A CRITIQUE OF THE NEW BRUNSWICK

SELF-SUFFICIENCY TASK FORCE REPORTS

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Abstract

This paper critiques the four-volume provincial economic development plan tabled by the New Brunswick's Self-Sufficiency Task Force. It tabled 91 separate recommendations ostensibly designed to promote provincial economic development over the next 20 years, with the goal of making the province self-sufficient.

While the Commission's goal of self-sufficiency is a good one (the Report wants the province weaned off of equalization payments by 2026), and while the Report seeks to emulate the "Frank McKenna" miracle of 1987-1996, the Report ends up advocating expensive, government-micromanaged programs that will prove costly to both businesses and taxpayers. The Report represents a break from the McKenna-led economic era. Consequently, the Task Force ends up supporting a tax-and-spend, interventionist government that could end up driving away, rather than attracting, needed business development.

The Self-Sufficiency Report is to be commended in its desire to increase New Brunswick's per-capita gross domestic product and to reduce its federal equalization payments to zero by 2026. I commend the Report for understanding that New Brunswick needs to have a strong export sector, and that the province needs to invest in public infrastructure to attract more business investment, to improve its schools and labour training, to reduce government red tape and government inefficiency, and to open up additional markets in Atlantic Canada and New England. The Self Sufficiency Task Force correctly identifies these key building blocks as important for economic development, and that these blocks need to be strengthened. That being said, I feel that the 2026 population target of 850,000 is both unattainable and unnecessary.

The Task Force misunderstands the reasons as to why the "McKenna Miracle" succeeded. The Frank McKenna government, first, used cost-effective means to attract call centres to New Brunswick. I support the Report's desire to repeat this success, to set up a small action team to attract higher-end service exporting industries but I oppose large government expenditures to attract business investment because these recommendations require costly, bureaucratic meddling in business decisions. I also oppose raising taxes to business (as was done in the province's March budget). I do support reducing corporation tax rates.

The Self-Sufficiency Report correctly understands that public infrastructure development spurs economic growth, as the building of the four-lane New Brunswick Highway did during the McKenna and Lord years. While the McKenna government built the highway under privatized management, where tolls paid for management's revenues, the Task Force proposes a $1-billion Social Infrastructure Fund to be financed by a $500-million federal subsidy and by $500-million from a bond issue from Alcohol New Brunswick Liquor. I support the original McKenna approach whereby infrastructure investments are undertaken through privatized management and supported through user costs.

I commend the Self Sufficiency Task Force for understanding the role of education and training in economic development. The Report rightly recommends more accountability in the education system, Prior Learning Assessment Recognition, higher literacy rates and renegotiation of the federal Labour Market Development Act to promote on-the-job training. But I deplore the Task Force's failure to criticize the low standards of New Brunswick's public education system and the continued low performance of its students which will impact the availability of quality human resources required for many Self-Sufficiency initiatives proposed in the Report. I support converting the government-run community college system into a group of independent not-for-profit institutions.

I oppose some of the Report's various labour market proposals. The Task Force advocates raising the minimum wage to the national average; employment equity in addition to the current wage equity programmes; additional public day care and raising government salaries to the national average. All of these would raise costs to business and government. I do support the expansion of the Provincial Nominee Program, speedy recognition of immigrant credentials, the abolition of mandatory retirement, and provincial tax incentives to support private day care (the latter being my proposal).

I question the Self-Sufficiency Report's support for increased provincial government intervention in New Brunswick's key export sectors. I do not support increased government administration of forestry practices on Crown lands. Instead I support a phased-in privatization of Crown land, with the proceeds of sales to be used for financing public and tourism infrastructure funds. I oppose the Report's interventionist approach to assisting aquaculture and seafood processing. Instead, I support expanding property rights of the sea for aquaculture farmers, to put them on the same footing as that of land farmers. I do support provincial programs for aquaculture crop insurance and aquaculture research.

As for energy and environment issues, I support developing a strategic plan for NB Power, and true-cost pricing for electricity users. However, I oppose using additional NB Power investment as a provincial economic development tool. And while I support government efforts to support alternative energies, I view the Report's many recommendations to support the Kyoto accord and province's emerging energy economy as both contradictory and excessive.

I have mixed feelings as to the Report's recommendations to streamline government. I favour a privatised version of their "e-health" proposal; efficiencies and incentives in government to improve inter-regional trade and cooperation with other Atlantic provinces and the northern New England tier. I oppose, however, any concerted move to amalgamate local governments for to do so would bring more wasteful local government spending and even higher property tax rates, two negatives already burdening the province. I also oppose moves to decentralize the provincial bureaucracy.

To summarize, I see the creation of the Self Sufficiency Task Force, and their many proposals, as a desire for the provincial government to emulate the earlier "Frank McKenna

Miracle”. The earlier “miracle” took place through advertising the province as a low-cost environment for business and through privatised public infrastructure investment. But the Self Sufficiency Report takes a polar opposite approach. It seeks to micromanage economic growth through excessive and costly bureaucracy – all of which would raise, and not lower, costs to businesses. Finally, the Report calls for expensive, gold-plated investment projects – projects that would assuredly raise debt and taxes for New Brunswickers. The Report, in short, calls for tax-and-spend government – a sure recipe for slow economic development.

I. Introduction

This commentary critiques New Brunswick's Self-Sufficiency Task Force's three-part economic development report, entitled *The New Brunswick Reality Report,* and its final report *The Road to Self-Sufficiency: A Common Cause.* Co-authored by Gilles LePage (former CEO of the Mouvement des Caisses Populaires Acadiennes) and Francis McGuire (former deputy minister of the province's Department of Economic Development and Tourism), the three-part report, tabled on three different dates from January 2007 to March 2007, served as discussion papers leading up to and during public consultations. The Task Force's Final Report was tabled on May 7, 2007. The Government of New Brunswick tabled a final plan, based on the four Self-Sufficiency documents, on November 2007 (*Our Action Plan: To Be Self Sufficient in New Brunswick).* My paper critiques the original four background documents, authored by LePage and McGuire.

Two economic development targets are set. First, LePage-McGuire want "self-sufficiency", understood, but not defined, as the weaning of the province off of equalization payments by 2026. To do this, the report targets the province's per-capita current-dollar GDP, (currently 75 percent of that of Canada), such that New Brunswick's per-capita GDP would equal Canada's by the target date. Second, LePage-McGuire focus their attention on the recent population decline in the province caused by out-migration and a declining birth rate. They interpret a declining population as worrisome and want provincial population increased. They set a target population of 850,000 by 2026.

LePage-McGuire envision that for the province to be self-sufficient and to experience good population growth it must stimulate exports. To do this, the province must foster higher productivity from four areas: public overhead capital (government investment), private business capital; human capital (increasing the skills of students and older workers); and technology. LePage-McGuire discuss and give some proposals in each of these areas. Furthermore, they then focus on New Brunswick's economic development on an industry-by-industry basis, discussing the main traditional industries (forestry, fishing, agriculture) and new, increasingly-important industries (petroleum and natural gas refining, electric power exports, tourism, information-processing).

My commentary follows the order of the LePage-McGuire report. My principal findings are that, while targeting New Brunswick's per-capita current-dollar GDP is worthwhile, the target of attaining a population of 850,000 citizens is both conceptually erroneous and unattainable. I endorse the Report's contention that exports stimulate economic growth (the "export-base model" is valid). I also endorse the Report's view that strong increases in public investment, business investment, human capital investment, and technological growth do in fact stimulate exports and economic growth. However, in many areas I disagree with the Report's proposals to achieve success in these areas. I also disagree with the authors in a number of areas with respect to improving export potential in New Brunswick's key industrial sectors.

My principal contention is that the New Brunswick government ought to promote economic development using its strengths in the public sphere, while allowing markets – through best choices of businesses, workers, students and consumers – to operate for the good of the province. I feel that much of the Self-Sufficiency Report, while understanding the role of provincial government in the public sphere, promotes government interference in purely private business matters. I cite a number of examples of this. The provincial government can effectively promote economic development through cost-effective investments, particularly in public infrastructure and human capital, while allowing the commercial sector to operate in a reduced-tax environment.

Section 2 of my paper report discusses LePage-McGuire's 20-year targets. Section 3 outlines the role of government and business investment in New Brunswick's economic development. Section 4 discusses both the human capital and technology components of the report. Section 5 critiques the Report's policies towards the province's major industries. Section 6 discusses a number of other economic development proposals, and section 7 concludes.

II. LePage-McGuire Targets. What is Useful and What is Feasible?

The Self-Sufficiency reports (2007a, 2007b, 2007c, 2007d)[1] do not explicitly define self-sufficiency. However, LePage-McGuire explain that through strong economic growth a province's tax base will grow and as a result the province will depend more on its own tax base and less on federal equalization payments:

> *...the government of New Brunswick will have greater flexibility to fund public services. This would then reduce the province's dependence on equalization. This is the route to Self-Sufficiency that New Brunswick must follow (LePage and McGuire, 2007a, p. 5).*

LePage-McGuire stress two targets that must be achieved by 2026 for self-sufficiency to be realized: (1) equality of per-capita current-dollar GDP between New Brunswick and Canada and (2) the province increasing its population to 850,000. I discuss each target in turn.

1. Equality of Per-Capita Current-Dollar GDP

I agree with LePage-McGuire's contention that equality of per-capita GDP, between New Brunswick and Canada, ought to eliminate the province's reliance on federal equalization payments. Current-dollar GDP includes direct, indirect and property taxes paid by households and businesses to government. If households and businesses earn relatively less in New Brunswick than the national average, they then pay relatively less in provincial income, sales, and property taxes than the ten-province average. Consequently, given that the New Brunswick government receives less in own-source revenue it is entitled to equalization payments. Unequal per-capita tax yields across government are explained by unequal per-capita GDP production across provinces. Therefore, one should use current-dollar (not constant-dollar) as the appropriate target since provincial taxes (and the equalization formula itself) are denominated in current-dollar terms. One could quibble that since only half of oil and natural gas tax yields are equalized in the current formula New Brunswick could reach a zero equalization target with a per-person GDP less than the national average. Nevertheless, per-person nominal GDP is a fairly clear and useful indicator[2].

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[1] LePage-McGuire have written four reports. The first three were available during the public consultations while the fourth is the Task Force's final report including recommendations. In this paper we will refer to these four reports as Volume 1, Volume 2, Volume 3 and Volume 4 respectively. Also, "Report" refers to Volume 4. See list of references for complete references to these reports.

[2] Some may question why other targets, such as New Brunswick's unemployment rate, or "job growth", are not used. First, as Tables 2 and 3 below show, the per-capita "wages-and-salaries" ratio includes both in the "unemployment rate" column (note that employment growth implies lower unemployment, labour force held constant). So per-capita wages-and-salaries ratio, and thus per-capita nominal GDP ratio, includes these other indicators. Second, the per-capita nominal GDP ratio is clear and simple to understand – and having this one target simplifies a complex story.

More fundamentally, I agree with the authors' contention that an equalization-receiving province *ought* to strive to wean itself off this form of federal largesse. First of all, a province with proportionately less of its total revenues in the form of equalization payments is more self-reliant. The province, as the authors contend, "will have a greater flexibility to fund public services" (LePage and McGuire, 2007a, p. 5). Secondly, and the authors miss this important point, increasing New Brunswick's economic output, vis-à-vis Canada's, means higher after-tax incomes for New Brunswick residents. The provincial government should undertake sound economic development policy to improve resident's private incomes as well as their access to government services.

The Self-Sufficiency Report states that in 2005 "New Brunswick's per capita GDP is 76 per cent of the Canadian average" (LePage and McGuire, 2007a, p. 5)[3]. Unfortunately, the authors do not show how the ratio of New Brunswick's per-person GDP to Canada's has changed over time. This I do in Table 1. The table splits the last 40 years into four decades, from 1967-1986 to 1997-2006. The table also splits the per-capita GDP ratio into "wages and salaries" and "non-wages and salaries GDP" (corporation profits, small business income, capital consumption allowances, indirect taxes, etc.).

As seen in the right-hand column, the ratio of per-capita GDP, New Brunswick to Canada has risen over time, from 64.7 percent in the 1967-1976 decade to 76 percent in 1997-2006. Note that this ratio jumped sharply in the 1987-1996 decade (covering the McKenna years) over the previous decade. My finding provides cautious support for what has been termed the "McKenna miracle" – a term used to describe the economic successes of the Frank McKenna government, in office from 1987 to 1996[4]. For the Camille Thériault-Bernard Lord years (1997-2006), the New Brunswick-Canada per-capita GDP ratio grew only slightly (0.1 percentage point) to a 76 percent average for that decade.

The ratios for "wages and salaries" and "total non-wage GDP" show a similar pattern. During the McKenna years (1987-1996) the non-wage ratio grew more quickly than the wage ratio. During the Thériault-Lord years the wages-and-salaries ratio grew modestly, whereas the non-wage GDP ratio fell slightly.

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[3] The authors go on to state that personal income per capita is 85 percent of that for Canada. Per capita personal income is not a good target of provincial economic development because personal income includes personal transfers such as unemployment benefits and welfare benefits (unproductive activities) and excludes non-household earned income (e.g. corporation profits, capital consumption allowances). Corporate taxes, for example, are included in the equalization formula used to calculate equalization payments, which the authors want to wean New Brunswick from.

The wages-and-salaries ratio in Table 1 can be further analysed as to sources of the wages disparity using a decomposition technique used in the regional economics literature[5]. The wages and salaries disparity column in Table 1 can be further decomposed into disparity ratios for the wage rate, the unemployment rate, the labour force participation rate, and the adult population rate. In simple terms, per-capita wages and salaries in a slow-growth province like New Brunswick are lower than Canada's if New Brunswick has lower wage rates, higher unemployment rates, lower labour force participation rates, and has more children (those aged 14 or lower) than that for Canada as a whole. Table 2 shows these four ratios in percent terms for New Brunswick relative to Canada. Table 3 then shows the percentage of the total wages-and-salaries gap (the first column in Table 1) that is explained by the gaps in each of the four components. For example, for the 1997-2006 decade, the lower wage rate accounts for 66.1 percent of the total wages-and-salaries gap, New Brunswick to Canada, and so forth.

Table 2 shows that wage rates, on average, have remained consistently lower than that for Canada as a whole, remaining below 90 percent than that for Canada. Indeed, in the 1997-2006 decade wage rates relative to Canada have fallen. Table 3 shows that New Brunswick's relatively low wage rates explain an increasingly higher percentage of the total wages-and-salaries gap (about two-thirds during the 1997-2006 decade). This evidence lends some credibility to the LePage-McGuire view that wage rates are low, and inhibits New Brunswick's standard of living (Volume 1, p. 8). Moreover, my results suggest that low wages can be seen in a different way, contributing to an increasing share, over time, of the total per-capita GDP gap, and the province's reliance on equalization payments.

As Table 3 shows, the province's higher unemployment rate also contributes to the wages-and-salaries gap, but not nearly so much (13.7 percent during 1997-2006). The labour force participation rate gap – measuring the difference between the ratios of people in the labour force to populations over 15 years old – has been traditionally important, but has become less so by 1997-2006 (26.3 percent in this last decade). The "adult population" rate – measuring the ratio of people aged over 15 to total population – actually works in New Brunswick's favour[6]. The province has aged more rapidly than that of Canada as a whole and since older adults tend to be in the labour force this increases wages and salaries per capita in the province relative to Canada hence the negative percent numbers in the right-hand column of Table 3.

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[4] See Savoie (2001, Chapter 6), Murrell (1999). Both authors provide statistics showing New Brunswick's economic improvement during the McKenna years.

[5] See Anderson (1988, Chapter 3) for technical details on the wages and salaries decomposition technique. The four columns in Table 2 of this paper, when converted into true ratios and multiplied, equal the "wages-and-salaries" ratio in Table 1. Analogously, the percentages across the four columns in table 3 sum to 100.

[6] One referee pointed out that the "adult population" works in New Brunwick's favour, but only up to a point. As the population continues to age, the province's labour-force participation rate will fall, and an aging population no

To summarize, the New Brunswick economy during the McKenna years did grow more quickly than that of Canada. But the per-capita GDP convergence – New Brunswick to Canada – levelled off during the 1997-2006 decade. The relatively lower wage rates explain an increasingly large share of the wages-and-salaries gap.

However, I stress that "the McKenna miracle" could be due to factors other than provincial economic policy undertaken during that time. During the McKenna decade, the province benefited from a low Canadian dollar and low energy prices, which kept natural resource industries such as forestry strong. As stated above, the good McKenna performance was accompanied by a higher debt-to-GDP ratio – not a positive outcome. Correspondingly during the Bernard Lord years the province suffered from a high Canadian dollar and skyrocketing energy prices which adversely effected forestry exports and tourism. These external factors continue to this day. There is a strong debate as to how much provincial government policy has affected the ratios shown in Tables 1, 2 and 3.

Can provincial economic policy achieve per-capita GDP equality by 2026? I doubt that any provincial economic policy can[7]. Refer to Table 1, the right-hand column, and consider the historic rise in the per-capita GDP ratio. Now, consider the following two back-of-the envelope calculations:

1. Assume the New Brunswick economy converges at the average rate that has been achieved over the past three decades. The New Brunswick economy, relative to Canada, rose from 64.7 to 76 percent, or nearly 3.8 percentage points per decade. This means that in the next two decades the total per-capita GDP ratio will rise by slightly over 7.5 percentage points, and will average about 83 percent of Canada's per-person GDP. In such a case New Brunswick will still be receiving equalization payments, and will not be, in the LePage-McGuire sense, self-sufficient.

2. Assume that the New Brunswick economy experiences two decades of relative growth identical to the "McKenna miracle" growth of 1987-1996. During the McKenna years the per-capita GDP ratio rose by 9.2 percentage points (75.9 percent minus 66.7 percent). If this experience could be hypothetically replicated over the next two decades, the 2017-2026 average would be 94.4 percent. This is close to the national average, and with growth during the 2017-2026 decade the province could be close to parity by the end of 2026.

LePage-McGuire might have had calculation #2 in mind while writing their report which in many ways seeks to relive the McKenna era. The LePage-McGuire report favours increased government infrastructure spending as a pillar of economic growth, similar to how the

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longer helps the province to reduce its wages-and-salaries gap (and its per-capita GDP gap). Therefore, the positive outcomes as shown in the right-hand columns in Tables 2 and 3 should be treated with caution.

[7] For a given provincial government, the available set of policy tools is limited such that it is unlikely that a province could achieve parity short of an exogenous force (such as an oil find) taking place.

New Brunswick four-lane highway spurred provincial economic growth. But the province might not be able to finance government investment spending at a level similar to the McKenna era (see my discussion below). Similarly, call centre investment grew rapidly in the McKenna years, and such stellar growth in call centre jobs will not be replicated over the next 20 years. If anything, I predict that some of these jobs could be lost to countries such as India where operation costs are much lower than those in New Brunswick.

As the Shawn Graham government begins its term in office, major market-driven investment projects are either well underway (the Irving-Repsos LNG processing plant) or in the planning stages (a second Irving petroleum refinery, an additional nuclear reactor at Point Lepreau). Clearly the province could benefit from energy development in the Saint John area. Having said that, and even if the more economically-viable portions of the LePage-McGuire report are implemented, I do not see the same economic growth over the next 20 years as was achieved during the McKenna years. For one thing, the Canadian dollar is expected to remain high, and might achieve parity with the U.S. dollar in the medium-run, and energy costs will remain high.

I see, for the 2017-2026 decade, the per-capita New Brunswick GDP ratio at somewhere between 83 and 94.4 percent (i.e. the calculations in points 1 and 2 above). I see the ratio increasing – given good economic policy coupled with the Saint John energy boom – to around 86-88 percent i.e. the average of calculations #1 and #2 above. In other words, a useful goal would be to target the New Brunswick – Canada GDP ratio half-way between the normal convergence (calculation #1) and two decades of "McKenna-type" growth (calculation #2). This would be a commendable achievement, but not enough to ensure New Brunswick's independence from equalization payments. Based on this analysis, the full-fledged self-sufficiency goal as stated by LePage-McGuire, while ambitious and commendable, is unattainable. But this is not to say that any provincial government ought not to seek lower equalization payments as a realistic target. Indeed, given the free-market reforms in Ireland during the latter 1990's that country's economy converged to the OECD economy far more rapidly than my forecast scenario for New Brunswick.

2. The 2026 Population Target of 850,000

LePage-McGuire stress strong population growth as a prerequisite for self-sufficiency (Volume 4, p. 22). Their Report calls for strong productivity and public infrastructure growth to raise incomes. They posit this will attract both international and inter provincial migrants and ensure that population growth is well underway by 2015. Such growth, they suggest, should allow the province to hit the population target of 850,000 by 2026.

The thinking underlying the target population of 850,000 is misguided for two reasons. First, as explained above, increasing the per-capita GDP ratio, while a useful target, does not explicitly depend on strong population growth per-se. In fact, the Self-Sufficiency report makes a rather brazen logical error in discussing nominal GDP growth. I quote the report in full:

> *Consider this: between 1985 and 2005, the Canadian per-capita GDP increased by 129.5 per cent. If the Canadian economy continues to grow at that pace for the next 20 years, New Brunswick will need to more than triple its per capita GDP growth during that period in order to achieve parity. This would mean nominal average annual growth of 5.7 percent. That's a full one percent annual increase every year for the next 20 years. That's a full one percent higher than the average annual rate experienced over the past 20 years.*
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> *Because of a forecasted decline in population, nominal GDP will have to increase even faster at 6.2 per cent annually for the next 20 years, a significant increase over the 4.9 percent annual average New Brunswick maintained during the previous two decades.* (Volume 1, p. 6).

Yet the authors have their arithmetic backwards. If New Brunswick's population is forecast to decline over the next 20 years, on an arithmetical basis nominal GDP would have to increase by *less*, not more, than the 6.2 percent rate that would be the case with a stable population. In fact, with the authors' rather strong goal of having 850,000 New Brunswickers by 2026, the province would have to post much larger annual GDP increased to achieve parity, in per-capita GDP, with the national average. There are valid reasons for a province to want to have increased population (avoiding labour shortages, security of a future tax base) but these reasons are not fully articulated in the Report.

As noted above, during the McKenna "miracle" years of 1987-1996, the New Brunswick/Canada per-capita GDP ratio rose by 9.4 percentage points, a commendable record. Meanwhile, the province's population grew by only 24,600 individuals. Yet LePage-McGuire want the population to grow by 100,000 over two decades. Remember that economic growth during the McKenna years was not driven by population growth; out-migration took place and population increases occurred through a positive net natural increase. Economic growth during the McKenna years took place from a rising labour force participation rate, a lower unemployment rate, a rising "adult population" rate and higher non-wage GDP incomes (see Tables 1 and 2).

Second, available data suggest that the 2026 population target of 850,000 is unachievable. Table 4 presents Statistics Canada's population forecasts for 2026. The most optimistic projections for New Brunswick peg the population at around 790,000, given "high economic growth" and "high immigration rates". Yet the Self-Sufficiency report targets the province's population at 850,000. Given that Statistics Canada forecasts that Canada's population will be at about 37.88 million in 2026, projections no. 2 to 5 in Table 4 are the most likely. Based on the Statistics Canada data the New Brunswick population should be in the range of 748 000 to 788 000, a far cry from the 850 000 targeted by LePage-McGuire.

LePage-McGuire target New Brunswick's population at about 2.24 percent of national population by 2026. Yet in 2006 New Brunswick's population was 2.28 percent and declining. Therefore the Self-Sufficiency Report targets New Brunswick to have approximately the same population share 20 years from now as exists today. One could argue that the LePage-McGuire population target calls for a cessation of the NB/Canada population decline. But targeting for the ratio to level off is unrealistic. The entire post-Confederation history of New Brunswick (and Atlantic Canada) is that of a declining population share with respect to the rest of Canada. With the prospects of a natural population decrease where deaths will exceed births, the 850,000 population target in 2026 is clearly unachievable. Expecting immigration to account for the "missing" 60 000 – 100 000 people is also unrealistic. It would have been better for the Report to call for modest programs (increasing birth rate, selected immigration programs) to halt the population decline.

III. Government and Business Investment in New Brunswick's Economic Growth

In my view, the LePage-McGuire reports have a fundamentally sound understanding of how a provincial economy develops. It is their policy recommendations that are subject to debate (see below). The authors stress the basic export-theory of regional economic growth (Volume 2, p. 4), the theory of successful growth most accepted by economists. To be successful, a province (or region) must export natural resources, manufactured goods, and services internationally and to other parts of Canada. Revenues from exports are then recycled in the province to create additional jobs through consumer spending and other factors (Anderson, 1988, Chapter 1).

LePage-McGuire emphasize that New Brunswick exports must successfully compete against those of other nations and provinces. To compete successfully the province's various export industries must be productive. That requires increased business investment and government (public infrastructure) investment[8]. It also requires our export industries to adopt the latest production technologies.

In this section, I discuss New Brunswick's record as to public infrastructure and business investment, and the policies LePage-McGuire advance to increase such investment. I discuss each investment type in turn.

1. Public Infrastructure Investment

LePage-McGuire stress the need to improve what they call "strategic infrastructure": roads, air, sea, rail access, power transmission; telecommunications; wireless communication, and tourism (LePage and McGuire, 2007b, p. 7). The report hearkens back to the McKenna era with the building of the four-lane New Brunswick highway between Moncton and Long's Creek. That mega-project, like the Confederation Bridge project did for Prince Edward Island and New Brunswick, is seen as having increased New Brunswick's productivity.

Looking at investment statistics from 1967 onwards, per-capita government investment in New Brunswick surprisingly surpassed that of Canada in each of the four decades (see the first column Table 5). During the McKenna decade, 1987-1996, per-capita public investment was 10 percent higher than that for the nation as a whole but roughly the same as in the previous decade. In the most recent 1997-2006 decade, public infrastructure investment declined relative to Canada, but was still higher than Canada on a per-person basis.

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[8] See LePage and McGuire 2007b, pp 7-8, and 2007c, pp 5-7. The Self-Sufficiency Task Force's view stressing the importance of investment-led growth is substantiated by many researchers. See McMahon (2000), Bougrine (1992), and Sitwell and Seifried (1984).

To finance the New Brunswick Highway, the McKenna government set up a public corporation and charged tolls. The Lord government did away with tolls, and the public corporation, put the administration of the highway under the provincial Department of Transportation, and moved the debt financing over to the province's debt, thereby increasing the province's debt substantially.

LePage-McGuire propose additional improvements to New Brunswick's highway system, ports, tourism infrastructure, broadband access, and research and development infrastructure. They realize that any sharp increase in deficit-financed government investment would not be sustainable. Thus, they propose – through recommendations 80 and 81 – the creation of a $1-billion Infrastructure Investment Fund to be financed in part by the federal government ($500-million) with the other half coming from a long-term bond issue to private investors who would receive a financial return from the Alcool New Brunswick Liquor (Volume 3, pp. 18-19). These policy recommendations are puzzling. First, I suggest that any provincial investment be subject to strict cost-benefit analysis. The four-lane New Brunswick Highway might pass such a test (given easier travel, better access to markets), but do "investments to support the strengthening of world-class research and development clusters" (Volume 3, p. 19) pass the test?

Second, I question the efficacy of simply asking the federal government for a $500-million contribution (recommendation 80). Public infrastructure spending has traditionally been undertaken through federal conditional transfers (see Savoie, 1992, pp. 270-277)[9]. Traditionally the federal government has undertaken cost-shared agreements with *any* province willing to invest a certain share of an investment project. Asking the federal government to participate in an investment fund unique to New Brunswick smacks of special treatment since cost-sharing agreements already exist. Therefore, I recommend that the province simply integrate the normal, yearly cost-shared federal/provincial spending into the administration of the infrastructure spending, without asking the federal government for more money or any further special treatment.

Third, I also wonder about the efficacy of selling long-term bonds financed by Alcool NB Liquor profits. This approach simply shifts increased debt-interest spending to reduced liquor profit revenues with no net change yearly in deficit obligations. Why not privatise the crown agency and use the sale proceeds to set up the fund?

[9] Note the irony of striving for "self sufficiency" from federal equalization payments while at the same time asking

2. Business Investment

The Self-Sufficiency Task Force acknowledges that business capital investment in New Brunswick has been historically low (LePage and McGuire, 2007a, p. 9). Over the last four decades, per-capita private investment in the province has been below that of Canada as a whole (see the middle two columns of Table 5). During the 1977-1986 decade, business investment in land and buildings declined to only about 55 percent of Canada-wide investment, on a per-capita basis. During the Frank McKenna decade, per-person such construction spending only increased marginally, to slightly over 57 percent of Canada's figure. Interestingly, per-capita business investment in machinery and equipment was relatively stronger during the first two decades under analysis (1967-1976 and 1977-1986) when such spending was 89 and 85 percent of the national average. In the McKenna years, business machinery and equipment spending fell to about 74 percent of the Canada average. So, paradoxically, total business spending *fell*, and did not rise, during the McKenna miracle years.

Why this is so is difficult to pinpoint. Some of the many causal factors determining business investment include natural resource prices, the availability of skilled and unskilled labour, availability of cheap transportation, land prices, wage rates, and provincial business income and property taxes. Note that the McKenna government raised the general corporate income tax rate, from 15 to 17 percent in 1994 (Treff and Perry, 2002). Raising the corporate income tax rate reduces retained earnings and reduces the amount available for investment. I note with alarm that the Shawn Graham government raised the large-corporation tax rate by 1 percentage point and the small-business tax rate by 4.5 percentage points.

By comparison, the Bernard Lord government undertook a well-publicized policy to reduce business taxes. By 2006 it had reduced the general large corporation tax rate to 12 percent and the small business corporate tax rate was reduced from 7 percent during the last years of the McKenna era to 1.5 percent by 2006. From Table 5, per-person business non-residential construction rose to 66.5 percent of the Canadian average during 1997-2006, from 57.3 percent during 1987-1996. Table 5 also indicates that business machinery and equipment spending slipped slightly during the Bernard Lord years, to 72.5 percent of the national average from 74 percent during the previous decade. However, Figure 1 shows that the per-person business machinery and equipment investment, as a ratio to that of Canada, has exhibited a gradual rising trend from 1997 to 2005, suggesting that the lowered tax rate under the Lord government was having a positive effect.

The Self-Sufficiency Task Force's prioritization of having stronger business investment seems erratic. True, the Self-Sufficiency report does promote an accurate export-based provincial economic model. The report stresses, rightly, the importance of productivity improvement (Volume 1, pp. 8-10). The authors mentioned that "a low Canadian dollar and a prolonged labour surplus" helped to "limit capital investment in New Brunswick's businesses

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the federal government for $500-million for a special investment fund.

over the past 20 years" (Volume 1, p. 9)[10] – suggesting that the authors realize the importance of business capital investment in raising labour productivity. But in the principal section "The Issues" of the report's second volume the authors highlight three issues – "human resources", "education and training", and "strategic infrastructure" – as factors important for export development, neglecting the importance of private business investment (Volume 2, pp. 5-8).

In the third volume, the authors are back on track, emphasizing private capital investment – through attracting medium-to-large sized firms to the province (Volume 3, pp. 5-10). Here, the authors want the province to repeat the success it had in attracting call-centres to its jurisdiction during the McKenna era. Only this time LePage-McGuire seek to attract higher-end business service jobs (Volume 3, p. 6). However, the method to attracting such better paying jobs is for the province to negotiate "packages that are tailored on a case-by-case basis", whereby the benefits of business investment (additional taxes and jobs created) outweigh the costs (grants, provincial infrastructure support). LePage-McGuire suggest using the successful techniques of the McKenna era: higher support levels for the first firms of a sector moving in (and less support for follow-up firms); the critical role to be played by Business New Brunswick; quick-deal making by public servants. Given that the McKenna-styled "hard sell" approach worked, in attracting call-centres to New Brunswick, I endorse a renewal of this effort, provided that the negotiated packages follow basic cost-benefit principles. I therefore endorse recommendation 12 in the Task Force's Final Report (Volume 4, p. 20).

However, active deal-making by public servants can only go so far. In particular I disagree with the Self-Sufficiency Task Force's approach towards business taxes which states that "business tax rates below the Canadian average should be earned through investment behaviour, not given away" (Volume 3, p. 6). First, taxpayers allow governments to tax them; they do not "earn" tax relief. And second, the Graham government listened to the Self-Sufficiency Report's advice on this point. Indeed, the first Graham budget mandated strong corporate income tax (CIT) increases: a 1 percentage point hike in the general CIT rate, from 12 percent to 13 percent, and a 3.5 percentage point increase in the small business CIT rate, from 1.5 percent to 5 percent. Moreover, the government made the tax hikes even more onerous by making the increases retroactive to January 1, 2007. The Graham government justified these tax increases stating that they were needed to help balance the budget, given an impending deficit. Therefore, I oppose recommendation 14 which calls for "a review of business tax policy"

[10] The Self-Sufficiency report cryptically states that these two factors distorted the value of output to New Brunswick's business leaders, without explaining how this leads to low capital investment. A low Canadian dollar, vis-à-vis the U.S. dollar, increases demand for the province's exports, so business investment should rise on that account. But high unemployment lowers New Brunswick's wage rate. Cheaper labour means business is willing to substitute more labour for less capital, all other factors held constant. I suggest (from Table 5) that the long-run decline in business capital investment, relative to Canada, is due from the long-run decline in demand for New Brunswick's basic forestry staples. Heavy forestry investments (plus the first Irving oil refinery) did take place in the 1960's and 1970's. The higher Canadian dollar also makes the importation of capital equipment more expensive. As suggested in the text, the rise in business investment during the 1997-2006 decade is due partly to the decline in corporation tax rates.

(Volume 4, p. 20). I interpret this as a euphemism for raising taxes.

My data suggests that the strong corporate-income-tax reduction program under the previous government stimulated business investment (Table 5 and Figure 1). Under the Lord government business non-residential construction increased, relative to the national average, and on a year-by-year basis per-capita business machinery and equipment spending, relative to Canada, had been trending upwards.

The Self-Sufficiency Report is correct in saying that business investment is crucial to economic development but wrong in suggesting that low corporation tax rates are “given away” to the business sector. The current provincial government is certainly sending the wrong signal, as to future investment, by raising business taxes. To keep business investment increasing, as it has been doing over the past seven years, I suggest the provincial government revoke the business tax increases in the spring 2007 budget, in the forthcoming budget.

The Self-Sufficiency Report calls for more incentives-for-business money to be given without saying how much (Volume 4, pp. 18 and 20, recommendations 11 and 13). Yet, as I suggest above, there is much stronger evidence showing that business capital investment has increased under a regime of lower tax rates.

LePage-McGuire complain about the lack of access to capital for small businesses (Volume 3, p. 7), blaming bank credit departments located far away from businesses needing loans. The authors claim (without showing any evidence) that a shortage of available funds for loans exists for firms needing $1-million to $5-million for investment projects. The authors contend that available funds to loan for smaller projects exist through various federal and provincial lending agencies. The Self-Sufficiency Report then suggests relaxing credit rules for the provincial government’s Small Business Tax Credit, expanding medium-sized loan guarantees for exporters, and provincial government equity positions in growing export firms (Volume 4, p.20, recommendations 15, 16, 18 and 19).

I do not support recommendation 15 which gives limited tax relief (increasing the maximum Small Business Tax Credit) to small business. I also disagree with recommendations 16, 18 and 19. I do not support any further involvement in provincial government micro-managing credit availability to firms needing investment funds, over and above what is now undertaken by Business New Brunswick and federal agencies. For one, the benefits to the present Small Business Tax Credit is rather small, only $2.3-million in reduced taxes since 2003, an average of slightly over $700,000 a year. Compare this to the $35-million a year in increased taxes to small businesses (Government of New Brunswick, 2007, p. 4). Also, provincial government bureaucrats must screen loan applications for risk analysis and project viability – a job better undertaken through private markets. Small business would be better off with $35-million in lower taxes and working through commercial agencies.

In summary, the Task Force’s Report and recommendations (Volume 4) seek a return to the McKenna years, during which private-sector businesses paid more taxes to the provincial government. Senior officials during the McKenna era did have success in recruiting call centre firms to the province and I agree that an analogous approach could be undertaken for higher-end business-service firms. However, the Lord government, by lowering taxes, succeeded in seeing business investment rise in New Brunswick relative to Canada. I believe that, while marketing of New Brunswick is good, attracting firms with incentive money is bad. I suggest that both approaches be undertaken: have government leaders and senior bureaucrats take and active role in attracting business to New Brunswick, while at the same time lowering taxes to make such investment more attractive.

IV. Education and Training

Recognizing that a highly skilled, motivated labour force is necessary for New Brunswick to become self-sufficient, the Task Force correctly highlights human resources and education and training as factors important for export development (LePage and McGuire, 2007b). It is generally accepted that New Brunswick is on the verge of an impending labour shortage due to emigration and an aging population. It is expected that the trades sector will be particularly affected. Several sectors such as transportation (long-haul truck drivers) and trades (electricians) are already struggling to find qualified people to fill existing jobs. In order to maintain the status quo New Brunswick employers will have to replace these new pensioners. However, growth rather than the status quo is an important component for self-sufficiency according to the Task Force. It follows that a greater number of skilled and motivated potential workers will have to graduate from our colleges and universities.

In this section, I focus on some of the education and training issues discussed in the Task Force's reports. I look at the performance of the province's students in order to identify strengths and weaknesses; and outline trends that have led to the current situation with regard to the educational attainment of New Brunswickers. It is in this context that the Task Force's recommendations will be addressed.

The first report (Volume 1, p.11) states that New Brunswick must concentrate on three areas: 1) shared programming between universities and community colleges, 2) on-the-job training, and 3) literacy and numeracy skills.

This section of my paper will discuss each of these areas.

1. Shared programming between universities and community colleges

I agree that there should be more sharing between universities and community colleges. In some cases geography facilitates sharing and also strongly suggests domains where opportunities should be developed. For example, the University of New Brunswick in Saint John (UNBSJ) and the Saint John Campus of the New Brunswick Community College should collaborate to develop shared curricular programs and degrees in the many areas related to the energy hub being developed in the Saint John area. Collaboration need not be limited to UNBSJ and the NBCC. Indeed, local businesses should serve as employers in a student co-op program which would enable students to gain the technical, theoretical and practical skills to successfully integrate and contribute to the workforce. Another benefit of the presence of an energy-based co-op program jointly administered by UNBSJ and the Saint John NBCC would be to attenuate the oft heard argument of increasing student debt. NBCC-Saint John already has a number of co-op programs and hence the experience, expertise and professional contacts to manage such a program.

In order to create shared programming between universities and colleges a clear understanding of each one's roles must exist. If a productive collaboration between both groups is to exist each must acknowledge that the other has an important role to play in the development of human capital. I therefore endorse the Task Force's recommendation (LePage and McGuire, 2007d, recommendation 39) which calls for providing incentives in the funding system for post-secondary education to improve integration and promote an increase in the number of joint programs between universities and community colleges. I caution however that efforts must be made to accomplish this with as little additional funding as possible.

I add to this recommendation the suggestion that New Brunswick universities consider sharing curricula with out-of-province universities when appropriate. Examples already exist with l'Université de Moncton currently training future doctors in Moncton through a shared medical school curriculum agreement with l'Université de Sherbrooke. The University of New Brunswick – Saint John and Dalhousie University have more recently agreed to a similar agreement to train future doctors in Saint John. I fully support these collaborative endeavors.

The line between 'education', normally associated with universities, and 'training', normally associated with community colleges, is often blurred when I realize that universities are responsible to train future lawyers, teachers, doctors and engineers among other professions. Increasingly, universities are expected to qualify students for jobs upon graduation (Ogilvie, 2005). If universities are responsible for training their students then it is reasonable to expect them to be accountable for their results. Currently, the Maritime Provinces Higher Education Commission ensures quality assurance for the various programs offered by Maritime Universities. Other than comparing program content there exist few, if any, accountability mechanisms addressing the quality of learning in these programs. Course content may be relatively similar on paper but the rigor and expectations placed on students varies between Universities. For example, a student at University A and another at University B may both have a Bachelor's degree in Business but there is no way of knowing which of the two students has been better prepared to enter the job market. Students, government, taxpayers and even universities need this information if improvements are to be made. The creation of accountability mechanisms to assess the quality of learning in universities is therefore warranted. Thus, I recommend that universities work collaboratively, in conjunction with the Maritime Provinces Higher Education Commission, to develop objective criteria intended to assess the quality of learning in their programs and that the results of these assessments be made public annually and be taken into account by government in its University funding policies.

The Task Force is correct in identifying the need to expose high school students to vocational education so they can make informed career choices. Vocational training in high schools has been a casualty of two decades of neglect by the McKenna and Lord governments. The current situation is one where few high schools have the physical facilities and trained teachers to offer a vocational curriculum. Given the expense that a return to what the high schools could offer in terms of a vocational education stream – as opposed to an academic stream – I do not agree with the Task Force's recommendation to ensure access to vocational training in high school (Volume 4, p. 25, recommendation 37). A more favourable approach would be to offer a vast array of vocational courses or modules so that student's could "sample" or get a feel for the types of opportunities that await them at the post-secondary level.

Competency in most trades, if not all, requires successful completion of an extensive curriculum sometimes accompanied by a practicum or even years of experience. It is therefore incorrect to assume that a high school graduate will be fully competent in a particular trade simply from having taken a limited number of high school courses. Assuming that community colleges can respond quickly to student and labour demands, it seems wiser to ensure that high school students are exposed to several vocational career possibilities and to encourage them to develop their competencies in their chosen field. This certainly calls for a vocational curriculum in high schools but one whose goal is to prepare students for post-secondary studies rather than "professional" work. Hence, a curriculum emphasizing breadth instead of depth should be the favored approach. This approach, in combination with the availability of high quality guidance services which values and promotes post-secondary vocational education is currently absent from the public school system. I agree with the Task Force's recommendation to ensure that high school students are knowledgeable about career opportunities in trades and technologies and have the information necessary to make informed choices about their post-secondary options (Volume 4, p. 25, recommendation 36).

2. On the job training

The Report's second point, on-the-job training, is crucial to the future well-being of the province (Volume 1, p 11). This fact presents an interesting difficulty given the current importance given to such training: nothing less than a drastic change from the current learning culture of New Brunswick citizens and employers will have to happen. The Canadian Council for Learning (2006) reports that the percentage of New Brunswick workers who participate in job related training of their own volition stands at 34.7 percent. The relative good news is that this is the same percentage as seen across Canada. The bad news is that Canada ranks lower than many OECD countries on this measure.

Canadian employers are more likely than employers elsewhere to expect that graduates will show up "ready to work" and that their own responsibilities are limited to providing their new hires with organization-specific knowledge and skills (Conference Board of Canada, 2007). Employers are apparently failing to see such training as an investment and consider it an unnecessary cost of doing business. The dearth of training offered by employers was recently underscored by the Conference Board of Canada (2007) which showed that Canada had fallen from 14th to 21st amongst developed countries in terms of employer training. The Canadian Council for Learning (2006) also reports that on-the-job training in Canada (the availability of work training offered by the employer) stands at 55.7 percent which is less than that seen in many other OECD countries. This percentage stands at 38.1 percent in New Brunswick, by far the lowest in Canada.

Large businesses are more likely to offer on-the-job training than small or medium-size businesses (Canadian Council for Learning, 2006). Given that most New Brunswick employers fall in one of the latter two categories it is imperative that this issue be addressed in a timely fashion. Lost opportunities in education and training have a negative impact on productivity. Taken together, the results from these two measures (self initiated job related training and employer offered job training) highlight an important challenge to New Brunswick's self sufficiency goal.

The mentality underpinning these numbers must change if New Brunswick is to become self-sufficient. I recommend that the dual issue of self-initiated job related training and employer-offered job training be addressed immediately with the goal of ensuring that New Brunswick participation rates increase to at least the Canadian averages, and preferably to the OECD average. I therefore endorse recommendation 23 (Volume 4, p. 23) and suggest making on-the-job training a priority in the renegotiation of the federal-provincial Labour Market Development Agreement.

Interestingly, Britain has recently pledged to boost their skills base by the year 2020 with a "demand-led" approach to address a similar skills-related labour shortage as seen in New Brunswick. Three features of the British approach stand out: 1) it is demand-led rather than government-dictated, 2) it relies heavily on employer participation, and 3) colleges must become more responsive to learners and employers. This approach appears to be easily transferable to other jurisdictions and I recommend that it be seriously considered for implementation in New Brunswick. Moreover this demand-led approach to addressing the skills-related labour shortage should be dovetailed with the Task Force's recommendation to move quickly on the promised addition of 12,000 spaces to the community college system. I therefore support recommendation 38 (Volume 4, p. 25).

Despite the scarcity of formal on-the-job training in New Brunswick one cannot deny that valuable work experience is obtained by virtue of performing job-related tasks. In fact, although some of these tasks represent outcomes of college or university courses and programs several trades require practical experience to be eligible for certification. As New Brunswick strives to attract more immigrants, the demand to have their professional competencies and credentials recognized will increase proportionately. All too often we hear of highly qualified professionals such as engineers, doctors and nurses whose credentials are not recognized thus stopping them from working in their chosen field once they arrive in Canada. As a result, highly qualified immigrants often work in jobs for which they are vastly overqualified. This job-versus-qualifications mismatch forces immigrants into situations in which they do not contribute fully to Canadian society and economy. The Task Force's recommendation to promote the development and expanded use of Prior Learning Assessment Recognition techniques by post-secondary institutions, to reduce the time it takes for people to obtain accreditation for skill and knowledge that they already posses (Volume 4, p. 23, recommendation 24) targets efficiencies on the postsecondary education. Meanwhile its recommendation that the province ensures that the credential recognition processes for doctors, nurses, engineers and other accredited professions are timely, responsive to labour force requirements, transparent and accountable, with first priority being given to post-secondary institutions in those countries targeted under the Provincial Nominee Program (Volume 4, p. 23, recommendation 32) addresses more directly the skilled labour shortage. I support both recommendations.

3. Literacy and numeracy skills

The third subject highlighted by the Task Force is literacy and numeracy skills. I agree with LePage-McGuire that the literacy and numeracy skills of our students are important to the current and future well-being of the province. To this I add science, given its importance in today's and tomorrow's society. Since the early 1990's many pan-Canadian[11] and international[12] reports have shown New Brunswick students to be lagging behind their Canadian peers in these three important domains. Of particular note is the generally poor performance of the Francophone students relative to that of their Anglophone peers.

The dismal ranking of our students' achievement in literacy, numeracy and science as compared to that of their peers represents a difficult roadblock for the province's Self-Sufficiency goals. The Task Force has not grasped this reality. Despite not clearly emphasizing the importance of low student performance, the Self-Sufficiency Task Force's final report nevertheless states that "there appears to be universal agreement that major reforms are required and higher standards and greater accountability must be adopted into the K-12 system if New Brunswick is to achieve Self-Sufficiency" (Volume 4, p. 12). Therefore, the Report includes a recommendation (Volume 4, p. 25, recommendation 35) that stresses the need to emphasize an outcomes-oriented system in K-12 education, incorporating transparency, accountability, accreditation and resources for special needs. I agree wholeheartedly with this proposal.

A note of caution is warranted. Most education researchers agree that at least five to seven years are needed to measure a significant difference in student performance while others argue it may take up to 10-12 years. The point to remember is that student achievement in a population changes gradually and usually slowly. The time required to see differences in student achievement explains why large scale assessments such as the School Achievement Indicators Program in Canada, the National Assessment of Educational Progress, in the United States and the OECD's Programme for International Student Assessment (PISA) for example are not administered on a yearly basis[13]. Quite simply, one can not validly state that a

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[11] See CMEC, 1996, 1997, 1998, 1999, 2001, 2002, 2004

[12] See Bussière, Cartwright, Crocker, Ma, Oderkirk, and Zhang, 2001 and Bussière, Cartwright, Knighton and Rogers, 2004

[13] SAIP was administered on a yearly basis except in 2000 and 2003 so as to not overlap with the PISA assessment. The SAIP protocol called for each subject area (reading and writing, mathematics, and science) to be administered

population of students is either improving or getting worse in a relatively short period of time. Patchwork projects and quick fixes, historical trademarks of political interference in education, are not the answer to serious educational reforms.

This being said, let's look more closely at New Brunswick's student performance. While most tests rank our students poorly on pan-Canadian and international assessments, there exists data which show the gap between the New Brunswick and Canadian averages is decreasing suggesting that the glass is slowly filling up. As seen in Figure 2, the performance of New Brunswick 16-year-old students is actually increasing relative to the Canadian average in problem solving. In large part the increase is due to the performance of Francophone students (not shown in Figure 2).

Much the same can be said when looking at the writing results of 16-year-old New Brunswick and Canadian students (Figure 3). Here one sees that while the performance of Anglophone students is on par with the Canadian average, the performance of Francophone students increased slightly from 1994 to 1998. Notably, they more than held their own in the 2002 assessment which is remarkable given that their peers across the province and the country showed a significant decrease in performance. Although the overall achievement level is still rather low this nevertheless represents a success story (albeit a minor one since the glass is still mostly empty). International assessments such as the OECD's Programme for International Student Assessment (PISA) tell the same story over the span of only two assessments. Figure 4 shows that the performance of New Brunswick 15-year-old students increased in math, reading and science, despite the fact that the Canadian average remained virtually unchanged in math and decreased in both reading and science.

Despite these modest successes, New Brunswick ranked 9th out of 10 provinces in the 2003 PISA assessment. This underscores the fact that even more sustained efforts are needed if New Brunswick students are to reach levels that are at or above the Canadian average. Given that every other province is also working hard to improve student performance the goal of becoming the best education system in Canada as promised by the Graham government will be difficult to achieve. The gap in student performance between Anglophone and Francophone students call for more co-operation between both linguistic sectors of the Department of Education. If New Brunswick is to become self-sufficient by 2026 it is imperative that officials in both sectors find out what is working and make sure they do more of it.

Laurie (2007) has shown that we cannot rely solely on teacher assigned marks to judge how well students are performing relative to provincial standards. Large scale, standardized assessments such as provincial exams designed to test the provinces mandated curriculum are the best tools to measure student performance. Given the poor results obtained by New Brunswick students in pan-Canadian and international tests, there is no doubt that the province

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on a 3 year cycle. SAIP's last assessment was in 2005; it is being replaced by a new pan-Canadian assessment program starting in 2007.

needs a rigorous and reliable assessment program. Recall that several provincial exams were abolished by the Lord government in 2004. Thus, I recommend reinstating as soon as possible, and in both linguistic sectors, all exams abolished in 2004 as well as introducing high school exams in science and social studies in the Anglophone sector.

The Department of Education also desperately needs an accountability system to ensure regular monitoring and progress. Such an accountability system would feature an annual public report which would include provincial exam results, financial statements, and cover other areas such as human resources, school installations and transportation. Such a report would be published annually, on a promised date. It is imperative that all areas of the education system be accountable for their results and how they use public funds. I reiterate my support for the Task Force's recommendation for an outcomes-oriented system in K-12 education incorporating transparency and accountability (Volume 4, p. 25, recommendation 35).

I commend LePage and McGuire for having reported the high rate of illiteracy among New Brunswickers over the age of 16 (Volume 4, p. 24). Efforts must be made to double the adult literacy rate in the next decade and thus support recommendation 40 (Volume 4, p. 25) which encourages a new partnership between the provincial government, the federal government and the private sector to double the adult literacy rate in the next decade through the establishment of an aggressive workplace based literacy program. I also emphasize the necessity of including assessment mechanisms in any and all efforts aimed at increasing the adult literacy rate in New Brunswick.

Consider also university education in New Brunswick. Figure 5 shows that although the percentage of New Brunswickers with a university degree has increased by five-and-a-half percentage points (from 11 percent to 16.5 percent) since 1990 this increase is less than the eight percentage point increase seen in the rest of the country (13.8 percent to 21.8 percent) during the same period. In fact, the current percentage of university graduates in New Brunswick is equivalent to what it was in Canada in 1993.

. Figure 6 shows the percentage of New Brunswick citizens holding a post-secondary diploma, a bachelor degree and a graduate degree relative to Canada's. Since 1990 the percentage of New Brunswickers with a bachelor's degree remains unchanged at approximately 84 percent that of Canada's. A similar stable pattern is seen with regards to those holding a post-secondary diploma. There is essentially no difference in New Brunswick relative to the rest of Canada on this measure since 1990. Where there is cause for concern is that in 1990 approximately 72 percent of New Brunswickers held a graduate degree relative to the rest of Canada and that this percentage has plummeted to 57 percent in 2005.

Given that a self-sufficient New Brunswick will need more research and development than the current levels (Volume 2, p.25), I question whether the province will have sufficient highly educated human resources to carry this out. Currently, the answer is no. New Brunswick must redress this situation immediately so that a greater proportion of New Brunswickers have at least one graduate degree and preferably more than one. The LePage-McGuire Report fails to mention this challenge which leads us to recommend that the provincial government partners with the federal government and universities to aggressively recruit graduate students in New Brunswick universities. To begin, specific areas of specialization should be targeted to ensure the development of a critical mass of knowledge and expertise. I support recommendation 75 whereby the New Brunswick Innovation Foundation would refocus its work on key export sectors (Volume 4, p. 31), but I oppose recommendation 76 (Volume 4, p. 31) whereby the provincial government would pick-and-choose what it calls "technology clusters".

One general area that New Brunswick universities should continue developing and emphasizing is information and communication technology in conjunction with computer science. The province is well positioned to pursue this area. Already, the Faculties of Engineering and Computer Science at the University of New Brunswick have a well-deserved excellent reputation for the quality of their research and their graduates. The recent addition of the National Research Council's e-commerce laboratory is a welcome addition to the province which should make important contributions to the province and its economy.

The result of these technological initiatives has made New Brunswickers very accepting of the "new" way of doing business. By capitalizing on and developing even more its existing current expertise, New Brunswick is positioned to become a world leader in the field of computer and internet technology. I recommend more university spending for the Faculties of Computer Science and Engineering.

However, the Report continues to call for more bureaucratic intervention and spending by acting as a "first user" of untried technologies (Volume 4, p. 31, recommendation 77) and for an expanded role for the Research and Productivity Council (Volume 4, p. 31, recommendation 78). I stress that private industry be allowed to take charge of this field and therefore I oppose both recommendations. Government intervention in this area, as in many others, should be kept to a minimum and happen only with the intention of facilitating the role of the private sector. Not only does my message of government non-intervention apply to this theme but it also applies to many others as we will see in the next section.

I respect the fact that the Task Force has generally refrained from commenting on post-secondary education since the government has undertaken a separate study by the New Brunswick Commission on Post-Secondary Education. Nevertheless, I recommend here that the government study ways to allow community colleges to move from their current publicly funded system to become private not-for-profit institutions, thus enabling them to respond more efficiently and be more accountable to the needs of their clients. Some community colleges nearby universities could merge with such universities (without calling them polytechnics!), whereby community college students could take university courses, and whereby economies-of-scale cost cutting could take place.

V. Policies to Assist Major Export Industries (Industry by Industry Analysis)

As stated above, I agree with LePage-McGuire's fundamental view on how provincial economies develop. They realize that our province grows through strong exports. They devote an entire volume (Volume 2), describing the importance of the province's key export industries. However, the authors are too interventionist in their policy prescriptions for individual industries. I support a pro-free-market view of ideal provincial government policies in economic development.. Where there is "publicness" to industry needs (e.g. education, public infrastructure, environmental concerns, lower tax liabilities) our provincial government should intervene. Where there is not (private property rights, access to capital, normal commercial activity), the province ought not to intervene.

My view is not that radical. Indeed, many of New Brunswick's major success stories stem from private initiative, and not from government largesse. For example, the emergence of Saint John as an energy production centre stems from Irving Petroleum's market decisions (the Irving-Repsol LNG facility; plans for a second Irving refinery). Fredericton and Moncton attracted high-technology information processing and engineering firms. While it is true that both cities have universities and city governments which have undertaken intelligent development programmes (see De Benedetti, 1994) the growth in these knowledge-intensive businesses developed largely without provincial or federal support.

In fact, I present the case that less, not more, provincial government intervention is needed. The LePage-McGuire report (Volume 2), like other New Brunswick development reports before it[14], discusses New Brunswick's key export industries, and their potential for development. In the following critique, I discuss forestry, fishing and aquaculture, NB power and other smaller sectors.

1. The Forestry Industry

New Brunswick's forestry industry (logging, lumber, pulp and paper) represents the province's largest source of jobs and the second-largest dollar exports. Yet the industry faces structural decline, because of a high Canadian dollar, rising electricity costs, increased foreign competition, and a long-term decreasing demand for paper.

To its credit, the Self-Sufficiency Report (Volume 2, p 13) argues that the province's forestry sector must be allowed to restructure on its own, a process which entails job losses. As to the province's 61 sawmills, LePage-McGuire restate that closure (or merger) of some of

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[14] See Government of New Brunswick (2000), the economic development plan developed by the Bernard Lord Progressive Conservative government, and Government of New Brunswick, (1989 and 1993), the two provincial government economic plans written by the McKenna government. Ironically, the McKenna Liberal's second (1993) development paper was entitled *Toward Self-Sufficiency*, the stated goal of the current 2007 report.

these firms should be allowed to proceed without provincial government intervention. I agree. I also agree with the report's contention that the government ought not to compensate companies for increased energy costs. I agree with Task Force's support for cogeneration and that NB Power should pay market rates for excess electricity (i.e. excess electricity produced by private companies for their own operations) sold back to the energy grid (Shipley, 2007).

This being said, I disagree with the report's tacit approval of maintaining Crown ownership of forested lands. LePage-McGuire correctly mention that the current 30 percent forest set-aside (for conservation) is too high, and in recommendation 54 state that it should be reduced to 20 percent (Volume 4, p. 28). They also recommend providing "greater certainty" for Crown licensees. They say that

> *"...the government of New Brunswick should insist that forestry companies use certified sustainable forest practices. In return for better management of forested land, the provincial government should consider reducing the amount of Crown land set aside for conservation to 20 percent from the current 30 percent. This would increase overall wood supply by up to 25 percent in 20 years. These requirements should be applied to all forested land, not just Crown land"*. (Volume 2, p 14)

The Report's recommendation 54 endorses the 20 percent set-aside, but suggests "raising the percentage of forest land where no logging is permitted to better achieve conservation values (Volume 4, p. 28). The Report's recommendation 53 states that government ought to grade silviculture investment on Crown lands, with the goal of rewarding "good performances" and penalizing "poor performances" (Volume 4, p. 27).

I strongly disagree with recommendation 53 (a proposal of top-down, provincial government meddling). The forestry companies know the best forestry management practices, and this is particularly true for forestry operations on private land, where less government interference takes place. Private companies which own forested land have more of an incentive to practice optimum silviculture technology and to set an optimum conservation set-aside than is the case for firms leasing crown lands. A given company may not be necessarily leasing the same Crown land 40 years hence, and top-down government meddling entails costs to government intervention and enforcement, and cost to business compliance.

So I therefore recommend a phased-in privatisation program of forested Crown lands over a period of 20 years. I also recommend an additional, small percentage of forested Crown lands be set aside for provincial parks and wildlife preserves. Companies operating on private lands have a greater certainty of long-term silviculture investment (Maillet, 2007). Private companies can best implement business production and sales, through unregulated markets.

L also think that the Self-Sufficiency Report's target, of increasing total wood supply by

25 percent, is artificial and may be uneconomic (Volume 4, p27, recommendation 52). Total wood supply, in 20 years, may be higher or lower than this arbitrary target, depending on the marginal costs and benefits of producing additional supply. I do support recommendation 59 (Volume 4, p. 28), which mandates NB Power to work with large industrial users to institute peak-load/off-peak pricing and electric power cogeneration.

2. The Fishery and Aquaculture

The fishery and seafood processing sectors represent another important source of jobs in New Brunswick. However, per-worker incomes are low, $12,700 annually versus the Canadian average annual income of $38,000 (Volume 2, p. 17). The Self-Sufficiency report says that industry and government should set a goal "to double the income of fish processing plant workers", and in doing so job losses will take place[15].

Again, I view the goal of doubling real incomes as an arbitrary figure. LePage-McGuire (Volume 4, p.29, recommendations 64, 65 and 66) only speak vaguely about provincial government programs to develop new technologies and to address labour shortages with no discussion as to how these programs would necessarily help the sector reach this target. I also oppose recommendations 68 and 69 - programs to improve seafood technology and to facilitate intrusive relocation of seafood workers.

I suggest more a fundamental solution. Low productivity results from problems of open access fishery resource. The absence of private ownership of the common-property resource of fish stocks leads to inefficient federal-government regulation, and inefficient and wasteful overfishing. I recommend therefore, that New Brunswick, with the cooperation of Nova Scotia and Prince Edward Island, and with the cooperation of the federal government, create fishery property rights through a system of individual transferable quotas (ITQ's)[16].

The federal government, each year, would set a "total allowable catch" for each species. ITQs are then bought and sold in a free market. Since a firm buys as much ITQs as it wants, it no longer has to rush out and fish up to its ITQs purchased. Alternatively, a firm can sell (or rent out) its shortfall in the ITQ market. Having an organized ITQ market reduces the effort and the high bureaucratic costs since a given fishing firm no longer has to catch exactly its assigned quota. Moreover, there are long-term gains, as to increased fish stocks and capital investment

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[15] The Report does not specify if the doubling of incomes is in constant-dollar or current-dollar, over the time-horizon of this target. I take the target to mean a doubling of constant-dollar incomes by 2026. As well, if fishing incomes in other provinces increase by more than 100 percent, the province's fishing sector in and of itself would not be contributing to overall per-capita income convergence, New Brunswick to Canada.

[16] Our short discussion draws heavily from Crowley (1996), especially his "Introduction", and from Scott (1996) and Leal (2005).

by fishermen given greater certainty as to the resource (Scott, 1996, pp. 50-55).

Aquaculture has now surpassed the open-access fishery in terms of total value production ($230-million versus $195-million in 2005). LePage-McGuire report that the sharp growth of aquaculture has helped the economy of Charlotte county grow going from a poor region to the New Brunswick average (Volume 2, p.16). The final Report makes vague recommendations as to research and development assistance, environmental controls, crop insurance, and disaster relief to firms (Volume 4, p. 29, recommendations 62, 63, and 64).

However, the Self-Sufficiency Report's recommendation 62 regarding environmental regulation is too intrusive, given that the current environmental regime is satisfactory. I also oppose recommendation 63, and instead favour increased property rights for fish farmers. Fish farmers in New Brunswick face similar difficulties as those of forestry firms operating on Crown lands. In this sense the fish farmer operates differently than an agricultural farmer:

> *"...unlike in agriculture, where ownership was transferred from the Crown to the individual farmer, in aquaculture the Crown continues to own the seabed, the water column, and the water surface. In effect, the fish belong to the fish farmer but the fish farm does not. The fish farmer's relationship to government is one of lessee to lesser, not owner to regulator. As lessee, the farmer has obligations, while government imposes its will through decisions made by the relevant minister and bureaucrats"*[17].

I recommend that the New Brunswick government, through appropriate legislation, endow full property rights – of the sea surface, the sea column, and the sea bed – to fish farmers. This could be done through a special federal-New Brunswick agreement. Moreover, I recommend that provincial regulation be consolidated into one department, such as the New Brunswick Department of Agriculture.

My recommendations, if implemented, would increase aquaculture output and productivity. The Self-Sufficiency Report claims that, at least for Charlotte County, that "...the industry currently occupies most of the available sites, (and) there is not likely to be much further expansion" (Volume 2, p. 16). Yet output could grow, even with sites fully taken. This is so given that fish farms would undertake optimal long-term investment, given enhanced security of its product, given fewer dysfunctional and ill-thought out government regulations. Knowledgeable observers state that the federal Department of Fisheries and Oceans, which currently oversees fish farming, lacks scientific and regulatory expertise in the aquaculture field (Neill, 2006, pp. 3-6).

3. NB Power

The second Self-Sufficiency Report (Volume 2, pp. 10-12) talks optimistically about major NB Power capital projects – the current 95-kilometre transmission line to the Maine border and a possible second nuclear reactor for Point Lepreau – as economic stimulants for the Saint John region. The report is optimistic about New Brunswick increasing power export capacity, without knowing if demand is there for exports to take place. In the mid-1990s, the McKenna government also stressed large fossil-fuel electricity generation projects (Belledune and Dalhousie) as important for regional development. Yet the 1990s capital expansion contributed to NB Power's debt problems (Tucker, 2003). Nowhere in the Self-Sufficiency Report is there a discussion of capital cost requirements, or whether or not future electricity demand (domestic or export) exists for the additional capacity. The report also stresses that New Brunswick could become a leader in new technology – for the Advanced CANDU reactor, CO_2 capture, and carbon sequestration – without providing any evidence that NB Power is in a position to possess and to sell such technology (Volume 2, pp. 11-12).

LePage-McGuire make no mention of additional costs to increase power capacity. Nuclear power is expensive (Adams, 1996, Chapter 6) and while it is true that such power is Kyoto-friendly, the building of a second reactor, especially on as yet-untested Advanced CANDU reactor, might raise average fixed costs to rates over and above NB Power's already high costs. New Brunswick's average fixed-plus-variable costs are among the highest in the country (Tucker, 2003, table 2, p. 7). Recently NB Power raised residential and industrial rates by 9.8 percent, and this rate hike caused a considerable outcry amongst business leaders[18]. While I support electric power pricing that reflects true costs (Volume 4, p. 26, recommendation 41), I also support policy arrangements to promote low costs of power generation and transmission.

Consequently, I oppose recommendation 46 which calls for a second generation plant at Belledune using clean-coal technology. Furthermore, I criticise the Self-Sufficiency Report for not calling for further market reforms at NB Power, over and above the mild 2003 reforms undertaken by the Bernard Lord government[19].

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[17] Crowley (1996, p. 18). My discussion also draws from Neill (2003, 2006) and Neill and Rogers (2002).

[18] See McHardie (2007). The normally placid *Telegraph Journal* published an editorial "No Room for Rate Shock" (April 4, 2007), and followed that up with a rare front page editorial "A Call for Leadership" (April 21, 2007) – both editorials opposing significant power rate increases.

[19] The previous Progressive Conservative government reorganized NB Power, from one large unified corporation, to one consisting of one parent company, and four separate Crown corporations overseeing non-nuclear generation, nuclear generation, electricity transmission, and distribution/customer service. A fifth corporation oversees public access to the transmission system (Tucker, 2003, p. v). A sixth corporation, the NB Finance Corporation, is tasked with servicing and retiring NB Power's large debt load.

I strongly support private-sector initiatives such as the Irving-Repsol LNG facility, and cost-effective public-private projects, such as the nearly-completed Point Lepreau-Maine transmission line, as important to promoting economic development and the Atlantic Gateway (see below for my comments about the latter). Given that, I recommend (1) full cost-benefit studies be undertaken for both the Advanced CANDU reactor and clean-coal refurbishment at Belledune, and (2) further market reforms at NB Power. Such reforms should include a phased-in privatisation at NB Power, the opening up of the electricity market to full competition, and the opening up of retail/wholesale sales (beyond that in the Saint John area) to market competition (see Tucker, 2003).

LePage-McGuire call for the development of a 20-year strategic plan in consultation with current and potential customers in order to forecast power demand (Volume 4, p. 26, recommendation 42), given uncertainty conditions in the electricity market,. I endorse this recommendation.

4. Other Key Industries

LePage-McGuire discuss provincial government support for other key industries (Volume 2, pp. 13-25). To promote manufacturing, the final Report argues for a preferential tax system for productivity-enhancing technologies, and for the Research and Productivity Council to promote high performance ('lean') manufacturing (Volume 4, pp. 20-21, recommendation 20). For small business exporters, the authors claim that government-service financing "is often the only solution" for cash-short firms, and offer seed money and tax incentives (Volume 4, p. 20, recommendations 15 and 16). The authors urge the provincial government to promote green technologies, in order to build up a small green-technology sector within the province. They also want the provincial government to become a first-buyer of emerging information and communication technology, without mentioning the attendant risks and possible cost-overruns of such a policy (Volume 4, p. 31, recommendation 77), and to provide seed and capital assistance to such firms.

For the tourism sector (also an export industry), LePage-McGuire call for $100-million in investment, for infrastructure, of which $70-million should be targeted for northern development (Volume 2, p. 22). Some of the tourism development, the authors contend, should be to renovate existing high-volume sites, but their report also states that some money should go for new high-end, all-season sites in the northern part of the province. They also call for a powerful tourism ad campaign, without mentioning the cost of increasing the advertising that already is in place. Finally, LePage-McGuire call for the provincial government to support research and development into e-health technology.

As stressed above, I support cost-effective provincial government economic development, but only in areas of the *public* sphere. Such government involvement includes investment in transportation and public parks infrastructure, education, and training – apart from constructing a supportive tax and regulatory environment, and apart from assisting poorer sectors of the economy, such as Aboriginals. As such, I oppose the report's overall approach to assisting commercial export sectors (Volume 4, pp. 20, 21, 31, recommendations 14, 15, 16, 20 and 77). I find that the report's recommendations signal an overly-interventionist economic development programme, where the provincial government, in a paternalistic manner, thinks it knows more about commercial decisions that the export firms they wish to help.

For example, LePage-McGuire contend that bureaucrats within the provincial government – in designing a preferential tax system for manufacturers – know more about the state of productivity enhancing technology than do export-manufacturers themselves. I disagree: manufacturers themselves choose the best possible technologies on their own.

The provincial government could best assist export-manufacturers by lowering corporate and business property taxes – to attract and foster manufacturing irrespective of technology choice. The Report's authors suggest a favourable regime for the mining sector (Volume 4, p. 26, recommendation 51). I favour this recommendation but it lacks specifics. We support preferential tax and regulatory treatment for mining, but I question why such treatment cannot start before 2015. I also contend that export-manufacturers do have access to capital, either from commercial or federal government sources, so I question why some provincial dollars should be diverted to helping export-manufacturers.

The final Report is also too government-intrusive in agriculture. First, they offer no explicit recommendations for provincial assistance. I support recommendations 60 and 61 to encourage "greater competitiveness" in potato and dairy production and to investigate conversion of marginal farmland to tree production (Volume 4, p. 29). Such measures are best left to market forces. The Volume 2 Report rightly mentions that the province's (non-economic) farm marketing boards are vulnerable through possible trade-liberalization measures that could be instigated by the World Trade Organization, but the final Report (Volume 4) says nothing about marketing boards.

I support the authors' call for tourist infrastructure spending (Volume 4, p. 33, recommendation 85), but I strongly recommend that such expenditures be limited to cost-effective investment in *public* tourism sites, where some user-pay pricing could be implemented to reap costs of operation of such sites. For example, the province could partner with ACOA to build the now-shelved Fort Nashwaak site, and should undertake the refurbishing and building of new facilities on Partridge Island (located off of Saint John), and to create a Partridge Island Provincial Park, as a historical park. I feel that the building of high-usage public parks – parks which cannot be built by purely commercial interests – is an area where active provincial intervention could prove worthwhile. Unfortunately the Self-Sufficiency report does not distinguish between public sites (such as parks, forts and walkways) and private tourist facilities (such as hotels, restaurants and resorts). I feel that the latter sites are best left wholly to private sector investment – undertaken under a favourable tax and regulatory environment open to all businesses in the province.

VI. Other Economic Development Proposals

1. New Brunswick Economic Development and the Proposed Atlantic Gateway

I commend the Self-Sufficiency Report for correctly recognizing opportunities for increased trade and cooperation with Maine and other New England states (Volume 2, p. 26). First, the authors rightly recognize the importance of the shipping bottlenecks affecting British Columbia and the Atlantic coasts, given vastly increased trade between Canada, China, India, NAFTA, and the European Union. Consequently there are promising reasons to upgrade the Port of Saint John and inland ports such as Dieppe, New Brunswick. The report realizes the complexity of identifying barriers to container-traffic flows, and ways of streamlining truck-traffic regulations. LePage-McGuire originally called for the "creation of a regulatory body to harmonize regulations amongst neighbouring jurisdictions and New Brunswick" (Volume 2, p. 22) but did not include such a recommendation in the final Report. I therefore recommend the creation of a regulatory body to harmonize regulations amongst neighbouring jurisdictions and New Brunswick.

The Report, to its credit, does offer an idea to have the provincial government develop an official provincial position in developing an Atlantic Gateway and to finalize this strategy with the federal government and the other Atlantic provinces (Volume 4, p. 33, recommendation 86). I endorse this recommendation.

I criticize the Self-Sufficiency Report for not developing stronger recommendations to enhance New Brunswick's trade with its other Atlantic and New England neighbours. Indeed, the private sector has taken the lead in integrating New Brunswick's economy with that of New England[20]. For example, the Irving Petroleum Corporation built its Saint John oil refinery in 1979, and upgraded the facility in 1997 – using the plant for refined product export to the United States. Similarly, the Irving-Repsol LNG plant, at this writing still under construction, will export the bulk of its output to northeast United States. And the province, through NB Power, has also supported regional economic integration, through the construction of its Point Lepreau-Maine transmission line. (I say this, realizing that integrating the region's power grid is no small undertaking). The fact that private interests strengthened ties between New Brunswick and New England provides a strong signal for the region's political leadership to heed. The public spheres of governments in the region should be further connected.

The Self-Sufficiency Report, as noted, correctly stresses infrastructure barriers to container-traffic and trucking. Other barriers exist. First, a full-fledged integrated electric transmission system, for New England and the Maritime provinces, to integrate electric power sharing across the "Atlantica" region, i.e. the Atlantic Provinces, part of Québec south of the St.

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[20] Our discussion of New Brunswick-New England economic integration draws from the Atlantic Institute for Market Studies' (AIMS) Atlantica Papers, and the set of articles, "Atlantica: Two Counties, One Region", contained in *Ideas Matter* (2004).

Lawrence River and the northern New York/New England states[21] (Weil, 2003).

Second, the government of New Brunswick, in concert with the other three Atlantic provincial governments, ought to consult with northern New England governments to improve road, air, and rail transportation links within the region. For example there is a lack of class-1 rail service through northern New England, and connecting to New Brunswick; there are poor highway connections across Maine-New Brunswick; and there is excess congestion on Maine's Interstate 95 (Crowley and Kymlicka, 2006, p. 8). Much of investment spending (rail, air) should come from private sources, and other investment spending (highway, expanded port facilities) could be undertaken though public/private partnerships.

Third, given the ongoing increase in world trade, I strongly urge the provincial government to upgrade port infrastructure on a cost-effective basis. I also encourage the provincial government to liaise with the federal government to improve rail infrastructure to handle future increases in port container traffic (Ircha, 2006, pp. vi-vii). Finally, suggested above, I encourage the provincial government to harmonize immigrant education and vocation credentials across the four Atlantic Provinces, and to promote an attractive credentials-of-immigrants program, in order to lure qualified international immigrants to the province.

2. New Brunswick's Health Care System

Normally a jurisdiction's health care system is not seen as a vehicle for provincial economic development. Nevertheless, the Self-Sufficiency report calls for an integrated ("e-health") information system for our province's health sector (Volume 2, p. 23).

Such a system would maximize:

> *"…the use of electronic delivery of clinical and information services. To deliver services directly to the home, electronic delivery/e-health is essential. The Department of Health estimates that an investment of $400-million would be required to build such an e-health system, but, once in operation, it would save $80-million annually".* (Volume 2, p. 23)

To finance the $400-million capital cost, LePage-McGuire advocate that the province adopt the federal Nav-Canada model: create a non-profit corporation to oversee the e-health system, whereby the corporation would borrow money from the bond market for the funds. The

[21] "Atlantica", as envisiond by AIMS, are the four Atlantic provinces, part of Québec south of the St. Lawrence River and the northern New York/New England states. AIMS considers the southern tier of Massachusetts, plus Connecticut and Rhode Island in their entirety, as a separate, contiguous economic region. However, integrating Atlantic could further trade with this more southern region as well. See the various articles in *Ideas Matter* (2004).

authors favour the bond market over the equity market, so that the provincial government would retain control of the corporation.

New Brunswick is also well positioned to develop an on-line health network. In recent years most residents have gained access to high-speed internet, all schools have high-speed internet and an increasing number of high school courses are offered on-line. Service New Brunswick has already developed a sophisticated on-line system (SNB Online) to deliver a multitude of services such as purchasing licenses, obtaining a variety of forms and publications as well as a host of other information. By using SNB Online, every New Brunswicker can perform a multitude of tasks on-line instead of having to stand in line at SNB offices. The success of this initiative has been copied by the federal government. Given this environment, most New Brunswickers have become very comfortable with the use of technology.

I support the report's suggestion and the Government of New Brunswick's recent commitment to creating an e-health system (Volume 4, p. 32, recommendation 79), more so for the cost-saving gains to government than any possible e-technology spread effects envisioned by the authors. But I criticize the Report for how it wants the system financed. If the corporation goes to the bond market to borrow funds, it then has to pay interest on the debt. But it is a not-for-profit corporation, with expenditure-revenue income statements of which debt interest is a major spending component. The authors do not mention how the corporation is to obtain revenue. I recommend that the corporation be allowed to charge user fees to patients for the e-services, and recognize private medical plans and other health service providers for e-health transactions. The corporation could also charge the provincial government for patients on welfare, and for true emergency-room non-welfare patients.

Finally, I support modest privatization measures for New Brunswick's health delivery, possibly one that follows the Québec model. The province could undertake bilateral negotiations with the federal government to allow for needed reforms. For example, private diagnostic health clinics could be allowed to operate, much like they do in Québec. Such clinics allow for speedy diagnostic testing on a user-pay basis. Possible private health clinics, for small-scale health services, could be allowed. Phased-in privatization could help spur a thriving commercial health sector in the province given that people in other provinces (with long wait times) may want to come to New Brunswick.

3. Government Reorganization; Government Reforms and Efficiency Measures

The Self-Sufficiency Report contains a number of recommendations to promote a streamlined bureaucracy, reduce red tape, and so forth (Volume 4, pp. 17-18). I support cost cutting and promoting efficiencies in government. In this section I discuss these proposals in the order given.

The report recommends that the province be “branded”, as an “exciting and dynamic province” (Volume 4, p. 17, recommendation 1). Something similar was undertaken at the start of the McKenna government when that regime spent government dollars on a new logo. I oppose any further “branding” effort. For one, the Task Force’s first recommendation (Volume 4, p. 17, recommendation 1) is vague as to what the actual branding entails and what it would cost. I suspect that any branding attempt would entail an expensive provincial economic-development advertising campaign akin to those being conducted by Saskatchewan and Alberta. As well, provincial government branding could entail costly consulting fees and costly changes to provincial government logos, stationary, signs, and so forth… all for no good reason.

The Self-Sufficiency Report recommends that a Deputy Minister position be created to promote and coordinate the various proposals of the Report, across various departments (Volume 4, p. 17, recommendation 2). I endorse this recommendation on the condition that this Deputy Minister report directly to the Premier and that staff assigned to support the position is kept small and cost-efficient. Further, I recommend that this position be abolished, at the latest during the 2010 calendar year, given that the vast majority of the Task Force’s recommendations are to be carried out from 2007 to 2009.

I also support the Self-Sufficiency Report’s many government-efficiency recommendations (Volume 4, p. 17, recommendations 3, 4 and 5). These entail partial merit pay for deputy ministers and the role of Service New Brunswick in identifying and incorporating new efficiency procedures. However, I oppose recommendation 7 which calls for the creation of a new regulatory body to oversee private sector suggestions to reduce red tape. I feel this could be better done through Service New Brunswick, whereby the suggestions-and-resolution processes are made public through the agency’s web page. My approach would also facilitate the processes transparency and accountability.

I do not support any decentralization of the provincial bureaucracy away from Fredericton (Volume 4, p.17, recommendation 6). I oppose decentralization given the considerable monetary and non-monetary costs to do so. The monetary costs entail 1) the capital costs to construct new government offices and supporting capital infrastructure, and 2) increased operating costs (communication and transportation) associated with increased coordination problems. Non-monetary costs are the opportunity costs arising from lower productivity, given the reduction in face-to-face meetings, of bureaucrats working away from Fredericton. Decentralizing government departments away from the capital city would also make it harder for Ministers and Deputy Ministers to keep in touch either with their Department or with the Legislative Assembly business, thus rendering both aspects of their job less productive. It must be stressed that New Brunswick is a small province, and its government administration is relatively large compared to that of other provinces. Any decentralization could result in considerable productivity losses given the size of the province.

I agree with recommendation 10 (Volume 4, p18), which proposes a single window office that will work with local communities on development issues, but only if the proposal calls for a merging of departments and not one that proposes an additional office. In particular, I propose merging the Department of Local Government with that of the Regional Development Corporation, with the idea of cutting duplication and waste. While on this topic, I do fault the report for not advocating any meaningful reduction in the many provincial government departments and agencies. Couldn't the offices of the Chief Electoral Officer and Supervisor of Political Financing be merged? Couldn't the N.B. Securities Commission and the N.B. Investment Management Corporation be merged?

Recommendation 8 mandates the hiring of a commissioner to make recommendations as to local government issues (grants, property taxation, etc.). I oppose this since, in my view, it would lead to forced amalgamation of small community governments, an idea discussed in LePage-McGuire's earlier report (Volume 3, p. 16). The latter document states that the "fragmentation of local bodies presents a number of drawbacks" such as coordination of services across local boundaries, lack of skilled local staff, and lack of government representation in unincorporated areas. However, I worry about the threat local government amalgamation would have on local government waste and raising property taxes. The merging of municipalities in Québec which was undertaken earlier this decade, and in Ontario earlier, has led to increased property taxes and an increase in local government bureaucracy. Data collected on this subject by Murrell (2008) states that property taxes in New Brunswick are increasing faster than elsewhere in Canada. However, for larger urban areas, like Dartmouth and Halifax for example, savings are possible. So I leave open that efficiencies could take place for amalgamating suburbs into core cities such as in Moncton and Saint John.

4. Contradictions Concerning Kyoto, and Saint John as an Emerging Energy Hub

I suggest that there is a glaring contradiction between the Self-Sufficiency Report's desire for a second petroleum refinery (the Elder Rock refinery) in Saint John, and its enthusiastic pro-Kyoto proposals. As for the refinery, the report sees it as one of five critical mega-projects defining Saint John as a major energy-producing hub (Volume 2, pp. 10-11), whereby "ongoing support for the proposed new refinery is critical". The report strongly supports developing "petrochemical opportunities" (Volume 4, p. 26, recommendation 50). Yet the refinery will increase greenhouse gas production despite claims that new green energy technology could reduce the amount of CO_2 increase (Shipley, 2007). Under current technology, carbon capture techniques are very expensive ($40 per ton of CO_2) and full use of this technology would render the new refinery non-economic. I support the (fully-private-sector) Irving second refinery, a mega-project which would create up to 5,000 temporary construction jobs, and 1,000 permanent refinery jobs. I therefore support accommodating provincial government support for this project, in terms of environmental and other regulatory screening. Any environmental assessment will have the province and refinery operators mitigate possible environmental damage.

Despite the fact that LePage-McGuire support the building of another petroleum refinery in Saint John (Volume 4, p.26, recommendation 50) they also support a full-bore adherence to the Kyoto Accord (Volume 4, p. 26, recommendations 43-45). The Report calls for New Brunswick participation in carbon emissions trading (recommendation 43); provincial-government-set targets for drastic reduction of CO_2 emissions by households and industry (recommendation 44); and the promotion of carbon capture and sequestration technology (recommendation 45). I question the Report's strong Kyoto stance given that, if the three recommendations were to be implemented, the second petroleum refinery might be put in jeopardy, given considerable higher costs involved. I support having New Brunswick follow federal government greenhouse gas policies only, without any further intervention by the provincial government.

The report also promotes Kyoto friendly practices at NB Power, through alternative sources of power, a clean coal facility at Belledune, and a second nuclear unit at Point Lepreau (recommendations 46, 47, and 49). As stated above, such measures might prove highly uneconomic. They would raise power costs at NB Power, and in turn would raise energy costs for end users. I leave open the possibility that the New Brunswick government will find a way to make such measures economical. Barring this, I oppose the above mentioned recommendations, since they would require expensive investments, and would raise operating costs for businesses as well as being unrealistic with regards to the environment. I do strongly support voluntary Kyoto-friendly investments by businesses, especially those which lower business costs and increase profits.

Finally, highlighting its contradictory stance on Kyoto, the Self-Sufficiency Task Force recommends that Business New Brunswick research ideas for petrochemical exports (Volume 4, p. 26, recommendation 50). I oppose the first part of this recommendation because such development is best left to the private sector. But I do support the second part of this same recommendation which calls for establishing "a clear, effective and efficient regulatory system to enable the development of business opportunities in the petrochemical industry."

5. Intergovernmental Relations and Self-Sufficiency

LePage-McGuire want New Brunswick to attain Self-Sufficiency, and they want all stakeholders to agree with their many proposals. Hence the sub-title "a Common Cause". The Report demands a review of all government policies to bring them in line with the recommendations in the Self-Sufficiency Report (Volume 4, p. 21, recommendation 22); establish yearly summits with business and union leaders to discuss Self-Sufficiency progress (Volume 4, p. 34, recommendation 88); and to buy off the provincial public service unions with a five-year pact that would see wages rise to "parity" with national wage rates (Volume 4, p. 34, recommendation 89).

I endorse recommendation 22 since, given that the provincial government endorses the report's overall agenda, there ought to be a mechanism to coordinate the recommendations that will be implemented. But I most emphatically reject recommendations 88 and 89. Having an annual summit with business and union leaders is undemocratic since many New Brunswick sectors (unorganized labour, small business, taxpayers) would not be represented. As well the summit would end up encouraging politicized complaining amongst the participants and showboating to the media with little tangible results taking place. Economic progress takes place through market decisions away from the public glare.

Bringing public sector wages up to national parity (recommendation 89) would be an unmitigated disaster. As can be seen from Table 6, wage rates, as measured in annual salaries per employee, are much lower in New Brunswick than in Canada as a whole, across all major sectors. To achieve wage parity would add $65-million to yearly provincial government funding. To reach parity with the ten-province average would entail a significant increase in personal and corporate income taxes which would seriously damage economic growth. LePage-McGuire endorse wage parity but neglect the key fact of lower productivity among public sector workers. For example, if a university professor in New Brunswick teaches a first-year economics class of 85 students and the average national counterpart teaches a first-year economics class of 120 students then, the former deserves lower pay. Insisting that an economics professor in New Brunswick earn the same annual salary as his national counterpart means higher costs for New Brunswick universities. The same logic applies to other sectors. Looking at aggregate statistics for New Brunswick's total provincial public sector (health, education, social, and public administration), the province in 2005 employed 88 workers per 1,000 population. This figure is somewhat greater than the 10-province average of 80 workers per 1,000 (Murrell and Munro, 2007, p. 17). I oppose the reduction of casual labour in government (Volume 4, p.23, recommendation 28), since there is no evidence of labour shortages in public administration.

Finally, the report calls for an annual meeting between New Brunswick's premier and the Prime Minister of Canada to discuss the province's progress towards Self-Sufficiency. As well, the federal government is expected to pay up $500-million, one-half of the $1-billion Self-Sufficiency Fund (Volume 4, pp. 33-34, recommendations 87 and 80 respectively). I do support recommendation 87 regarding an annual summit between the New Brunswick Premier and the Prime Minister since such a meeting doesn't entail large costs and can be used to improve communication between the two levels of government. Whereas it is unlikely that the federal government will not spend $500-million for its share of the proposed Social Infrastructure Fund, it will continue to partake in smaller shared-cost programs as it has done in the past. The proposed meetings could be used to discuss this. Nevertheless, I oppose recommendation 80 asking for $500-million in federal dollars which defeats the purpose of Self-Sufficiency from federal government equalization payments. The $1-billion is better obtained through privatisation sales and user-charges on provincial infrastructure of which charging tolls on improved highways is an example.

6. Labour Market Reforms

The Report's labour market recommendations contain some valid proposals but unfortunately contain other recommendations that would prove costly to businesses and government. I agree with the recommendations aimed at strengthening the province's immigration strategy and the current Nominee Programme (Volume 4, p. 23 recommendations 31 and 32) provided the benefits of doing so outweigh the additional costs to government. As I state above, the target 2026 population is unachievable. Notwithstanding the unrealistic goal, having a cost-effective programme to attract productive immigrants – akin to similar programmes in Saskatchewan and Manitoba – does make sense. I also support the development of a plan to eliminate industry-wide mandatory retirement (Volume 4, p. 23, recommendation 26) which would add to the labour supply with little additional costs to government. However, the provincial government – if and when it abolishes mandatory retirement within its own ranks – must be wary of rising wage costs. Since a worker aged over 65 and with plenty of experience makes more than an entry-level worker, average wages could rise after mandatory retirement abolition.

I disagree with the Self-Sufficiency Report's other labour-market recommendations. The report calls for an increase of the province's minimum wage to the national average (Volume 4, p. 23, recommendation 25). The New Brunswick government has already followed the general direction of this recommendation, raising the rate from $7.00 an hour to $7.50 an hour. This brings the province's minimum wage to that of Nova Scotia and Prince Edward Island[22]. But since all provinces west of New Brunswick, save one, have minimum wage rates at $8.00 an hour, and since central and western Canada have the bulk of the population, the report implicitly argues that New Brunswick's minimum wage should be at $8.00 an hour. I oppose this legislative wage hike, since it would create additional unemployment for unskilled adults and would raise wage costs to business. Indeed, given that New Brunswick's average wage rate is less than that of the country's ($14.33/h for New Brunswick and $15.53/h for Canada in 2005) its relative minimum wage-to-average wage would be considerably higher than that of Canada as a whole. The results would be that unskilled workers in New Brunswick would have a relatively more difficult time accessing jobs than would be the case nationally.

I recommend, in place of increasing the minimum wage that the New Brunswick government introduce its own Working Income Tax Benefit (WITB) to enhance the recently implemented federal WITB. Such a move would encourage the poor to enter the labour force without destroying low-skilled job opportunities.

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[22] See the table "Current and Forthcoming Minimum Hourly Wage Rates for Experienced Adults, Canada", available from Human Resources and Social Development Canada (2007). Nova Scotia's minimum wage is $7.60/h; Prince Edward Island's is $7.50/h and Newfoundland and Labrador's $7.00/h. Saskatchewan, with a minimum wage rate of $7.95/ h, is the only province west of New Brunswick with a minimum wage less than $8.00/h.

I disagree with the Report's proposal to "address the issue of employment equity" (Volume 4, p. 23, recommendation 29). The province already has an Equal Pay for Equal Work law, which mandates equal wages for men and women given identical job classifications. The Shawn Graham government has also launched a five-year plan ostensibly to eliminate the male-female wage gap (Government of New Brunswick, 2007). But the Self-Sufficiency Report asks the government to address *employment* equity, not *wage* equity. Employment equity mandates roughly similar proportions of women and men in a given occupations, as exists for all occupations in New Brunswick. In its most extreme form, employment equity would mandate a minimum percentage of women in construction occupations, firefighting occupations and so forth. Similarly, the same measures would mandate a minimum percentage of men in administrative assistant occupations, nursing occupations and so forth. I oppose employment equity since it would require more (and costly) government intrusion into the workplace. Employment equity measures would raise monitoring costs to government and additional compliance costs to businesses. I believe that effective *wage* equity would render useless *employment* equity. Such wage equity should be limited to current legislation (Equal Pay for Equal Work) instead of being expanded to Equal Pay for Equal Value.

Finally, I oppose the report's proposal to expand public daycare spaces (Volume 4, p. 23, recommendation 30). Again, the Self-Sufficiency Report glibly talks about expanding the number of spaces without any discussion of increased costs to government. Note that I strongly support the part of this recommendation which encourages businesses to offer day care services for shift work. Similarly, I also recommend that the province offer provincial tax breaks (not mentioned in the report) to families with young children to pay for privately-delivered child care services.

VII. Conclusion: Centralized Micro-Managing with Little Cost Accountability

I give credit to the Self Sufficiency Task Force for realizing that significant economic progress did take place under the period of the “McKenna miracle”, and that such progress did level off in the decade following 1996. I also commend the Task Force for realizing that the export-based model is the proper economic paradigm in explaining successful provincial economic growth. The Task Force’s final Report gets these two big ideas right. After that, the major thrust of the report goes off track by wanting to emulate the successes of the Frank McKenna government, but by doing so in a costly and risky manner.

Surprisingly, the report fails to understand why the McKenna government succeeded. Two major successes under McKenna underpinned the “miracle”: (1) the call centre initiative and (2) the building of the New Brunswick Highway. I consider these two measures in turn.

Under the call-centre initiative, government representatives, in its meetings with business leaders, advertised the province’s low wages, low property taxes, cheap land prices, and minimal government bureaucracy and red tape as advantages for businesses considering locating to the province. The provincial government of the day spent relatively little in incentive money to attract call centres. As a whole, the call centre successes during the McKenna government didn’t cost the government all that much.

Yet the Self-Sufficiency Task Force advocates a polar-opposite approach by favouring a top-down, micro-managing approach for economic development. It calls for additional business incentive money to be spent to attract high-end service-export businesses, and to favour large corporations over smaller businesses. Its many proposals – higher taxes, higher minimum wages, higher electricity and fuel costs, strict environmental measures, costly employment equity, expanded and more costly provincial government – would *raise*, and not lower, costs to businesses in New Brunswick. The cost advantages of locating to New Brunswick – as promised by the McKenna government – would no longer exist under the Shawn Graham government. In fact, other provinces are lowering, not raising business taxes. In short, the Report strongly advocates a (high) tax-and-spend approach to government – not an inviting environment for prospective businesses.

Regarding the construction of the four-lane New Brunswick Highway, this major project stimulated the province’s economy in two ways. First, it reduced costs of doing business for New Brunswick firms given that travel and time costs were reduced in transporting goods and people between Moncton and Fredericton. Second, the enormous construction project created temporary construction jobs which lead to significant (albeit temporary) multiplier effects across the province. The sheer size of the highway project helped to spike upwards provincial economic indicators during the McKenna decade. Importantly, the McKenna government correctly designed the highway project to be built and operated under privatized management. The privately-run Maritime Road Development Corporation put up the $544-million capital cost to design, build and operate the highway, under a 30-year lease, and in return they would receive income from highway tolls. Consequently, the McKenna government planned on achieving economic development from this source at little cost to the taxpayer.

Unfortunately, the Bernard Lord government did away with the toll system and assumed operation of the four-lane highway and the large capital cost, in the form of a large increase in the provincial debt. Consequently, some of the gains from the "McKenna miracle" did come at a cost of higher per-capita government interest payments, still being paid by New Brunswick taxpayers today. Part of the successful McKenna miracle was mortgaged through future public interest payments.

Given the Lepage-McGuire recommendations, I worry about repeating a scenario which calls for massive government investment today resulting in a higher provincial debt tomorrow. In terms of capital projects, the report calls for a $1-billion social infrastructure fund, half of which is to be financed by the federal government and half through long-term bond issue though the Alcool New Brunswick Liquor (ANBL). True, it is now likely that the federal government will enter into a special deal with the province, although the deal will probably be less than the $500-million asked. But bond financing through the ANBL simply disguises future debt-interest payments in the form of reduced government revenues through lower ANBL revenues.

New Brunswick faces future human capital difficulties. The two major success stories of the McKenna years that I highlighted were possible because of the province's available human capital. The relatively high percentage of bilingual New Brunswickers was correctly seen as an obvious advantage for future call centre employers. Similarly, the available construction and trades workers enabled the construction of the New Brunswick Highway using mostly New Brunswick citizens.

However, considerable problems remain today. The performance of New Brunswick high school students lags that of their peers in the country. The province also has the highest percentage in the country of adults without basic literacy skills, the lowest on the job training rate in the country and a lower percentage of university graduates than the Canadian average. The overall picture of New Brunswick which results from these observations is one of a province which demonstrates a poor learning culture, placing little value on education relative to other provinces. To compound the problem, there is currently a worrisome shortage of people in the trades sector with the reality that many more will be retiring in the next decade.

As a critic I offer private-sector alternatives to the big project approach taken by the Self-Sufficiency Report. As emphasized above, the current private-sector energy projects in the Saint John area (the LNG plant, the transmission line to Maine, the possible second oil refinery) will stimulate the province's economy with little assistance from government. Similarly, if the province sees a need for public infrastructure investment, it should do so under privatized management similar to the McKenna government's Maritime Road Development Corporation. NB Power could be privatised, with large projects proceeding under cost-effective (i.e., marketdetermined) rules. Yet the Self-Sufficiency Task Force eschews privatization, and market-driven approaches to economic development, in favour of a highly centralized micro-managing approach.

The fact that the report ignores private-sector involvement in growth creates a glaring paradox. As emphasized, the McKenna years was a time of dramatic economic improvement. Per-capita GDP and wages converged noticeably towards the national average. The beauty of the McKenna miracle was that the government had planned such progress at low cost to the taxpayer. The call centre initiative was done cheaply and the four-lane highway undertaken under privatized management. The Self-Sufficiency Report, in contrast, entails sharply increased government management, with the prospects of higher deficits, taxes, and debt.

Indeed, the report speaks little about costs. In fact, there is scarcely any mention of costs in the report. Although public-sector cost-benefit analysis is an important feature of competent government management, the phrases “cost-benefit” or “cost-effective” never once appear in the Self-Sufficiency Reports. A careful costing of the 91 recommendations has yet to be undertaken. I fear that a report that boasts of hypothetical benefits, without mentioning the associated costs, represents a recipe for massive, and wasteful, overspending.

To compound the problem, the Task Force has not recommended the development and implementation of clear accountability mechanisms to ensure the province actually does evolve towards self-sufficiency. In this respect, the Report repeats the all-to-common error of targeting all available resources into specific actions while neglecting to allot resources to measure the outcomes of those actions. Therefore, I recommend that the government report two benchmarks in each annual budget statement: 1) the New Brunswick - Canada per-capita GDP ratio, and 2) the ratio of equalization revenue to total government revenue.

Finally, taking a broad view, the four self-sufficiency reports lack proper focus. The report lists 91 recommendations, 12 “themes” and seven “realities”. Indeed, some of the recommendations in the final report appear to have been tacked on at the last minute in response to demands by vested interest groups. The helter-skelter approach undermines concentration of resources and efforts which are needed for a small, poor province to succeed.

As I stress, there is much good in the report. Many of the recommendations are certainly worth doing. However, the bulk of the report relies on massive provincial government oversight, and meticulous micro-managing, of the private-sector economy. I fear the prospect of a provincial government assigning task forces of bureaucrats to address this or that recommendation, without addressing the consequences of cost, and how such a given recommendation will truly improve economic development. Undertaking the full 91 recommendations will do little to promote economic development. Instead, I fear that this report will lead to a massive rise in provincial spending, debt, and taxes.

List of Tables

Table 1 Comparing per-capita GDP, Wages and Salaries, and "Non-Wages and Salaries", New Brunswick to Canada (percent)

decade	wages/salaries	total non-wages	total GDP
1967 - 1976	69.3	59.3	64.7
1977 - 1986	70.7	62.2	66.7
1987 - 1996	77.0	74.7	75.9
1997 - 2006	78.3	73.6	76.0

Source: National Accounts and Population Divisions, Statistics Canada; calculations by the authors. A number of 100 means New Brunswick is equal to Canada in per-capita terms.

Table 2 Comparing "Wages and Salaries" Components, New Brunswick to Canada (percent)

decade	wage rate	unemployment rate	labour force participation rate	adult rate
1967 - 1976	84.2	98.1	87.1	96.2
1977 - 1986	88.0	95.8	86.6	96.8
1987 - 1996	88.4	97.0	89.5	100.3
1997 - 2006	85.1	96.7	93.6	101.5

Source: National Accounts, Labour and Population Divisions, Statistics Canada; calculations by the authors. A number of 100 means that New Brunswick is equal to Canada in per capita terms.

Table 3 Share of Wages and Salaries Disparity, New Brunswick to Canada (percent)

decade	wage rate	unemployment rate	labour force participation rate	adult rate
1967 - 1976	49.9	5.1	37.5	10.5
1977 - 1986	36.7	12.5	41.5	9.2
1987 - 1996	47.6	11.8	42.5	– 1.3
1997 - 2006	66.1	13.7	26.3	– 6.1

Source: National Accounts, Labour, and Population Divisions, Statistics Canada; calculations by the authors. Summing across columns equals 100 percent.

Table 4 Statistics Canada Population Projections in year 2026, New Brunswick and Canada (000's of individuals); Percentage, New Brunswick to Canada.

no.	description of population forecast	NB pop.	Canada pop.	NB to Can
1	low-growth scenario	748.8	35,786.7	2.09
2	med-growth; recent migration trends	747.9	37,893.5	1.97
3	med-growth; medium migration	768.5	37,882.7	2.03
4	med-growth; west coast migration	788.3	37,872.6	2.08
5	med-growth; centre-west migration	748.3	37,897.7	1.97
6	high-growth scenario	791.0	39,931.3	1.98
7	low nat increase; high immigration	739.9	38,071.3	1.94
8	high nat increase; low immigration	758.8	37,581.3	2.02
9	high immigration rate	794.5	39,047.0	2.03
10	low immigration rate	782.1	36,733.5	2.13
11	high fertility rate	759.4	38,554,6	1.97
12	low fertility rate	738.9	37,111.3	1.99
13	one-percent immigration	780.3	40,267.7	1.94

Source: Statistics Canada; calculations from the authors.

Table 5 Comparing Government and Business Investment, New Brunswick to Canada, by decade (percent)

		Business		
decade	**government**	**construction**	**mach and equip**	**total**
1967-76	104.3	77.7	89.6	88.6
1977-86	110.8	54.9	85.3	78.2
1987-96	110.8	57.3	73.9	75.5
1997-05	103.0	66.5	72.5	75.8

Source: Investment and Population Divisions, Statistics Canada; A number of 100 means that New Brunswick is equal in per-capita terms with Canada.

Table 6 Calculation of Extra Provincial Government Spending, if N.B. Public Service is Paid the Same Wage Rate as the Canadian Average: 2005

	average weekly wages ($)		employment	weekly wage difference ($)	total additional spending
industry	N. B.	Canada	N.B.		
education	785.21	805.21	19902	20.00	20.7-million
hospitals	740.52	745.16	15875	4.64	3.8-million
social serv.	309.85	552.86	1866	243.01	23.6-million
public admin.	835.17	862.93	10603	27.76	15.3-million.
total					63.4-million

Source: Statistics Canada Labour Division; calculations made by authors.

List of Figures

Figure 1 Ratios of per-capita government, business machinery and equipment investment, NB to Canada.

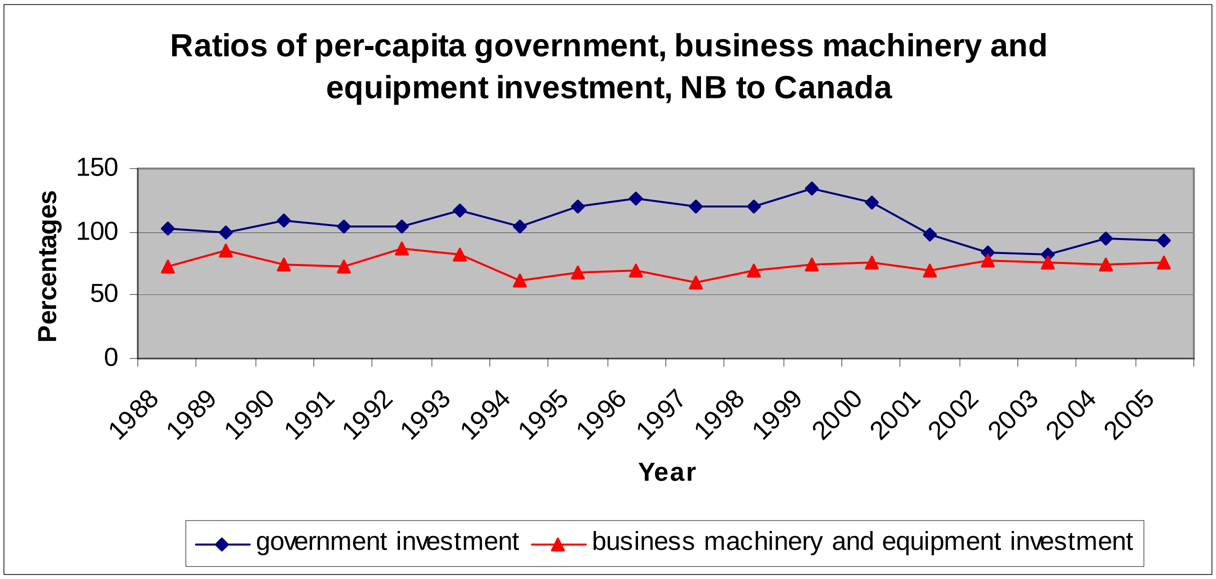


Figure 2 Percentage of 16-year-old students achieving at expected level in problem solving

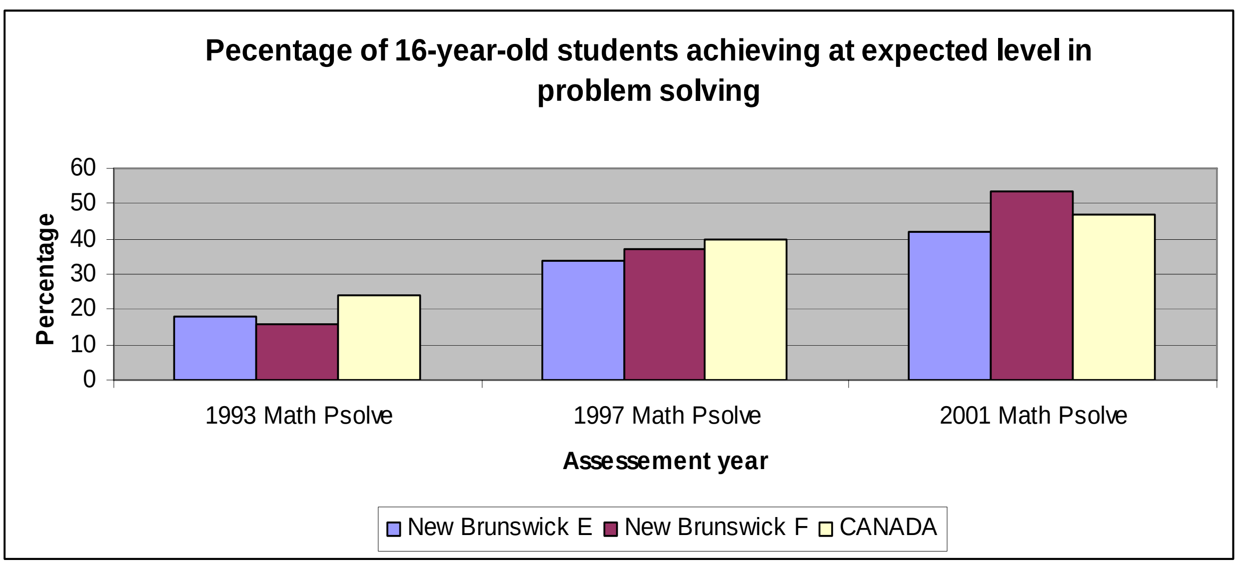


Figure 3 Percentage of 16-year-old students achieving at expected level in writing

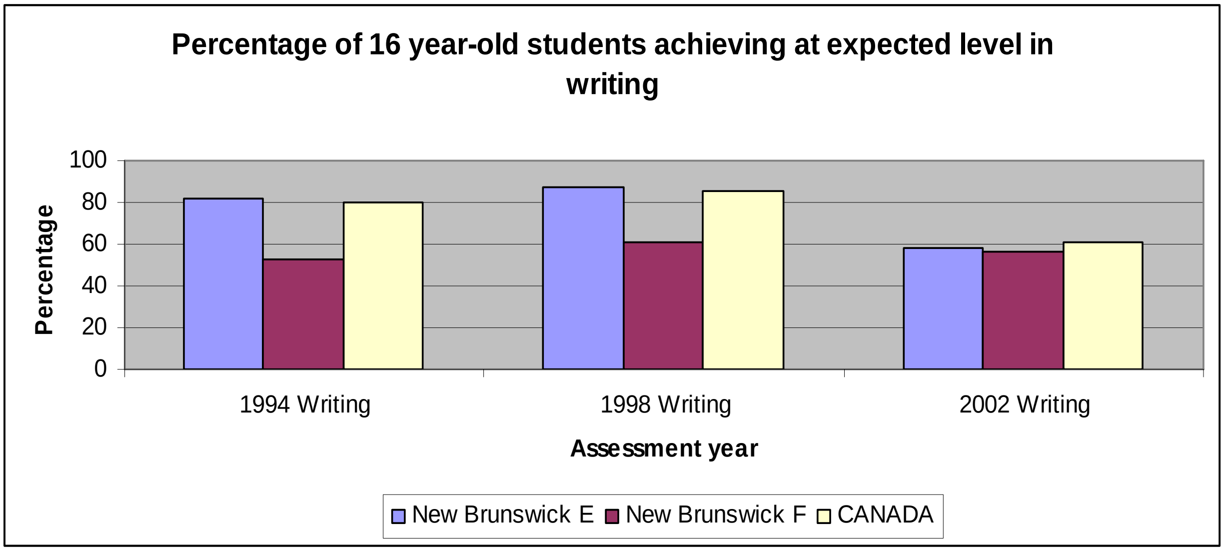


Figure 4 New Brunswick and Canadian results on PISA 2000 and 2003

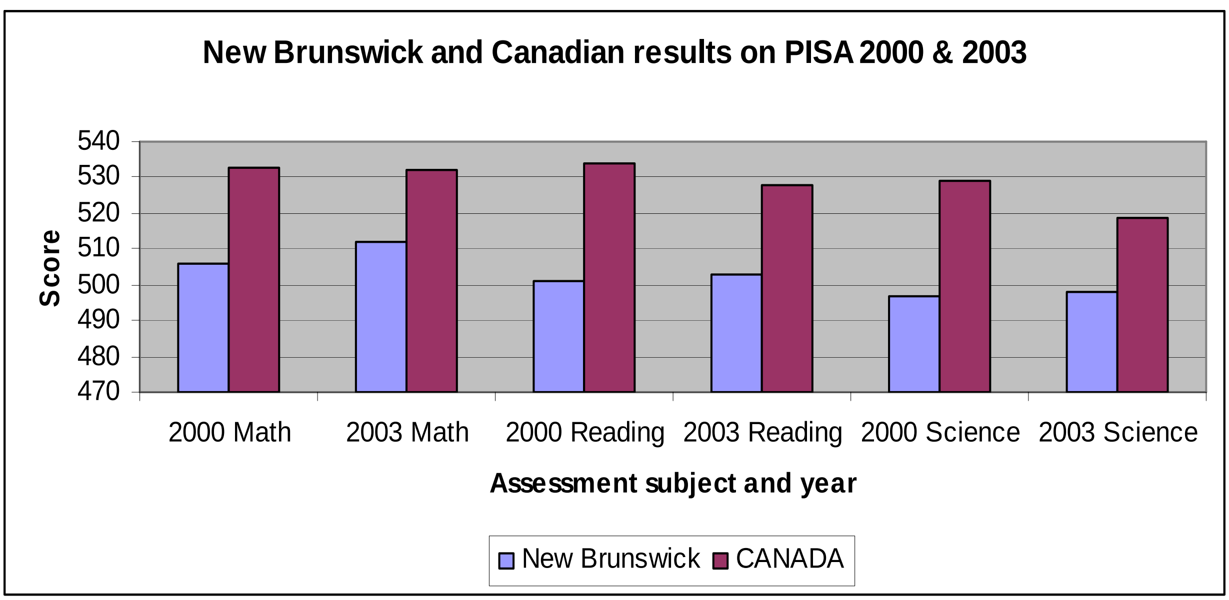


Figure 5 Percentage of New Brunswick and Canadian citizens with a university degree

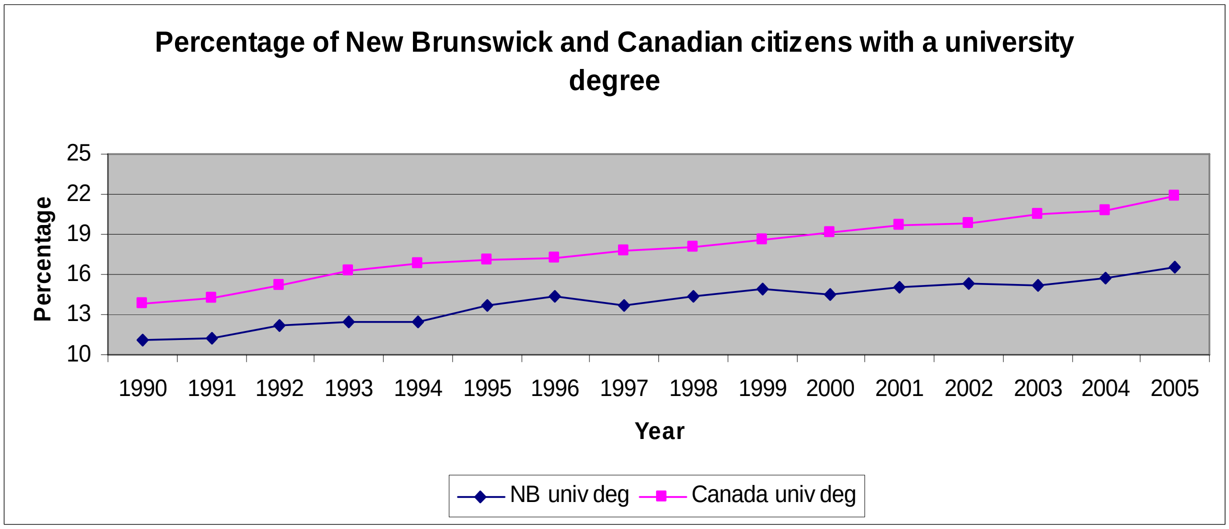
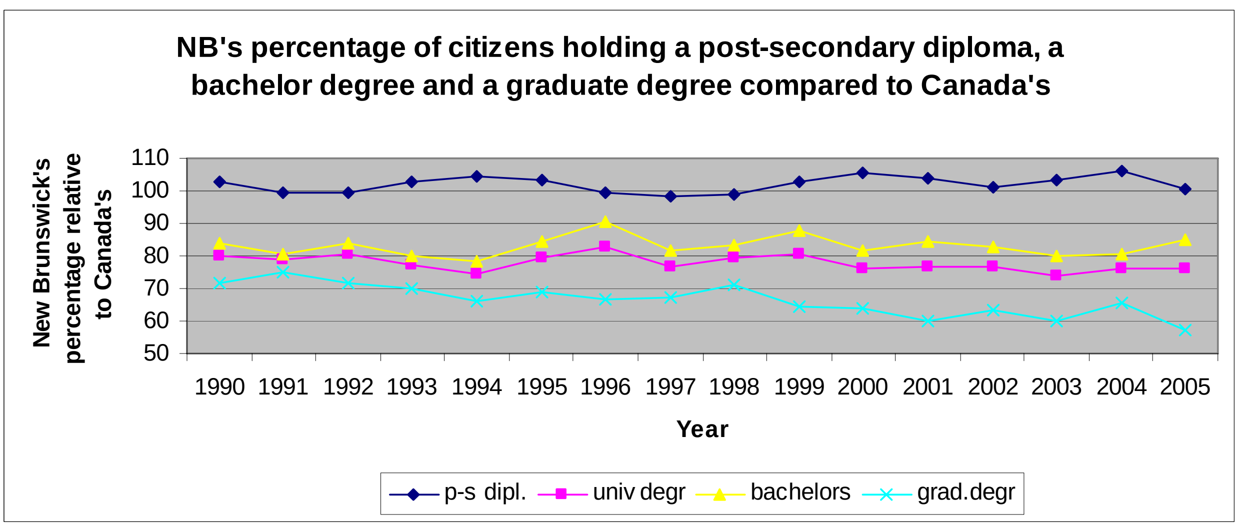


Figure 6 New Brunswick's percentage of citizens holding a post-secondary diploma, a bachelor degree and a graduate degree relative to Canada's



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