Assumptions were also required for the location of the five claim centres. We assume that they would be located in the northeast (Bathurst), the northwest (Edmundston), the southeast (Moncton), the southwest (Saint John) and central New Brunswick (Fredericton).

During the start-up year (Table 1), gross output in the province would increase by nearly \$110 million. The greatest impact would be felt in Westmorland County, home of the new headquarters as well as of one claim centre (Table 3, Appendix 3). Other counties with claim centres would also be important beneficiaries of increased economic activity.

Table 1: Summary of Results for Start-Up Year, Province of New Brunswick

	Direct Impact ¹	Indirect and Induced Impacts ²	Total Impact ³
Variation of gross output (\$)	\$75,393,152	\$33,944,802	\$109,337,954
Variation of Employment (person-years)	821.9	202.0	1023.9
Variation of Gross Domestic Product (\$)	\$35,444,680	\$10,705,626	\$46,150,306
Variation of Federal Gvt Revenues (\$)			\$6,064,549
Variation of Provincial Gvt Revenues (\$)			\$4,450,772

On the employment front, it is estimated that the equivalent of more than 1,000 person-years of employment could be created. Three hundred of these would be the result of hiring by the public automobile insurance corporation. A significant number would be employed directly or indirectly as a result of the construction of the headquarters and the claim centres. The great majority of the employment creation during this start-up year would thus take place in communities where the headquarters and the claim centres would be located (Table 3. in Appendix 3).

The contribution to the provincial gross domestic product (GDP) would be, for the start-up year, about \$46 million. Federal government revenues – from activities taking place within the boundaries of the province of New Brunswick – would increase by \$6 million while those of the provincial government would increase by over \$4.4 million.

Regular Operation Year

The economic impact of the proposed public automobile insurance system would be more varied for a regular operation year than would be the case for the start-up year. In the case of a regular operation year, there would be a positive economic impact resulting from the activities of the public automobile insurance corporation as well as from the impact of the premium savings for insured drivers. There will be a negative economic impact of the reduction or elimination of activity in the private insurance sector.

Of the 2,400 actual insurance sector jobs, we estimate that the number would fall to about 1,266. It is assumed that all remaining adjusters would be employed with the public insurance corporation (the details of the assumptions are presented in Appendix 2). This would lead to the elimination of 291 private sector licensed resident adjusters and 145.5 related support positions. It is further assumed that there would be a reduction of 26.4 per cent of agent (130.7) and broker (247.9) related employment. We also estimate a further reduction of 317.7 positions in other insurance functions. At the same time, 800 positions would be created at the new public automobile insurance corporation.

¹ Direct impact measures the impact of actions directly resulting from the implementation of the public automobile program.

² Indirect and induced impacts measure the impact of actions resulting from, but not directly related to the implementation of the public automobile program.

³ Total impact may not be equal to direct impact + (indirect and induced impact) as a result of rounding off numbers.

Amongst the other factors considered, the premium savings for insured drivers is the most important, totalling \$103,587,000. Also included in the calculations are the various variations in operational expenses.

From Table 2, we can observe that the direct impact would be negative, a reflection of the fact that the size of the sector would shrink with less direct employment after the creation of the public insurance corporation. However, the indirect and induced impacts – mostly fuelled by reduced premiums – would generate a positive economic impact. The total economic impact would be positive.

Overall, gross output in the province would increase annually by over \$144 million. The impact would be positive for all regions of the province, although Westmorland and, to a lesser extent, York and Gloucester counties would be the principal gainers (Table 8 in Appendix 3).

Table 2: Summary of Results for Regular Operation Year, Province of New Brunswick

	Direct Impact ¹	Indirect and Induced Impacts ²	Total Impact ³
Variation of gross output (\$)	-\$13,673,245	\$157,854,974	\$144,181,729
Variation of Employment (person-years)	-333.2	608.4	275.2
Variation of Gross Domestic Product (\$)	-\$8,469,596	\$45,876,474	\$37,406,878
Variation of Federal Gvt Revenues (\$)			\$6,768,763
Variation of Provincial Gvt Revenues (\$)			\$3,515,239

The total impact on employment would be positive with the creation of the equivalent of 275 person-years. In this case, the total impact is negative for some counties and positive for others (Table 9 in Appendix 3). The greatest gains are in counties with a physical presence of the new public automobile insurance corporation.

The impact on the province's GDP would be positive, increasing by over \$37 million. Federal government revenues from New Brunswick would increase by over \$6.7 million while provincial government revenues would increase by \$3.5 million.

Other Economic Issues

We have presented the overall economic impact of the proposed modifications to the automobile insurance regime in New Brunswick. These are not the only economic impacts, although the other costs are extremely difficult to quantify. Two of these are increased stability for insured drivers and the impact of the loss of jobs and displacement of workers.

Increased Stability for Insured Drivers

A new system offering both stability and predictability to insured drivers would have a positive economic impact. Facing risk and uncertainty, economic agents tend to be more cautious and restrict their exposures. Reducing this risk and uncertainty should translate into increased economic activity, both as a result of modified behaviour of consumers and of businesses.

Loss of Jobs / Displacement of Workers

Even if the model predicts a net increase in employment, one should not underestimate the impact on the displaced workers. As we have seen, we estimate a loss of about 1,134 positions. Change is very often difficult, especially when it is imposed on individuals. There are no guarantees that these individuals will easily find employment especially when one considers that the proposed system would be more centralized than the existing system. This means that individuals will surely have to move if they intend to continue working in the sector, an option that may not be viable for some.

Summary of Findings

Start-Up Year:

- Net increase of \$109 million of gross output in New Brunswick
- Net increase of employment of 1,024 person years
- Net increase of \$46 million in New Brunswick's gross domestic product (GDP)
- Net increase of \$6 million in federal government revenues resulting from increased economic activity in New Brunswick
- Net increase of \$4.4 million in provincial government revenues

Regular Operation Year:

- Net increase of \$144 million of gross output in New Brunswick
- Reduction of 1,134 private insurance sector jobs
- Creation of 800 jobs at the proposed public insurance corporation
- Net increase of employment of 275 person years (taking into account direct, indirect and induced impacts)
- Net increase of \$37 million to New Brunswick's gross domestic product (GDP)
- Net increase of \$6.7 million to federal government revenues resulting from increased economic activity in New Brunswick
- Net increase of \$3.5 million to provincial government revenues

Appendix 1: Input-output modeling

Analysis such as this can only be done with a proven economic model, in this case an input-output model. The principle of this model is essentially to follow the money trail “step by step”. For example, a firm purchases goods and services from local firms (the direct impact). These may as a result hire extra personnel, buy its own extra inputs, etc., which may also generate more purchases, etc. (the indirect and induced impacts). The input-output model takes into account all of the various relationships based on the inputs (purchases) and outputs (production) of businesses, households and governments. Our model has the added advantage of taking into account geography, yielding results on a county basis.

Appendix 2: The Assumptions

We used the financial information generated by Jon Schubert Consulting and Meyers Norris Penney LLP to estimate the economic impact. Following are further assumptions.

General Assumptions

- Headquarters (HQ): to be located in Moncton. This is the same assumption made in the Shift Central's study done for the Insurance Bureau of Canada
- Five Claims Centres (CC): Moncton, Saint John, Fredericton, Edmundston, Bathurst
- Call centre: located at headquarters in Moncton

Start-Up Year:

- Assume no impact on private sector insurance related activities during start-up year
- Employment Increases:
 - Employees: the number is going to gradually increase during the year to total 700 at the end of the start-up year. We assume an average of 300 positions for the year.
 - Salaries for employees: average of \$41,625 (excluding senior management)
- Recruitment Costs:
- Includes print media buys
 - Westmorland (70 per cent)
 - Gloucester (10 per cent)
 - York (10 per cent)
 - Saint John (10 per cent)
- System and Business Process Development Costs
 - Most expenditures out of province
 - Westmorland (1.27 per cent)
- Communication Costs:
 - Includes print media buys
 - 70 per cent in New Brunswick
 - Westmorland (40 per cent)
 - Gloucester (10 per cent)
 - York (10 per cent)
 - Saint John (10 per cent)
- Consulting Services
 - 30 per cent in New Brunswick
 - Westmorland (10 per cent)
 - York (10 per cent)
 - Saint John (10 per cent)

- Construction of Claim Centres
 - Westmorland (Moncton) (20 per cent)
 - Saint John (Saint John) (20 per cent)
 - York (Fredericton) (20 per cent)
 - Madawaska (Edmundston) (20 per cent)
 - Gloucester (Bathurst) (20 per cent)
- Construction of Headquarters
 - Westmorland (Moncton)
- Furniture and Equipment
 - \$5,000 per employees – total employees
 - Westmorland (Moncton HQ) (75 per cent)
 - Westmorland (Moncton CC) (5 per cent)
 - Saint John (Saint John CC) (5 per cent)
 - York (Fredericton CC) (5 per cent)
 - Madawaska (Edmundston CC) (5 per cent)
 - Gloucester (Bathurst CC) (5 per cent)
- Training Costs
 - Westmorland (Moncton HQ) (16.7)per cent
 - Westmorland (Moncton CC) (16.7 per cent)
 - Saint John (Saint John CC) (16.7 per cent)
 - York (Fredericton CC) (16.7 per cent)
 - Madawaska (Edmundston CC) (16.7 per cent)
 - Gloucester (Bathurst CC) (16.7 per cent)

Regular Operational Year

- Employment Increases:
 - Eight senior management positions (HQ – Moncton)
 - Employees:
 - Westmorland (Moncton HQ) (600, including the eight senior management positions)
 - Westmorland (Moncton CC) (40)
 - Saint John (Saint John CC) (40)
 - York (Fredericton CC) (40)
 - Madawaska (Edmundston CC) (40)
 - Gloucester (Bathurst CC) (40)
 - Salaries for employees: average of \$41,625 (excluding senior management)
- Operating Costs
 - 25 per cent of salaries for various centre:
 - Westmorland (Moncton HQ) (75 per cent)
 - Westmorland (Moncton CC) (5 per cent)
 - Saint John (Saint John CC) (5 per cent)
 - York (Fredericton CC) (5 per cent)
 - Madawaska (Edmundston CC) (5 per cent)
 - Gloucester (Bathurst CC) (5 per cent)

- Brokers:
 - Information received from industry identifies 939 jobs, by community
 - From Canadian Underwriter, we assume 60 per cent of business is automobile related
 - We assume 44 per cent reduction of automobile-related work, reflected by reduction in commissions from 12.5 per cent to 7 per cent
 - Hence, we assume a reduction of brokers' activity of 26.4 per cent (i.e. 44 per cent of 60 per cent)
 - Assume salaries on average of \$41,625.
 - Result:
 - Reduction of employment of 26.4 per cent (247.9 jobs), in all communities where brokers are present
 - Reduction of operating expenses of 26.4 per cent (Operating expenses buying estimated at 25 per cent of salaries)
- Adjusters:
 - Assumption is that all adjuster-related activity is incorporated in the new public automobile insurance corporation.
 - From the Insurance Branch of the Department of Justice, we estimate that we have 291 licensed resident adjusters in the province.
 - We further assume an average of 0.5 support staff for every adjuster, for a total of 145.5 support staff
 - Based on the companies names listed on the Department of Justice list, we used www.yellowpages.ca to identify communities where the offices are located. In the case of multi-locations, we distributed the numbers evenly between offices, with the consequence of most probably overestimating the impact in relatively more rural New Brunswick and underestimating the impact in relatively more urban New Brunswick.
 - We again assume an average salary of \$41,625.
 - We assume operating expenses of 25 per cent of salaries.
 - We finally assume that under the new system, all these private sector adjuster-related activities will cease.
- Agents:
 - We make the assumption that agents may continue their operations under the same rules and regulations as brokers
 - From the Insurance Branch of the Department of Justice, we estimate that we have 330 licenced agents in the province.
 - We further assume an average of 0.5 support staff for every agent, for a total of 165 support staff

- Based on the companies in the Department of Justice list, we used www.yellowpages.ca to identify communities where the offices are located. In the case of multi-locations, we distributed the numbers evenly between offices, with the consequence of most probably overestimating the impact in relatively more rural New Brunswick, and underestimating the impact in relatively more urban New Brunswick.
- We again assume an average salary of \$41,625.
- We assume operating expenses of 25 per cent of salaries.
- From Canadian Underwriter, we assume 60 per cent of business is automobile related
- We assume 44 per cent reduction of automobile-related work, reflected by reduction in commissions from 12.5 per cent to 7 per cent
- Hence, we assume a reduction of agents' activity of 26.4 per cent (i.e. 44 per cent of 60 per cent)
- Result:
 - Reduction of employment of 26.4 per cent in all communities where agents are present
 - Reduction of operating expenses of 26.4 per cent (Operating expenses buying estimated at 25 per cent of salaries)

- Other Insurance Industry:

- We did not have access to precise data, but from Shift Central's study on behalf of the Insurance Bureau of Canada, we know that there are a total of 2,400 jobs in the province, in various sectors of the non-life insurance sector. We thus make the following calculations:

2,400	Shift Central total number
939	Brokers
495	Estimate of agents and support staff
436.5	Estimate of adjusters and support staff.

We conclude that there are an extra 529.5 jobs in the province.

- From Canadian Underwriter, we assume 60 per cent of business is automobile related
- We then assume that 60 per cent of these 529.5 other jobs will be lost, i.e. a reduction of 317.7 jobs, which we again estimate at an average salary of \$41,625.

We make the assumption that these jobs are concentrated in Moncton (2/3) and Saint John (1/3).

- We further assume a reduction of operating expenses of 25 per cent of lost salaries.

- Premium Savings:
 - We assume total annual savings of \$103,587,000.
This is based on an average reduction of premiums from \$1,212 to \$993.
 - We base our distribution of the savings on the data reported by Service New Brunswick, by office, for vehicle registration.
This overestimates the impact in larger urban centres and underestimates the impact in rural regions. For example, Albert County residents registering a vehicle at the Moncton (Westmorland) Service New Brunswick office.
- Health Services Levy:
 - We assume no changes for government revenues
- Corporate Income Tax:
 - Based on the report titled “Study of cost-benefit and legal implications of an Atlantic public automobile insurance system: Effects on Provincial Finances” published August 28, 2003 by the Atlantic Canada Insurance Harmonization Task Force, we assume that the potential lost corporate income tax for the provincial government is \$700,000 annually. We will make the additional assumption that the result will be the same for the federal government.
- Premium tax:
 - The reduction in premiums (\$103,587,000) will translate into a reduction of premium tax revenues (3 per cent) totalling \$3,107,610.

Appendix 3: Detailed Results

Table 3 : Start-up Year – Variation of Gross Output (\$)			
	Direct Impact	Indirect and Induced Impacts	Total Impact
Albert	\$1,660	\$293,895	\$295,555
Carleton	\$1,416	\$497,458	\$498,874
Charlotte	\$817	\$541,875	\$542,692
Gloucester	\$3,457,469	\$742,895	\$4,200,364
Kent	\$1,283	\$472,740	\$474,023
Kings	\$5,614	\$461,783	\$467,397
Madawaska	\$3,910,406	\$374,824	\$4,285,230
Northumberland	\$3,236	\$514,288	\$517,524
Queens	\$87	\$224,952	\$225,039
Restigouche	\$3,153	\$332,472	\$335,625
Saint John	\$4,601,159	\$2,837,543	\$7,444,702
Sunbury	\$1,329	\$212,637	\$213,967
Victoria	\$1,505	\$387,133	\$388,638
Westmorland	\$58,800,239	\$23,813,480	\$82,613,719
York	\$4,597,778	\$2,236,828	\$6,834,606
Total New Brunswick	\$75,393,152	\$33,944,802	\$109,337,954

Table 4 : Start-up Year – Variation of Employment (Person-years)			
	Direct Impact	Indirect and Induced Impacts	Total Impact
Albert	0.0	1.3	1.3
Carleton	0.0	2.1	2.1
Charlotte	0.0	2.3	2.3
Gloucester	25.5	8.3	33.8
Kent	0.0	2.0	2.0
Kings	0.1	1.9	2.0
Madawaska	24.0	4.0	28.0
Northumberland	0.0	2.3	2.3
Queens	0.0	0.9	0.9
Restigouche	0.0	1.4	1.4
Saint John	79.3	32.0	111.3
Sunbury	0.0	0.9	0.9
Victoria	0.0	1.6	1.6
Westmorland	614.2	115.6	729.8
York	78.8	25.6	104.3
Total New Brunswick	821.9	202.0	1023.7

Table 5 : Start-up Year – Variation of Gross Domestic Product

	Direct Impact	Indirect and Induced Impacts	Total Impact
Albert	\$861	\$80,005	\$80,866
Carleton	\$879	\$153,738	\$154,617
Charlotte	\$517	\$164,795	\$165,312
Gloucester	\$1,040,930	\$235,034	\$1,275,964
Kent	\$665	\$143,348	\$144,013
Kings	\$3,371	\$134,569	\$137,940
Madawaska	\$900,000	\$115,033	\$1,015,033
Northumberland	\$1,917	\$158,262	\$160,179
Queens	\$53	\$64,588	\$64,640
Restigouche	\$1,797	\$94,611	\$96,408
Saint John	\$4,009,021	\$965,025	\$4,974,046
Sunbury	\$883	\$60,362	\$61,245
Victoria	\$995	\$111,479	\$112,474
Westmorland	\$25,502,573	\$7,384,412	\$32,886,985
York	\$3,980,217	\$840,367	\$4,820,584
Total New Brunswick	\$35,444,680	\$10,705,626	\$46,150,306

Table 6 : Start-up Year – Variation of Federal Government Revenues

Total New Brunswick	\$6,064,549
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Table 7 : Start-up Year – Variation of Provincial Government Revenues

Total New Brunswick	\$4,450,772
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Table 8 : Regular Operation Year – Variation of Gross Output

	Direct Impact	Indirect and Induced Impacts	Total Impact
Albert	-\$986,810	\$1,025,273	\$38,464
Carleton	-\$1,699,257	\$6,586,942	\$4,887,686
Charlotte	-\$1,269,879	\$5,534,139	\$4,264,260
Gloucester	-\$436,456	\$19,103,012	\$18,666,556
Kent	\$689,266	\$4,998,082	\$4,308,817
Kings	\$1,998,694	\$6,035,529	\$4,036,835
Madawaska	-\$784,387	\$6,443,555	\$5,659,168
Northumberland	-\$2,139,157	\$8,401,206	\$6,262,049
Queens	-\$43,781	\$1,957,848	\$1,914,067
Restigouche	-\$1,415,186	\$7,139,895	\$5,724,709
Saint John	-\$11,436,079	\$18,170,222	\$6,734,143
Sunbury	-\$397,963	\$3,139,556	\$2,741,592
Victoria	\$255,732	\$4,443,260	\$4,187,529
Westmorland	\$11,268,780	\$44,682,731	\$55,951,512
York	\$1,389,380	\$20,193,722	\$18,804,342
Total New Brunswick	-\$13,673,245	\$157,854,974	\$144,181,729

Table 9 : Regular Operation Year – Variation of Employment (Person-years)

	Direct Impact	Indirect and Induced Impacts	Total Impact
Albert	-18.4	4.2	-14.2
Carleton	-30.8	23.2	-7.6
Charlotte	-23.8	19.3	-4.5
Gloucester	-8.0	69.9	61.8
Kent	-12.8	17.9	5.1
Kings	-37.2	21.7	-15.5
Madawaska	6.3	29.4	35.6
Northumberland	-40.5	30.1	-10.4
Queens	-0.8	7.4	6.6
Restigouche	-26.9	25.9	-1.0
Saint John	-234.9	75.3	-159.6
Sunbury	-7.5	11.5	4.0
Victoria	-24.5	10.6	-13.9
Westmorland	179.7	180.2	359.9
York	-53.0	81.9	28.8
Total New Brunswick	-333.2	608.4	275.2

Table 10 : Regular Operation Year – Variation of Gross Domestic Product			
	Direct Impact	Indirect and Induced Impacts	Total Impact
Albert	-\$740,108	\$238,897	-\$501,212
Carleton	-\$1,275,446	\$1,901,733	\$626,288
Charlotte	-\$953,184	\$1,559,011	\$605,826
Gloucester	-\$207,615	\$5,604,901	\$5,397,286
Kent	-\$516,949	\$1,423,734	\$906,785
Kings	-\$1,499,280	\$1,697,646	\$198,365
Madawaska	-\$338,691	\$2,075,222	\$1,736,531
Northumberland	-\$1,604,799	\$2,371,890	\$767,091
Queens	-\$32,851	\$541,659	\$508,809
Restigouche	-\$1,061,729	\$2,050,281	\$988,552
Saint John	-\$8,764,206	\$5,286,827	-\$3,477,379
Sunbury	-\$298,855	\$928,122	\$629,267
Victoria	-\$319,211	\$1,062,664	\$743,452
Westmorland	\$10,065,796	\$12,937,700	\$23,003,496
York	-\$922,467	\$6,196,189	\$5,273,721
Total New Brunswick	-\$8,469,596	\$45,876,474	\$37,406,878

Table 11: Regular Operation Year – Variation of Federal Government Revenues	
New Brunswick	\$7,468,763
Decrease in corporate tax	\$700,000
Total for New Brunswick	\$6,768,763

Table 12 : Regular Operation Year – Variation of Provincial Government Revenues	
New Brunswick	\$7,325,239
Decrease in corporate tax	\$700,000
Decrease in premium tax	\$3,110,000
Total for New Brunswick	\$3,515,239

Appendix O: Registered Vehicles by Vehicle Type in New Brunswick, 2003

Number of Active Vehicles as of March 31, 2003			
Type of vehicle	Currently Registered	Expired less than 6 month	Total Active Vehicles
Passenger / Light Commercial	435,624	37,688	473,312
Commercial	24,056	6,953	31,009
All Terrain	37,289	20,343	57,632
Motorcycle	3,950	9,089	13,039
Total	<u>500,919</u>	<u>74,073</u>	<u>574,992</u>

The above table does not include trailers, mopeds, miscellaneous vehicles (e.g. payloaders), commercial (farm) tractors, etc.

Source: New Brunswick Department of Public Safety, 2003