Atlantic Institute for AIMS Market Studies

Nova Scotia Universities

Constrain or Release?

Juanita Spencer

May 2012

Atlantic Institute for Market Studies

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About the Author

Juanita Spencer, a Halifax based policy researcher, has an extensive background in helping individuals and small businesses navigate the government labyrinth. An entrepreneur herself, Spencer also spent time with the Canadian Federation of Independent Business and the Metropolitan Halifax Chamber of Commerce. Her policy research and member service roles gave her exceptional insight into how business responds to government activities.

Her Master's level research focused on correcting the unintended consequences of well-intended public policy. She has written on the perverse incentives built into university funding and provincial transfers, the taxation and regulation of small business, and the challenges around getting public consultation and engagement right in the modern era of direct electronic interaction and immediate feedback.

Spencer has delivered talks to future policy leaders on the small business-government interface, and has had numerous leadership roles in organizations bridging the gap between government and community, including Co-Chair of her local School Advisory Council, Board member at Canada Nova Scotia Business.

Spencer has a BA from Saint Mary's University and an MPA from Dalhousie University. She lives in Halifax with her husband and three young children.

Executive Summary

The baby boom saw a massive expansion in university infrastructure around the globe. Locally, the expanded education marketplace allowed Nova Scotia to maintain, as public institutions, a broad range of universities, a range and scale of post-secondary instruction that, on a per capita basis, is among the largest in Canada. Absent this huge increase in demand, these institutions would potentially have had to close or amalgamate. The aging population and the demographic shift are now having similar impacts and leading to another transformation in post-secondary education. Pressure for the young to enter the workforce quickly, and the old to retrain while continuing to work, are increasing the demand for part-time or alternative education delivery models. Such an environment, with increased demand for more, and more flexible education, coupled with reduced government capacity, is both destabilizing the current policy framework and pointing the way to a new one.

Starting with the proposition that universities have three distinct roles to play (educate students, contribute to society, and contribute to the economy), this paper will question the effectiveness of the current policy environment in allowing or assisting universities to achieve those goals. More specifically, it will argue for greater accountability in each of these areas while recognizing that with greater accountability from universities must come greater responsibility and freedom for the universities. It will then consider the challenges and opportunities that the ongoing demographic shift will provide and propose that now is an ideal time to test an alternative model for universities going forward; a policy model better suited to the new reality of an aging population, labour shortage, and smaller more constrained government.

Key Recommendations

The author concludes that the province of Nova Scotia should move to a funding model that recognizes the three core purposes of universities by:

1. Continuing to split university funding into three distinct blocks: support for students, block grants to universities (to support their contribution to community building and a civil society) and tied grants associated with specific research and development efforts or economic projects

2. Gradually shifting the balance of these funding blocks over a period from five to ten years with the end goal being 50% of funds in student hands, 30% tied to performance based and measurable economic contributions, and 20% in the form of guaranteed base grants

3. Increasing university control over tuition (remove caps), program choice and delivery

4. Enhancing funding accountability through establishing performance measures in MOU's

5. Engaging existing agencies (i.e. ACOA, NSBI, RDA's) in the delivery of additional funds to universities dependent on performance in research and development

Introduction

Universities have at least three distinct and important roles to play in society. They impact the economy, the students they serve and society as a whole. Their economic impact takes two forms, immediate and over time. The immediate impact includes direct employment and direct consumption. It also includes dollar attraction activities which can be grouped into: student spending, research grants and, gifts and contributions from donors. Over the longer term, by contributing to research of all types, universities have the capacity to improve collective productivity across the economy and encourage further investment and employment by others.

In terms of the contribution to the lives of students, education and skills are unquestionably a significant component of what students are seeking from the university they attend. But skills and knowledge are not the only products students purchase from their school, nor are they the only components of employability that universities endow their students with; universities also deliver socialization, enhanced life experiences, lifelong networks and connections. At the end of a university career, students seek not only to be more employable but to be more complete people than they were when they started. This broader goal, and some of its constituent components, deserves to be highlighted and recalled when making policy around how to structure and fund a university system.

Similarly, universities have broader impacts on the communities and the regions in which they are located. There is no question that Halifax, Wolfville, Antigonish and Sydney for example, are different than they otherwise would be if universities did not have a significant presence in their community. Civil society is arguably stronger for the presence of universities; more informed and active public debate, more engaged citizens, stronger democratic structures, greater cultural activities and a more global outlook. These impacts are often catalogued when people are defending the liberal arts, but, science and engineering and other more 'professional' programs arguably have the same or similar impacts.

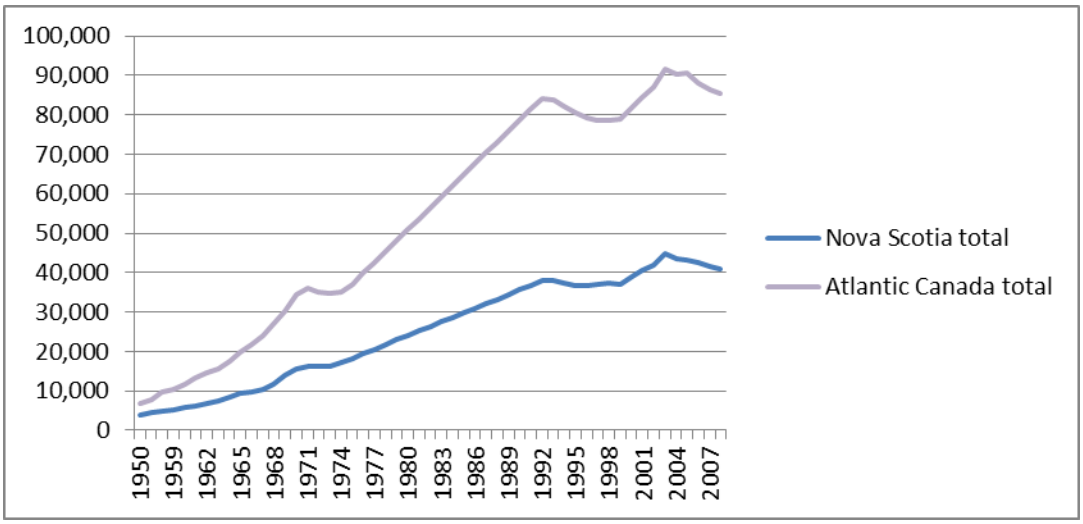
It is about 'impacts' that the policy maker must be most concerned. Starting with the proposition that universities have three distinct roles to play, this paper will question the effectiveness of the current policy environment in allowing or assisting universities to achieve those goals. More specifically, it will argue for greater accountability in each of these areas while recognizing that with greater accountability from universities must come greater responsibility and freedom for the universities. It will then consider the challenges and opportunities that the ongoing demographic shift will provide and propose that now is an ideal time to test an alternative model for universities going forward; a policy model better suited to the new reality of an aging population, labour shortage, and smaller more constrained government.

The baby boom saw a massive expansion in university infrastructure around the globe. Locally, the expanded education marketplace allowed Nova Scotia to maintain, as public institutions, a broad range of universities. Absent this huge increase in demand, these institutions would potentially have had to close or amalgamate. The aging population and the demographic shift are now having similar impacts and leading to another transformation in post-secondary education. Pressure for the young to enter the workforce quickly, and the old to retrain while continuing to work, are increasing the demand for part-time or alternative education delivery models. Such an environment, with increased demand for more, and more flexible education, coupled with reduced government capacity, is both destabilizing the current policy framework and pointing the way to a new one.

Section One: The Boom Times

Over the past fifty years universities in Atlantic Canada (in fact across Canada and around the world) have seen an amazing spike in their enrolments. As Figure 1 displays, universities in Nova Scotia, for example, went from an enrolment of well below 10,000 students in the late 1940's to well over 40,000 by the mid 2000's; a fourfold increase in just sixty years.

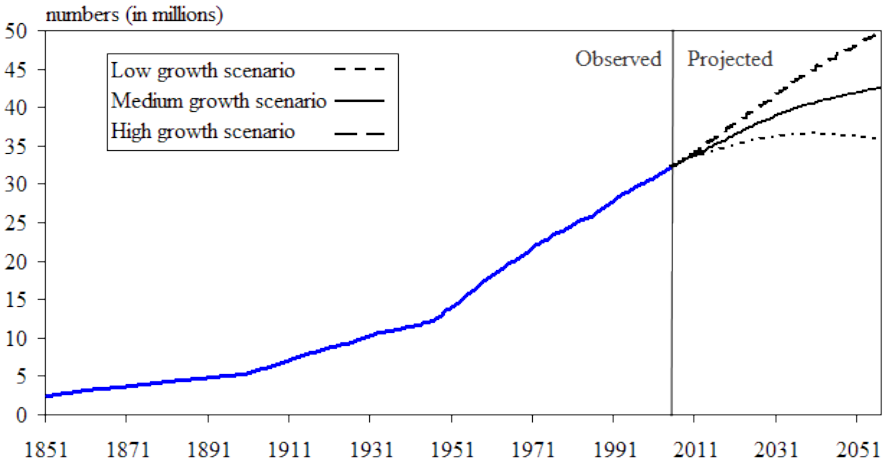
Figure 1 – University enrolment 1950-2008



Source: Statistics Canada, 2008a[1]

This spike in enrolments matches almost perfectly (and not unexpectedly) the baby boom that was experienced in the population following the end of the Second World War. Figure 2 shows Canada's population from 1851 to 2009 and the population spike precedes slightly, and tracks almost perfectly with, the university enrolment figures shown above. Figure 2 also projects Canada's population forward to 2056 and only under a high growth scenario do we not see a net decline in total population. The ramifications of this likely decline, and other demographic characteristics of our future population, will be the focus of the next section of this study.

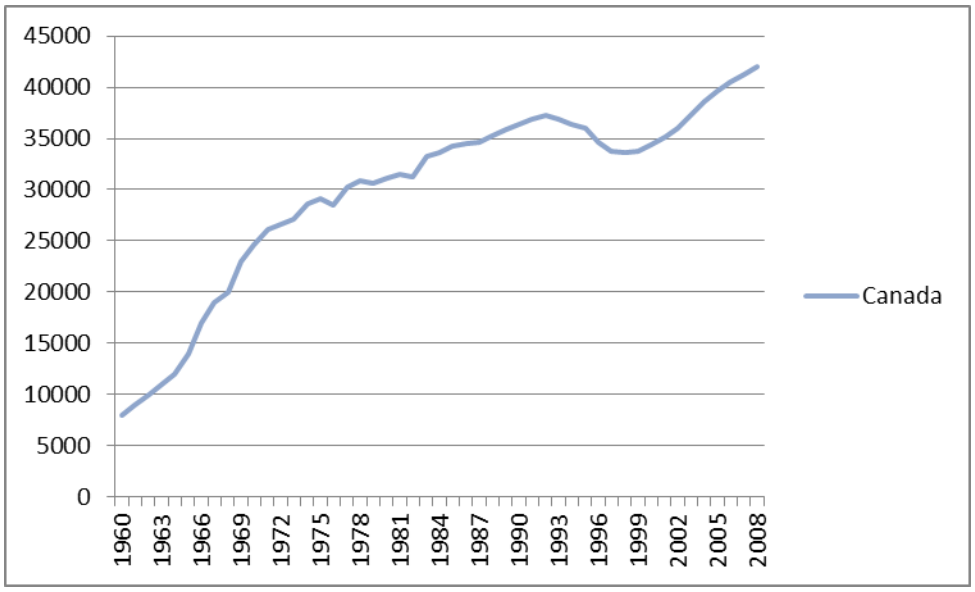
Figure 2 - Population of Canada, 1851 to 2056



Source: Statistics Canada, 2008b[2]

Before moving to an analysis of other demographic factors at work in Canada and Atlantic Canada, it is important to understand that not only did the baby boom drive demand for university education, it also enhanced society's ability to pay for it and to supply the human resources (professors, administrative and other support staff) to deliver it. Figure 3 highlights the growth in university level educators from 1960 to 2008. It is interesting to note that this growth trend is actually faster than the one for either population or university enrolments. Between 1960 and 2008, Canada's population roughly doubled, university enrolment nearly quadrupled, yet the number of full time faculty actually increased by a factor of just over 5 from approximately 8,000 to over 41,000. It is also curious to see a decline in full-time faculty during the mid to late 1990's; a period of fiscal restraint, followed by a continued upward trend even as both population and enrolment stabilized and, in some regions, actually began to decline.

Figure 3: FT Teaching Faculty at University 1960-2008



Source: Statistics Canada, 2011b&c
Table 477-0017 [3] and Table W475-485 [4]

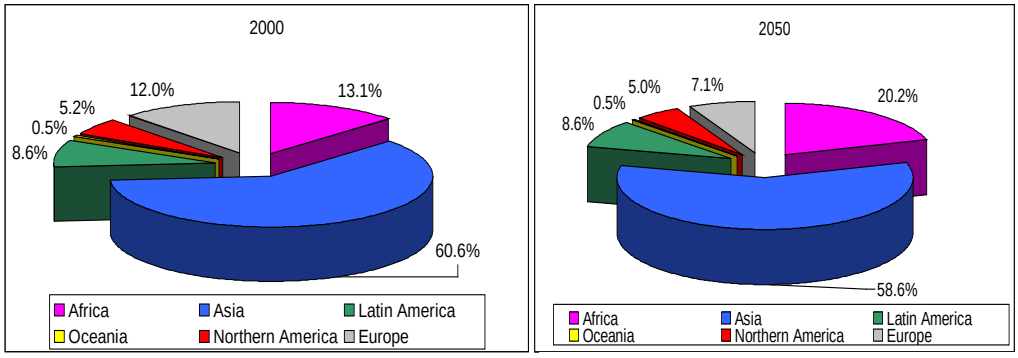
Whether this means that the reduction in direct employment will lag reduction in demand (as growth in employment led growth in demand) remains to be seen. What is clear is that other factors pushed the growth rate in university employment to expand much faster than simple demand would have suggested. It is possible that those factors will also ensure decline in employment at university will be slower than the drop off of domestic demand may otherwise indicate. This would have (and may already be having) implications for government that will be considered later on in this paper.

Section Two: The Current Demographic Shift

The analysis above highlights the reality that as the baby boom ages, similar multiple impacts can be expected. It is certain that such impacts will be the inverse of the ones seen during the birth and growth of the boom generation and it is likely that the impacts will be on the same, or similar, scale.

An aging population will change not only the dynamics of the demand for university education, but also government's ability to pay and a university's ability to staff. On this score, Canada is facing a significant short and medium term challenge. Birth rates in Canada and much of the developed world have declined. Figure 4 shows population shares by world region in 2000 and 2050.

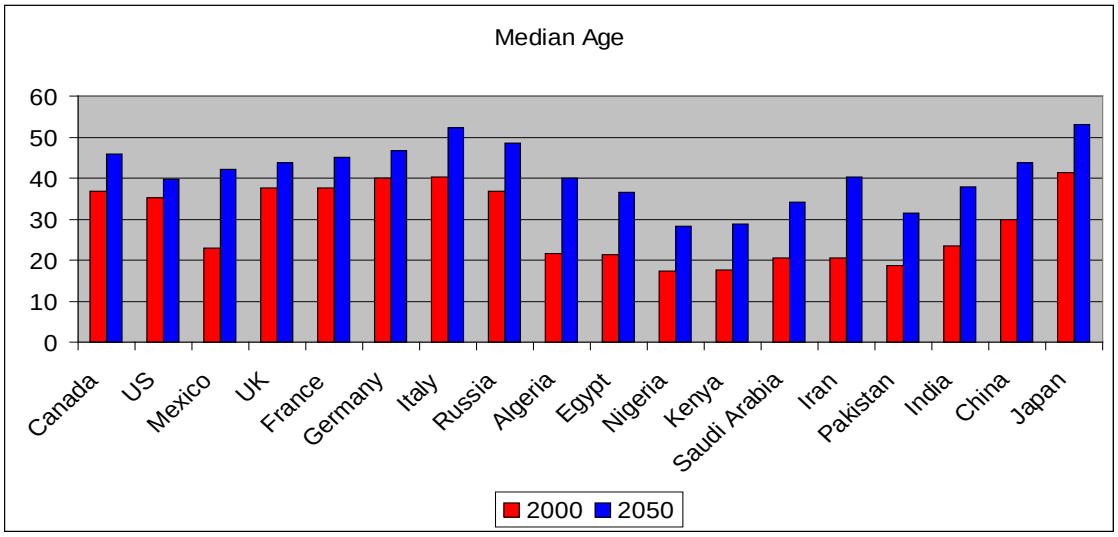
FIGURE 4



Source: United Nations – *World Population to 2300*

Figure 5 shows the median age (the age at which exactly half the population is younger and exactly half the population is older) in 2000 and in 2050 for a number of countries (arbitrarily chosen to give a broad view of the world's regions). What is evident is that everyone is getting older, but some more so than others. For universities, this could have a dramatic impact on enrolment numbers and human resources.
As Canada, the United Kingdom, France and Germany move from a median age in their 30's to their 40's (the United States benefiting slightly from a higher birthrate), the Middle East and Africa are experiencing a shift from their teens into their 20's and 30's. Countries like Mexico and China who have a younger median age than Canada now, are projected to catch up by 2050. Perhaps the most alarming examples of aging populations can be found in Italy, Russia and Japan where median age is projected to reach into the 50's. Author Mark Steyn (Nelson, 2006) calls this the 'demographic death spiral' where the population is too old to replace itself. For universities that rely on the international community to boost enrolment numbers this will mean a smaller pool of potential students to draw from and greater competition.

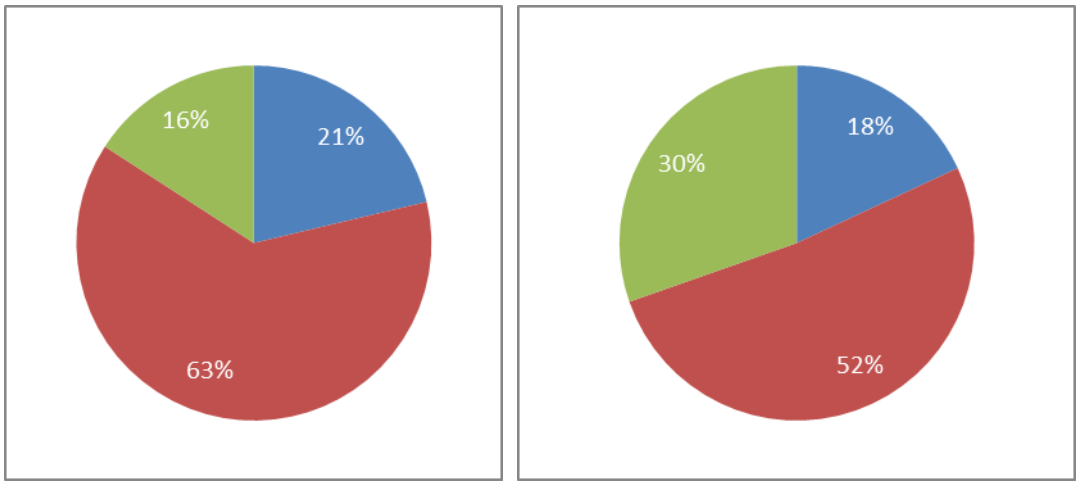
FIGURE 5



Source: United Nations – *World Population to 2300*

An aging population and stiff competition globally for immigrants (because everyone in the developed world is experiencing the same demographic challenges) does not bode well for Canada's demographic future. The news is actually worse here in Atlantic Canada. Figure 6 portrays the age projection for this region going forward. From 2010 to 2036, the proportions of both children and working age people drop, while the proportion of seniors almost doubles.

Figure 6 – Population Age Proportions 2010 and 2036



2010 2036

Source: Statistics Canada, 2011c
Tables 14-2 to 14-5[5]

The question of what happens when a society gets old is complex, yet critical in determining the way forward. What is known is that people retire and jobs don't get filled and demand for education falls, particularly education matched to economic necessity and workplace skills. Table 1 shows one projection of the future workforce based on current population trends while actually allowing for some slight improvements in current rates of both population growth and participation rates (Denton, Feaver & Spencer, 2009, p. 25).

TABLE 1: Projected Size of Labour Force (000's)

	2006	2021	2046	
Newfoundland & Labrador	253.1	219.1	146.6	**100,000 fewer workers**
Prince Edward Island	77.1	77.3	63.6	14,000 fewer workers
Nova Scotia	480.0	464.9	382.8	**100,000 fewer workers**
New Brunswick	389.6	369.7	292.6	**100,000 fewer workers**
Atlantic Canada	1199.8	1131.0	885.6	
Canada	17592.8	19976.3	20984.2	

Source: Denton, Feaver & Spencer, 2009 [6]

Table 1 has particular relevance in light of recent announcements around the Muskrat Falls hydro-electric project and the Federal Shipbuilding program. The projection of thousands of new jobs (and new workers and new children and, eventually, new university age cohorts) associated with these projects should, one might expect, slow outmigration and could actually contribute to increased immigration. It is important to put such announcements in demographic perspective however. Even the most enthusiastic estimates suggest a total peak employment impact of 11,500 jobs (The Conference Board of Canada, 2011, p. 4)[7] and of that only 6400 are forecast to be new workers added to the labour force. That includes direct, indirect and induced jobs and still only translates into six percent of the total number of workers expected to be lost in Nova Scotia alone in the next forty years, and only two percent of the total regional workforce that is expected to disappear.

Similarly, the 'thousands' (MacIntyre, 2011) of new jobs related to Muskrat Falls, even if every worker was new to the region, would hardly make a dent in the demographic trend. In addition, these upticks need to be set against continued losses like those recently announced related to the changes at the Bowater Paper Mill, the NewPage Mill and two Gypsum plants in Hants county. Many of those workers have already expressed an intention to leave the province ("NewPage closing," 2011, para. 3) and with 8200 jobs (Stats Canada, 2011d)[8] having been lost in the last twelve months, it seems likely the demographic trend has, as of yet, abated little if in fact it has not worsened.

Fewer workers mean fewer workers everywhere – including in the public and university sectors. Fewer workers also means less income and less income taxes. This decline in capacity will not be insignificant

and will not be confined to just one level of government or to one quasi-government sector. One estimate of the impact of the loss of 300,000 workers in Atlantic Canada projects not only $5.6 billion in reduced tax revenues, but a decline in the public sector workforce of 25 percent (C.Cirtwill, conversation with the author, November 22, 2011).

Such a decline means that every level and entity delivering public or publicly funded services will, as they are already, be searching for ways to 'get out' of promises they have made, or to meet those promises in new low cost ways. Simply put, even if they want to do something they will be hard pressed to find the money and even harder pressed to find the people. Universities, like all of the rest of us, will have to adapt.

Section Three: What We Did the Last Time

The last time Nova Scotia faced this type of fiscal constraint was during the federal government's battle against debt and deficit in the late 80's and early 90's. Federal transfers were stagnant or in decline and 'downloading' of programs and services became the new normal. The burden for universities, which during the boom times had been increasingly a shared federal-provincial expense, came in the bust time to fall more heavily on the province and the provincial taxpayer. Provinces responded as the federal government had, by shedding or centralizing programs.

THE MPHEC

"The Maritime Provinces Higher Education Commission (MPHEC) was established in 1974. The MPHEC is an "agency of the Council of Maritime Premiers." In June 1997, the Ministers of Education in New Brunswick, Nova Scotia and Prince Edward Island agreed, after extensive review, to renew and refocus the Commission's mandate through an "Agreement Respecting the Renewal of Arrangements for Regional Cooperation Concerning Post-Secondary Education" (MPHEC, n.d.).[9]

This 1997 review made the MPHEC the 'gatekeeper' for new programs at Maritime universities. It created a process of not only quality control but centralized approval of new degree areas and specializations. The objective was both quality assurance and constraint on future program growth. The MPHEC also was given a mandate of data collection, reporting and the promotion of a smooth transition between learning and work. The first ripples of the baby boom's departure from the workplace were being felt and, while unemployment still loomed large in the public discourse of the day, demographers were starting to ring alarm bells about the future (Denton, Feaver & Spencer, 1998). The MPHEC also was given an advisory function on efficiency and effectiveness as well as a mandate to lobby for skills recognition and prior learning assessment and skills transfer. Society needed cheaper, more flexible education; education that either kept people out of the workforce for the minimum amount of time or educated them while they remained in the workforce. The MPHEC was a first effort to deliver on that need.

AMALGAMATION AND CONSOLIDATION

While attempting to make university education more efficient and to restrain future growth, governments also set about downsizing existing delivery mechanisms. In Nova Scotia, they did so in a firm and aggressive manner. "In 1994 the NSTC (Nova Scotia Teachers College) community and its many supporters were shocked by the provincial government's decision to close the Nova Scotia Teachers College (Allumni Association of the Nova Scotia Teachers College)[10]Programs at Dalhousie, Saint Mary's as well as the University College of Cape Breton (now Cape Breton University) were also closed leaving St. Francis Xavier, Acadia, Mount Saint Vincent and Sainte Anne as the only postsecondary schools offering B.Ed. degrees in the province.

During this same time, Dalhousie amalgamated with the Technical University of Nova Scotia. This agreement was reached in 1996, with formal amalgamation happening the following year. A review process was also initiated for Nova Scotia's disparate system of independent vocational training centres. This culminated a decade later with the creation of the Nova Scotia Community College (NSCC) in 2007; a centrally administered, 13 campus community based college that offers programs around the province.

Section Four: Is the Current Approach Working?

It is clear that the thinking about universities has changed very little in the last twenty years. Our response to the last fiscal crisis was centralization, downsizing and tighter controls. Our response this time has been largely more of the same. The recommendations of the 2010 O'Neill report, *Report on the University System in Nova Scotia*, commissioned by the Nova Scotia Government, focused primarily on price controls, centralization, mergers and amalgamations of services and, in some cases, institutions (O'Neill, 2010, pp. 2-7). The government appears to be, at least on a piecemeal basis, following the advice provided by O'Neill. Student debt has been capped, forgivable support and upfront grants have been increased, tuition fees for professional programs largely deregulated, and increases in other tuition fees restrained. Dalhousie has, with the support of the government, entered into discussions towards a merger with Nova Scotia Agricultural College and the current review of the Nova Scotia College of Art and Design may well lead to a similar result.

This line of thinking is not unique to Nova Scotia. The Canadian Council of Learning (2011), throughout its existence and in its capstone report, called for greater coordination and centralization of education priorities on a national scale. The commissioners who reviewed the New Brunswick education system, meanwhile, came to very similar conclusions around the need to centralize service delivery and amalgamate institutions as did O'Neill in Nova Scotia (Commission on Post-Secondary Education in New Brunswick, 2007 & O'Neill, 2010). Their 'innovation' was in the idea of amalgamating not only universities but post-secondary institutions, creating a sort of Technical University of New Brunswick that would structurally look like the University of California or University of Toronto systems but content wise reflect high end technical institutions like the Massachusetts Institute of Technology and Rensaellar College. This approach too was not truly 'new', the concept of 'polytechnics' being a prominent one in the redesign of the NSCC a decade earlier.

This lack of innovative or transformative ideas around the policy environment for universities is the central one being considered in this paper. If what we want is a flexible, low public cost, high public reward system of higher learning, is the current approach of centralization and concentration the one most likely to deliver it to us? To answer that question, one must consider each of the three objectives of a university in its turn: value for the community, value for the economy and value for students. When assessing policy instruments, Weimar and Vining (1999) list five key criteria to consider: administrative feasibility, political feasibility, effectiveness, efficiency and equity. The following sections apply these criteria to the current approach of block funding and centralized program review and approval.

DELIVERING VALUE FOR THE COMMUNITY

Block grants are arguably *administratively feasible* as a means to deliver value for the community. With centralized decision making and single source funding, decisions should be relatively quick and reasonably coordinated around a set of clear and measurable goals. However, block grants and central control have, at least in the case of Maritime universities, created some system drag and wasteful duplication. The MPHEC is not the only step involved in decision making around new programs, with internal decision tools at each university, individual provincial education departments, and in many cases the Premier's office also getting involved. The process becomes cumbersome, administratively inefficient

and distorted. The still ongoing debate about how many teachers to certify and how many teacher education programs to have in the province is just one example of this.

From a *political feasibility* perspective, block grants have proven their value. Or rather, block grants involving multi-year terms seem to satisfy the criteria well. In a multi-year grant scenario, the public debate around university funding and access is limited to a few points in the year or on a cycle of years. The first two 4-year funding agreements in Nova Scotia have delivered relative 'quiet' in the middle years. Such fixed schedules make the issue of university funding more manageable. In addition, with multiple players involved in any negotiation, the balancing of competing interests allows more space for compromise and for drawing at least some of the players in line with current government priorities. Multiple players also allow for a dispersion of public concern across many stakeholders. It is difficult to lay 'blame' for specific failings on any one stakeholder. However, this lack of clarity, while sometimes of benefit to the government, is generally more a harm than a good. In the absence of clear performance indicators and public reporting on performance, the government is open to criticism for the failures or actions of others. Consider the ongoing anger about tuition. Government does not set tuition rates nor does it have direct authority to manage the costs which contribute to those rates, yet government bears the almost exclusive blame for any tuition increase.

The *effectiveness* of block grants in delivering predictable and reliable value to the community seems well settled. The evidence for this is in both the subjective assertions of many liberal arts defenders who highlight the intrinsic value universities deliver in Nova Scotia and the connections they make between this value and the need for continued and expanded core support (ANSUT, 2011). There is also considerable objective evidence of a valuable return to the community. The Association of Atlantic Universities (2011) published a report highlighting the many cultural and intellectual events held on campuses across the region and the considerable number of attendees at these events from the general public. For example, "more than 500,000 people attended cultural events, such as live theatrical and musical performances"; more than 17,000 members of the region's university community were involved in charitable undertakings" and; "universities were involved in more than 800 charitable community service initiatives during the year" (Association of Atlantic Universities, 2011).

From an *efficiency* perspective, block grants are generally not considered the ideal funding model. They give rise to what, in other contexts, has been described as a 'welfare trap' (McMahon, 1996). Economic theory and harsh practical experience suggest block grants will create the opportunity for rent seeking and give rise to the tragedy of the commons. These phenomena can be seen in Maritime universities. Infrastructure is allowed to decay until 'someone else', generally the federal government, launches a special plan to reinvest in it (the building Canada fund for example). Organized interests seek to maximize their return from university investment, either in the form of lower tuition or greater grants/forgivable loans for students or higher salary, lower teaching loads for faculty. This may in fact be one of the factors driving the higher than expected growth in the number of university teachers noted earlier. If organized interests are capturing some economic rent for themselves, you would expect to see both a faster growth in supply than the growth in demand would predict and you would expect to see that excess supply continue even as demand declines. Both of these trends are evident in the data tracking the number of university educators in Canada.

Finally, on the *equity* question, block grants to universities raise the issue of who exactly is the benefiting population and whether they are receiving an unreasonable benefit at the expense of others. Not every town in Nova Scotia has a university, nor would such a model be sustainable, so some degree of inequity is unavoidable. But, to the extent that an already privileged group in society (the middle and upper classes, highly educated and capable of accessing culture and art opportunities using their own resources)

receive a public subsidy for these activities , the inequity is likely indefensible. These questions of equity can only be answered with greater measurement and reporting not on the size of the events hosted and information disseminated by university communities, but on who accesses them. This again raises the issue of appropriate key performance indicators and clear accountability for desired results related to the attached purposes supporting the block funding.

DELIVERING VALUE FOR THE ECONOMY

Administrative feasibility related to the contribution of universities to economic growth and prosperity requires a different set of skills, knowledge, and structure than those attached to delivering a wider value to the quality of a community. In the latter, predictability, stability and clarity are key. In the former, flexibility, innovation and business acumen are essential. By using the same sets of individuals to achieve both tasks, the system inherently biases itself against administrative efficiency. Either economic investments will be made by individuals with no capacity to judge them, or community expenditures will be sacrificed on the altar of profit opportunities.

The muddle of players and purposes highlighted above also creates opportunities and challenges around the *political feasibility* of using block grants to support economic activity. With multiple point access for major decisions, the process is open to both actual and assumed political interference. The intended direction of the government could also be undermined by lobbying. This opens politicians and the process up to accusations of favouritism or meddling. These problems have been addressed in other industries by allowing investments to be handled by arms-length boards and agencies. This allows government to take full credit for success and diffuse blame for any missteps. The absence of those tools, or their proxy (clear detailed key performance indicators), in the process of giving major blocks of funds to universities, is a major gap in the political feasibility of the current model. This is especially true now as we see rising public expectations for openness and accountability.

The absence of these types of arms-length arrangements for monitoring university funding impacts may explain the slim evidence that the current block funding approach is *effective* in achieving improved economic performance. Certainly, universities are a large part of the NS economy – employing 11,578 people and spending approximately $700 million (Association of Atlantic Universities, n.d.)[11]. However, of those funds, fully $500 million is sourced here in Nova Scotia and another $100 million (or more) are direct or indirect investments or contributions from the federal government (base grant, student tuition, student loans, and other special incentive programs and investments).[12] A portion of every federal dollar is, of course, sourced from Nova Scotia taxpayers as well. At best, only $100 million of the spending by universities in Nova Scotia can truly be seen as new to our economy.

At the same time, the presence of the considerable research capacity at universities in Nova Scotia does not appear to be having a significant positive impact on the overall provincial economy. Nova Scotia's business productivity was up only 0.3 percent in 2010. The province was the only one in Atlantic Canada to have an increase below the national average improvement of 1.9 percent (Bundale, 2011, para. 8, 9). This poor performance is not explained, but it is certainly not helped by what O'Neill calls a "just beginning to develop" capacity for commercialization (O'Neill, 2010, p.145) and research support that only amounted to "55 percent of the national average" when comparing research funding per faculty member (O'Neill, 2010, p. 139). However, as with spending per student and average tuition figures, it is important to put these comparisons into context. As of 2008-2009, on a per capita (citizens not students) basis, Nova Scotia had 2.3 full time faculty members per 1000 population, the highest ratio in the country. The next highest was Newfoundland and Labrador at 1.8, while the Canadian average was 1.26. [13]

The ability to answer the efficiency question is also impacted by the absence of clear business case type impact assessments and arms-length administration and accountability. That could be mitigated, but not entirely addressed, by the use of clear centrally assigned and measured key performance indicators, but those do not exist in the current context either. Some effort has been made to calculate the multiplier of university spending, with one estimate being .60 for every dollar spent, and .62 of indirect or induced jobs for every direct job (Association of Atlantic Universities, n.d.). With the majority of the spending on university being domestically sourced, it means that these measures need to be more aggressively compared to the ratios for other types of investments.

The projected impact of the shipbuilding announcement, as an example, included a spending multiplier estimated at .82 (The Conference Board of Canada, 2011, p. 16), and the ratio of indirect and induced jobs to direct jobs (at peak production) is forecast to be 9000 to 2500, or almost 3.6 indirect or induced job for every direct one created (FAQ, Halifax Shipbuilding Bids, 2011, para. 13).

The level of confidence around securing a competitive return on the public investment in universities would be heightened if those investments were subject to the same controls and assessments now in place for other government spending in direct support of economic activity. The federal and provincial governments now routinely use arm's length boards with business expertise and analytical capability to choose between one investment and another and to track investment returns over time. It would be a reasonably straightforward exercise to move some, or all of the money earmarked for economic investment in university research and commercialization into these processes and institutions and out of the hands of public servants whose primary expertise is education or management and not investment attraction and maximization of value and return.

Such a move to a more arms-length and value for money type assessment could, however, raise equity concerns. Success breeds success and if one or more institutions had early success in leveraging their research and other activities into valuable commercial returns for themselves or the economy as a whole, they may see their share of the total government investment increase disproportionately. This would lead to a cycle of decline for the other institutions that would be or appear to be unfair on a regional or population basis depending on who the primary market of that university is. For example, supplemental funding for Mount Saint Vincent or for the Nova Scotia College of Art and Design has in the past been defended on equity grounds because of the need to support and encourage women in post-secondary studies or the expansion of the arts and culture community in Nova Scotia. At present, by largely lumping the funds for university investment into a single pool, the government can use population or capitation formulas to divide the funds. This, notionally at least, creates a level of equity among the various institutions in that none are more favoured than others. However, even the last two Memorandum of Understanding's (MOU's), while based on enrolment, had built in adjusting factors to ensure a base level of funding was contributed to smaller or more challenged institutions. Furthermore, equity considerations may be more appropriately addressed by differential block grants in the "community impact" area as opposed to accepting lower rates of return on investments intended specifically to increase the size or growth rate of the overall economy.

DELIVERING VALUE FOR STUDENTS

Block grants are *administratively feasible* as a means for delivering support for students. The operational structures exist at the governmental, departmental and university level to assess perceived need and to deliver targeted support. By 'buying seats' government can quickly expand or contract the supply of placements in various specializations thereby controlling cost or encouraging or discouraging fields of

study based on current and projected market demand. Other funding alternatives are, however, equally feasible. We have structures in place now to inform students about the labour market and to encourage them to make better choices. We have tools, systems and staff in place to addresses individualized need targeted at specific program choices. Shifting away from core block funding to a more student centred approach is not only administratively feasible, it is already occurring as student grants and forgivable loans continue to increase as a percentage of the total public expenditure on universities.

Block grants intended to support students are also *politically feasible* as they streamline the process for decision making around ensuring access to education. Block grants can be targeted at existing institutions, institutions located in the province and institutions targeted at specific sub-sets of the population (subsets based on residence, gender or skill set for instance). Control over the overall outcome and direction of university funding and growth is, to a considerable degree, heightened. However, block grants do not promote spending efficiency or personal responsibility; they tend to overemphasize the role of the public and underemphasize the role of the students. This is reflected in the debate around tuition fees and the lack of considered discussion of collective ability to pay or value for money. University education is increasingly considered a right as opposed to a responsibility, an investment by society as opposed to an investment by the student. As a result, the pressure is for ever greater spending on education. This creates counter pressure as taxpayers begin to resist 'footing' the ever rising bill. A system of funding support for students that more evenly balances the burden and encourages all sides to consider a broader perspective of both costs and expenditures would improve political feasibility and serve to rebalance the current debate.

A switch from block grants to a more student centred model would similarly enhance the *effectiveness* of funding to universities as a means to deliver value to individual students. The Organisation for Economic Co-Operation and Development (OECD) has demonstrated the effectiveness of competition in education as a means to achieve high quality institutions based on global evidence in the K to 12 sector (OECD, 2007, pp. 236-253). This evidence supports continued experimentation with increasing the level of control students have on the entire university sector and that means control over where funds for universities are directed. However, the OECD also highlighted that for this full effect to be achieved the institutions and stakeholders had to have real autonomy and power. This means that the more money which is directed to students the less power the MPHEC or the individual provinces should have to dictate or 'approve' programs or to control 'seats'. As long as government has the ability to constrain the offerings of university, system effectiveness is compromised.

Given the analysis above and the continued sustainability challenges reflected in multiple reviews of the Nova Scotia university system, it seems reasonable to conclude that the current model does not promote effective delivery of value to students. Block grants do little to connect money to value and even the introduction of key performance indicator's offer limited hope of securing such a connection absent serious and non-negotiable consequences for failing to meet the key performance indicator targets. In that regard, it seems reasonable to assert that the maximum percentage of funding should be placed in a delivery model with the maximum level of immediate accountability. The most immediate level of accountability is in the student's decision to attend, or not attend, a particular institution.

Similarly, a shift from block grants to a more diversified and student centred delivery model would enhance *efficiency* as well. Considerable work has been done to highlight the 'welfare trap' created by block grants in other circumstances. Critics of the Canadian equalization system highlight, for example, the greater level of services and spending in recipient provinces, services and spending out of line with both fiscal capacity in the subject provinces and average spending by other provinces (see Crowley & O'Keefe, 2006; Tiger, 2004; MacKinnon, 2005). There is also a considerable body of theoretical

literature (see Buchanan, 1950; Gordon, 2011) and a long history of real world experience (including the Healthy Living Tax Incentive (Doctors Nova Scotia, 2011), and the tax credit for public transit passes (Government of Canada, 2008) suggesting that putting the funds in the hands of the consumer constrains both total and public costs while maximizing value for money.

As with efficiency and effectiveness, there is little support for the notion that block grants to universities promote equity. A recent study by Statistics Canada found that the pattern of university participation rates being highest among youths from high-income families and among children of highly educated parents had remained unchanged throughout the period 1993-2001 (Statistics Canada, 2011e). The O'Neill report (2011) similarly found little evidence that participation rates across sub groups were varying over time. This led O'Neill to make two interesting recommendations. First, that since, " it appears from the empirical data that tuition fees and enrolment rates are not strongly (inversely) correlated", tuition fees should be allowed to rise. Second, that " if, as appears to be the case, a relatively high percentage of university students come from relatively more affluent families… the subsidy provided by middle-class taxpayers ought to be much more targeted to those with more significant financial disadvantages" (O'Neill, 2010, p. 82).

Conclusion

Moving to a funding model that recognizes and reflects the three core purposes of universities will require fortitude and determination. The stakeholders are both well entrenched and well organized. The opposition to the proposals of the New Brunswick review commission and the O'Neill report in Nova Scotia (and the student "strike" in Quebec) demonstrate just how active opposition to any change to existing entitlements will be. That said, we are already incrementally moving in the direction suggested by this paper.

Incremental increases in student oriented funding are being matched by slower increases in university block grants. This transition is being accompanied by the 'carrot' of multi-year memorandums of understanding. These typically four year agreements deliver a greater degree of certainty to all stakeholders and allow for experimentation with change over time. At the same time, universities are more regularly securing additional initiative specific funding through more normal industrial channels such as the Atlantic Canada Opportunities Agency (ACOA), the Regional Development Agencies (RDAs), Nova Scotia Business Inc. (NSBI) and the Nova Scotia Jobs Fund (NSJF - formerly the Industrial Expansion Fund.

A Memorandum of Understanding (MOU) modeled on three blocks of funding, each with their own unique accountability mechanisms is eminently possible, especially where it is matched with increased total funding levels in line with GDP growth, inflation and successful performance by universities. The negotiations between the government of New Brunswick and New Brunswick Universities actually appear to be moving in this direction, at least in terms of measuring results. Recent reports suggest the New Brunswick MOU will include three key performance indicator areas: the diversity of the University's students; the employability of the students; and, the quality and number of research done by the professors (C. Cirtwill, conversation with author, December 2, 2011).

The challenge will be in assigning the percentage division of the total university funding into these three envelopes. Especially in the short term, variations in the existing funds division can be expected to cause consternation, system gaming and, potentially, service disruptions. Any initial target set will be, in essence, almost entirely random but the option of negotiating that starting point seems a non-starter. Given past and current history and positions, the entrenched interests are more likely to use any such negotiation to drag out and eventually halt any transition than they are to actively contribute to it. A better approach is to set the initial objective as some specific shift in the current balance, the author would suggest moving from the current 90/10 split in university/student funding to a more equitable 50/50 division, or rather a 20/30/50 division between university block funding, economic investments funneled through existing agencies like NSBI, and student funding. The government could set annual targets for moving funding from one priority to the other over a period of five or even ten years, and commit to negotiations at some future point on the go forward division among the three envelopes based on the evidence gathered during the initial experiment period.

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