

**MEASURING SUSTAINABLE DEVELOPMENT**

---

**THE GENUINE PROGRESS INDEX**

---

**ECONOMIC VALUE OF CAP SITES AS INVESTMENTS IN  
SOCIAL CAPITAL**

AN ANALYSIS BASED ON GPI ATLANTIC'S SURVEY OF BRITISH COLUMBIA'S  
RURAL CAP SITES AND THE REPORT: "IMPACT OF CAP SITES ON  
VOLUNTEERISM" (JANUARY 2002)

---

*Prepared by:*  
Ronald Colman, Ph.D  
Executive Director, GPI Atlantic

Survey Administration: Karen Laine and Cat Dextrase

Prepared for Industry Canada: Community Access Program

March, 2002

## EXECUTIVE SUMMARY

In January, 2002, GPI Atlantic prepared a 45-page report, plus 33 pages of detailed appendices, entitled, *Impact of CAP Sites on Volunteerism*, based on the results of a survey of British Columbia's rural CAP sites conducted in October-November, 2001. This paper presents and re-organizes those results with a view to elucidating the *economic value* of CAP sites. Chapters 2 and 3 present results that are already included in chapter 5 of the January, 2002, report, while chapters 4 and 5 of this paper present references to aspects of economic valuation not included in the January report, and that provide opportunities for further research and investigation.

The January report indicated that the benefits of CAP sites extend far beyond the provision of Internet access and computer skills training. Survey results demonstrated that CAP sites also play an important role in strengthening rural communities, enhancing communication and reducing isolation, facilitating inclusion of youth, seniors, and disadvantaged groups, promoting equity, and providing opportunities for education, employment, and local learning. The purpose of this paper is to point to the economic value of those wider functions.

While the GPI CAP site survey allows the value of CAP volunteer activity to be quantified for the first time, the survey was not designed to quantify other economic values. Those values derive largely from the strengthening of "social capital," in which CAP sites play a vital role. Beyond the quantification of voluntary activity, this paper therefore simply points to other potential economic benefits of CAP sites that are presently not adequately recognized, with reference to the relevant literature on likely economic linkages.

Both the monetary valuations of CAP volunteerism, and the circumstantial evidence on other likely economic benefits, together indicate that CAP sites may provide a return on investment that is much greater than hitherto supposed. Carefully designed studies, preferably using control communities that do not have CAP sites, will be necessary to test these hypotheses.

Key economic values identified in this paper are:

- CAP volunteers contribute an estimated 630,000 hours of voluntary time each year to British Columbia's rural CAP sites. These volunteer hours are worth \$9.5 million annually, and are the equivalent of 330 full-time jobs. This estimate is based on the replacement value of voluntary work assessed at a rate of \$15 an hour. Survey evidence indicates that every hour of paid coordinator time leverages an additional 2.5 hours of volunteer time. The results indicate that modest monetary investments in CAP sites and staffing produce a significant return on investment in volunteer hours that is invisible in standard accounting mechanisms.
- CAP sites make an additional *indirect* contribution to the market economy by providing training in technical, computer and office skills; management and organization; communications; fundraising; and interpersonal skills; as well as work experience and specialized knowledge of particular subject areas. CAP volunteers teach courses in Internet and email use; basic computer skills; word processing; web page design; spreadsheets; database design, and other computer skills. Two-thirds of CAP coordinators reported that their CAP site work had improved their employment prospects; 79% stated

that learning new skills was a very important (47%) or important (32%) motivation for them in their work. CAP youth and summer employment programs similarly provide invaluable skills training for the job market.

- CAP sites offer access to employment, education and training opportunities, thereby improving the earnings potential of beneficiaries, and providing significant economic benefits in direct contributions to the economy and the tax base.
- Without CAP sites, there is a real danger that the age of information technology could deepen social exclusion and the social divide between those who have access to IT and all the opportunities it provides, and those who do not. This could undermine social cohesion, increase alienation, and produce significant social costs. The Community Access Program plays an essential role in levelling the playing field, in creating opportunities for disadvantaged groups, and in promoting equity and social inclusion. That role provides significant indirect economic benefits that are invisible in the conventional accounts, but can be substantial.
- By providing access to employment, education, and skills training opportunities for vulnerable and disadvantaged groups, CAP sites potentially provide significant savings in avoided health care, justice, and social welfare costs. Poverty, inequality, poor education, and social exclusion are all highly correlated and statistically associated with higher rates of illness, premature death, crime, and mental distress, all of which are costly to society. This paper provides references to the research literature on these correlations, to point to the indirect economic benefits that may be provided by CAP access to employment, education, training, and income opportunities.
- There is a growing literature correlating equity, access to higher education, and social cohesion with improved economic performance. Although the GPI site survey provided evidence that CAP sites perform these functions, there are as yet no empirical data to confirm the correlation, and it remains a hypothesis waiting to be tested. Assessing the impact of investments in social capital on productivity, competitiveness, and economic growth is the most difficult aspect of economic value to quantify, and a research area that is only in its infancy.

In sum, the GPI survey results demonstrate that CAP sites are a significant investment in education, training, information technology dissemination, job access, and community building. This investment not only provides a direct return to the market economy in volunteer hours, skills training, and access to employment opportunities, but may also produce considerable indirect savings to justice, health, and social service budgets, and more elusive benefits in improved economic performance. Despite these substantial economic benefits, the high return on investment provided by CAP sites, and the leveraging of additional volunteer hours for every paid staff hour, many CAP sites are financially insecure and uncertain of their future.

The survey results provide substantial new evidence on the value and impact of the Community Access Program not only on volunteerism, but on other important components of social capital. It is hoped that these results and the GPI valuation approach will provide a more comprehensive basis for assessing the economic value of the Community Access Program than has existed to date. In addition, the GPI method demonstrated in this study can be used to evaluate investments in future CAP funding from a full-benefit / full-cost accounting perspective, and thus provide a more stable financial basis for a service that has clearly provided remarkable benefits for the Canadian economy and society.

## TABLE OF CONTENTS

<b>Executive Summary .....</b>	<b>2</b>
<b>Chapter 1: CAP Sites as Investments in Social Capital .....</b>	<b>5</b>
1. The Capital Approach to Accounting .....	5
2. Defining Social Capital .....	7
<b>Chapter 2: The Economic Value of CAP Volunteerism.....</b>	<b>8</b>
1. Contribution of Voluntary Work to Social Capital .....	8
2. Why Measure the Economic Value of Voluntary Work.....	9
3. Market Value of CAP Volunteer Hours.....	10
<b>Chapter 3: Economic Value of CAP Site Skills Training.....</b>	<b>13</b>
<b>Chapter 4: Economic Benefits of CAP Access and Equity Promotion .....</b>	<b>15</b>
1. Direct Benefits of Access to Employment and Education Opportunities .....	15
2. Indirect Savings through Avoided Social Costs.....	17
2.1 Avoided Health Care Costs.....	17
2.2 Avoided Justice Costs .....	19
<b>Chapter 5: CAP Impacts on Productivity and Economic Performance.....</b>	<b>21</b>

# CHAPTER 1

## CAP SITES AS INVESTMENTS IN SOCIAL CAPITAL

### **1. The Capital Approach to Accounting**

CAP sites are conventionally viewed as providing computer skills training that can facilitate the diffusion of information technology in Canada, and thereby aid the country's transition to an information-based economy. That is a valid and well-documented function of CAP sites that is in accord with our traditional measures of progress, which are in turn based on the goal of robust and stable economic growth.

However, just as our standard measures of progress provide only a very partial (and potentially misleading) description of social wellbeing and prosperity, this usual justification of the Community Access Program misses some of its most important functions. In fact, the economic value of CAP sites is far greater than prevailing descriptions indicate, and CAP sites provide a significant return on investment that is not captured by assessments of the program based on computer skills training and Internet access alone.

The true economic value of Canada's Community Access Program can only be understood against the background of a capital approach to accounting that differs markedly from the current income approach conventionally used to assess economic growth and prosperity. While our economic growth statistics do measure investments in produced or manufactured capital, they do not adequately account for the value of human, social, or natural capital.

For example, health promotion and disease prevention, like skills training, are investments in human capital. Conversely, an increased incidence of disease or of illness risk factors like high blood pressure, smoking, obesity, or physical inactivity, is literally a depreciation of human capital. And yet, the economic value of health promotion is not properly acknowledged in our conventional accounting system. On the contrary, the Gross Domestic Product (GDP) counts spending on doctors, hospitals, and drugs as contributions to economic growth and prosperity, but gives no explicit value to health promotion as an investment in human capital. Not surprisingly, disease prevention has a low priority on the policy agendas of governments and accounts for only 2% of our health care budgets.

Here is a concrete example: In the last 15 years, rates of obesity have doubled in Canada, from 13% in 1985 to 29% at the end of the 1990s with very little government alarm or action, because the consequent depreciation of human capital remains invisible in our measures of progress. And yet, the resultant increased susceptibility of Canadians to diabetes, hypertension, heart disease, gallbladder disease, and some cancers carries economic costs as surely as the deterioration of produced capital like machinery. Those costs will manifest both directly in increased health care expenditures, and indirectly in lost productivity through disability, absenteeism, and premature death, just as the disrepair of machinery will result in a reduced flow of goods and services in the future. Similarly, the closing of a CAP site and the consequent reduced access of disadvantaged groups to employment, education, and training opportunities, can be described as a dis-investment in human capital.

Conversely, an increasing number of firms are beginning to see work-site health promotion programs and skills training seminars as providing a significant return on investment. Careful analyses of health interventions aimed at reducing weight, stress, smoking rates and other risk factors, improving diet, and increasing levels of physical activity, have reported benefit-cost ratios of \$5 in reduced employee absenteeism costs for every \$1 invested, and nearly \$4 in avoided medical costs for every \$1 invested.<sup>1</sup> These savings directly affect the bottom lines of companies, and have a direct impact on government budgets.

But just as the value of human capital remains hidden in our conventional economic accounts, the value of natural and social capital similarly remains unaccounted for and unrecognized. The depletion of fish and timber stocks is perversely counted in the GDP as economic gain, since only the fish and timber sent to market are given explicit economic value. The more fish we sell and the more trees we cut down, the faster the economy will grow. The depreciation of natural capital remains invisible in our standard accounts, and the economic costs of resource depletion will not show up until fish stocks collapse or until our forests can no longer provide high-value timber for the market.

These brief examples illustrate why the lack of valuation of human, social, and natural capital can send such misleading signals to policy makers, undermine essential investments in non-produced capital, and consequently blunt vital policy initiatives. The absence of such valuations frequently results in heavy-handed government regulation or intervention after the fact, like pollution remediation, to compensate for social costs that had previously been regarded as “externalities” and excluded from market prices and production costs.

By contrast, the inclusion of non-produced capital values can increase market efficiency by accounting for the full range of actual benefits and costs of production. The Genuine Progress Index (GPI), consisting of 22 social, economic, and environmental components, is based on a capital approach to accounting that recognizes investments in human, social, and natural capital as providing a return on investment as definite as investments in manufactured capital. The GPI similarly counts the deterioration of these assets as capital depreciation that can predict future costs and a decline in the flow of goods and services just as machinery in disrepair will compromise future production and undermine competitiveness.<sup>2</sup>

If Canada is to remain strong and competitive, it will have to rely on solid investments in *all* forms of productive capital. Conversely, if the country’s human, social, and natural wealth deteriorate, then present prosperity may be illusory and carry the seeds of future decline. To understand the value of Canada’s Community Access Program, and of investments in CAP sites, this full capital approach to accounting is essential. In light of the survey results described in GPI Atlantic’s January, 2002, report on *The Impact of CAP Sites on Volunteerism*, it is particularly necessary to elucidate the concept of social capital.

---

<sup>1</sup> Goetzel, Ron, “The Financial Impact of Health Promotion,” *American Journal of Health Promotion* 15 (5), May-June, 2001, page ii, and pages 296-320.

<sup>2</sup> For more details on the GPI capital accounting approach, please see GPI Atlantic, *Measuring Sustainable Development: Application of the Genuine Progress Index to Nova Scotia*, January, 1998.

## 2. Defining Social Capital

The January 2002 GPI Atlantic report on *The Impact of CAP Sites on Volunteerism* offered definitions of social capital that can be useful in assessing the true value of the Community Access Program in Canada. According to Robert Putnam:

*“Social Capital refers to features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit.”*<sup>3</sup>

Similarly, Michael Woolcock speaks of “the norms and networks that facilitate collective action.”<sup>4</sup> As the GPI survey results clearly demonstrate, Canada’s CAP sites fit that definition and have become a key component of the country’s social capital assets.

Social capital has economic value through the provision of essential infrastructure for wealth creation. Markets, for example, require certain basic rules of exchange and conduct, a fundamental social trust that contracts and obligations will be honoured, and an effective legal system that can ensure the enforcement of these contracts. Researchers have also found correlations between productivity and sustainability on the one hand and effective governance on the other.<sup>5</sup> Enhancement of community cooperation and solidarity is therefore an *investment* in social capital that may in turn contribute to economic prosperity, productivity, and competitiveness.

This may seem obvious. But government cost-cutting strategies more often define investments like the Community Access Program as “costs,” and see their reduction as “savings” to the public purse, rather than as a potential depreciation of social capital. Conventional accounting mechanisms have no way of recording these expenditures as investments in social capital. On the contrary, when CAP funding is counted as a cost in government ledgers (and thus subject to potential cuts in an era of fiscal restraint), analysts fail to recognize the significant return on investment produced by CAP sites functioning as social capital assets.

That investment can only be understood if the functions performed by CAP sites are seen not simply as services to individuals (although that too is important), but as potential agents of social inclusion, human capital accumulation, and a profound and far-reaching strengthening of communities. Paradoxically, the income generated through jobs is counted in our conventional accounting mechanisms, but the role of CAP sites in facilitating job searches is not counted as an investment in that outcome. A “cost-conscious” government may balance its books by cutting CAP site funding, while the longer-term impact of that decision on economic prosperity remains invisible.

Survey results and responses attesting to the value of CAP sites as investments in social capital are detailed in chapter 3 of GPI Atlantic’s January 2002 report on *The Impact of CAP Sites on Volunteerism*. That study reported on the value of CAP sites in strengthening community; enhancing communication and reducing isolation; facilitating inclusion of youth, seniors, First Nations communities and disadvantaged groups; promoting equity; and providing opportunities for education, skills training, employment, and local learning. This paper will focus on the economic value of those investments, with particular emphasis on the economic value of volunteer work performed at CAP sites.

---

<sup>3</sup> Available at: <http://www.bsu.edu/classes/white2/honors/teaching/soc.html>

<sup>4</sup> Helliwell, John, *The Contribution of Human and Social Capital to Sustained Economic Growth and Well-Being*, OECD and HRDC, Hull, Quebec, 2001.

<sup>5</sup> See for example, Levy, Marc, “Beyond Indicators: Lessons Learned from the Environmental Sustainability Index,” presentation delivered to Environment Canada, Toronto, 5 March, 2002.

## CHAPTER 2: THE ECONOMIC VALUE OF CAP VOLUNTEERISM

### 1. Contribution of Voluntary Work to Social Capital

Voluntary work is a key component of social capital. The network of community and voluntary organizations is the backbone of what is variously described as the “social economy” or “civil society.” The strength of these organizations, in turn, is regarded by social scientists as a critical indicator of healthy democracy, because the social economy is the arena in which people participate most fully as citizens, freely choosing their interests and associations.<sup>6</sup> In other words, CAP volunteers have freely *chosen* to give their free time to CAP sites, because they regard that as a worthwhile use of their time.

Weak civil societies, that lack strong networks of community and voluntary organizations, are more subject to social unrest, alienation, and disintegration. They may be associated with higher rates of crime, drug abuse, and other dysfunctional activities that eventually produce much greater social and economic costs than wise investment in the community and voluntary organizations that strengthen the fabric of civil society. For these reasons, the strength of society’s commitment to voluntary work is, for many social scientists, a touchstone of social health, stability, and harmony.

For many communities, CAP sites have become the cornerstone of that civil society. It is clear from the descriptions of CAP survey respondents that the country’s rural CAP sites do perform these wider functions. CAP sites are gathering places for the community, the “hub” of activities for many small towns, and a force for social cohesion and inclusion. The functions of CAP volunteers therefore go well beyond computer training and technical skills upgrading, and contribute to the social fabric, social capital, and wellbeing of their communities in a larger sense.

Jeremy Rifkin describes civil society as “the millions of people in every country who give of themselves to contribute to the common weal. It’s the ancient economics of gift-giving.... Each person giving of themselves to the community, maximizes their own self-interest.” Rifkin recommends that schools not only train students for the market economy, but also encourage youth to “go out into their community, as part of their educational experience, and work in a non-profit neighbourhood organization of their choice, to learn social capital.” And he predicts that in the 21st century, workers will spend 25 hours a week in the market economy and the rest with family and volunteering in community.<sup>7</sup>

To its credit, Industry Canada has now recognized that “the backbone of the Community Access Program is its volunteer force,” and that “empirical data about the impact of CAP on this valuable resource is not available.”<sup>8</sup> That was the primary motivation behind GPI Atlantic’s CAP site survey in British Columbia.

---

<sup>6</sup> Bharti, Manisha, “Building on the Social Economy,” *Report of the Advisory Committee on the Changing Workplace*, Human Resources Development Canada, June, 1997, pages 36-43.

<sup>7</sup> Rifkin, Jeremy, “The End of Work,” *New City Magazine*, 17 (4), Summer, 1997, pages 10-18.

<sup>8</sup> Industry Canada, “Statement of Work,” in Contract for Services with GPI Atlantic, contract no #5001613.

## 2. Why Measure the Economic Value of Voluntary Work

If the motivation for volunteering is so clearly altruistic, why assign an economic value to it? Though motivated by generosity and care, voluntary work does have a direct economic value. If it were suddenly withdrawn, either our standard of living would deteriorate markedly, or else government and the private sector would have to provide the lost services for pay. If all CAP volunteers were to cease their activities, many CAP sites would be forced to close. The “replacement value” of voluntary work provides a means to assess the economic value of volunteerism.

CAP site volunteers assist members of their communities in learning and upgrading skills, looking for work, accessing educational opportunities, acquiring information, facilitating communication, and a wide range of other activities. All these activities have economic as well as social value. If these activities were withdrawn, the wellbeing of rural communities would suffer or the services would have to be provided for pay. According to the architects of the original U.S. GPI:

*“Work done [in the voluntary sector] is the nation’s informal safety net, the invisible social matrix on which a healthy market economy depends.... Despite its crucial contribution, however, this work goes entirely untallied in the GDP. The GPI begins to correct this omission.”<sup>9</sup>*

Particularly in an era of fiscal restraint and government cutbacks, we depend even more directly on the work of volunteers. According to Finance Minister, Paul Martin:

*“There is no question that governments have to rely on volunteerism more than ever in a time of cutbacks, and that makes it absolutely essential that we do all we can to recognize the importance of volunteers.”*

And former Health Minister, David Dingwall, admitted:

*“Governments have only woken up in recent years and started to acknowledge the significant contributions that volunteers make.”<sup>10</sup>*

And yet, this vital contribution remains unrecognized and unvalued in our standard measures of progress based on the GDP, which counts only monetary transactions. Yet the GDP is the economic accounting system from which policy makers take their cues and which guides the behaviour of governments, businesses, and individuals. The volunteers who staff CAP sites are therefore invisible in conventional assessments of the Community Access Program, and the impact of CAP sites in stimulating unpaid community service also remains uncounted, unmeasured, and therefore “de-valued.”

Although voluntary work contributes direct value to the economy, it appears neither in the employment statistics (even though it is definitely productive work,) nor in our output measures (even though it produces clearly defined services.) Offering a computer training course in a CAP site is counted as a contribution to the GDP, to economic growth, and to prosperity when it is paid for, but not when it is voluntary.

What is not counted and measured frequently fails to find its place on the policy agenda. Thus the 9% nationwide decline in volunteer work in the last decade is almost unknown to policy makers, and has stimulated no debate in the House of Commons or in any provincial legislature. Had the economy declined

---

<sup>9</sup> Cobb, Clifford, Ted Halstead, and Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, September 1995, page 15.

<sup>10</sup> Both statements cited in *Maclean’s* magazine, July 1, 1996, page 40.

by 9%, we would declare a national emergency and given the highest priority to stimulating the economy. But a similar decline in voluntary work aroused almost no interest, largely because it is excluded from our conventional measures of progress and evaluation

This invisibility can be potentially dangerous, because critically important unpaid work may not receive the necessary support, and because individuals under financial or time stress may first cut back on voluntary commitments as “luxuries” they can no longer afford. GPI Atlantic’s survey of British Columbia CAP sites elicited responses that point to both these dangers. Many CAP site coordinators expressed anxiety over uncertain future funding, and several responses indicated that many CAP volunteers and coordinators suffer from significant time stress and burn-out.

Statistics Canada data indicate that overtime hours are increasing for the highly educated, who also have by far the highest rate of participation in the work of volunteer organizations.<sup>11</sup> The nationwide decline in voluntary work indicates that volunteerism may be getting squeezed out by growing labour market pressures. Similarly, analysts have noted that “women’s ‘double day’ of paid work and unpaid domestic labour” has resulted in the severe ‘time crunch’ that now characterizes the female life course.<sup>12</sup> Given the very high proportion of CAP site coordinators who are middle-aged women, many with children, this potential time crunch may threaten the current high level of voluntary work in British Columbia’s rural CAP sites.<sup>13</sup> Until we value unpaid work, however, this time stress will remain as invisible as the decline in voluntary work.

By making the economic value of voluntary work explicit and thus more visible, we increase the likelihood that vital voluntary services will be supported and that participation rates will remain high. In a study of the economic dimensions of volunteer work for the Department of the Secretary of State, Canada, David Ross writes:

*“When recognized at all, volunteer work is most often seen as isolated individual acts of charity; consequently, it remains largely outside the framework of policy discussions on the Canadian economy. The lack of reliable statistics on volunteer activity at the national level has tended to reinforce this invisibility.... It is hoped that by illustrating the economic significance of voluntary activity...it will become more visible and valued, and that both the public and policy makers alike will give volunteerism the increased attention and assistance it deserves.”<sup>14</sup>*

By explicitly valuing the work of CAP volunteers in economic terms, the contributions of CAP sites to rural communities in Canada may also become more fully appreciated.

### **3. Market Value of CAP Volunteer Hours**

The GPI survey found that 59% of CAP site coordinators in rural areas of British Columbia contribute at least some of their hours on a voluntary basis. These coordinators contribute an average of 10 hours per week of volunteer time. In fact, one-third of all CAP site coordinator hours in rural BC are contributed on

---

<sup>11</sup> Statistics Canada, *Perspectives on Labour and Income*, Winter, 1997, catalogue no. 75-001-XPE, pages 5-6, 13-14, and 27; Webber, Maryanne, *Volunteers in Sports and Recreation*, Labour and Household Surveys Division, Statistics Canada, November, 1989; Duchesne, Doreen, *Giving Freely: Volunteers in Canada*, Statistics Canada, Labour Analytic Report No. 4m catalogue 71-535, No. 4, August, 1989, pages 22-23.

<sup>12</sup> Frederick, Judith, *As Time Goes By...Time Use of Canadians*, Statistics Canada, catalogue no. 89-544E, page 7.

<sup>13</sup> Colman, Ronald, *Impact of CAP Sites on Volunteerism*, pages 3-4.

<sup>14</sup> Ross, David, *Economic Dimensions of Volunteer Work in Canada*, Department of the Secretary of State, January 1990, page 7.

a voluntary basis. Extrapolated to all 390 rural CAP sites in British Columbia, it is estimated that CAP site coordinators contribute about 120,250 volunteer hours per year. Another way of describing the economic value of these volunteer hours is to note that every two hours of paid CAP site coordinator time leverage an additional hour of volunteer time by coordinators.

As noted above, if these CAP site coordinators were not contributing this voluntary work, there are only two alternatives. *Either* a significant portion of current CAP site services would no longer be offered to rural communities, resulting in a severe depreciation of social capital, and a significant decline in the quality of life, *or* these volunteer hours would have to be replaced for pay. The second scenario is used to estimate the economic value of the volunteer hours offered by CAP site coordinators.

According to Statistics Canada, the “replacement cost (specialist)” value of volunteer hours in British Columbia is about \$14 an hour (1997\$).<sup>15</sup> This reflects the hourly wage rate that would be paid in B.C. to replace existing voluntary activities at market prices for the types of work that volunteers do. This wage rate is almost certainly an underestimate for CAP site coordinators given (a) the specialized nature of their work, and (b) the fact that most coordinators are highly educated. By contrast, the Statistics Canada estimates include voluntary work that requires lower skill levels, such as domestic services.

For the purposes of this study, therefore, a conservative replacement cost estimate of \$15 an hour (current dollars) is used. According to this estimate, CAP site coordinators contribute \$1.8 million worth of volunteer services per year in British Columbia. This is the equivalent of 63 full-time jobs.

Based on these survey results, Industry Canada can now extrapolate from the British Columbia data to estimate the total economic value of all volunteer hours offered by CAP site coordinators throughout Canada. Assuming the same rate of voluntary work throughout the country as in B.C., one can multiply the total number of Canadian CAP sites by 6.1 hours per week, or 318 hours per year, to estimate the total volunteer hours offered by CAP site coordinators. The resulting number can then be multiplied by \$16 (the average hourly rate for volunteer work in Canada) to produce a conservative estimate for the economic value of this work.

It should be noted that these economic valuations are conservative from another point of view as well. They measure only the value of labour inputs, and not the value of the actual work outputs (which includes the value of capital inputs). To be truly comparable to GDP statistics, output valuations would be necessary. Unfortunately, methodologies are not sufficiently developed to assess the value of unpaid work from an output perspective, although important new work by the United Nations Institute for Research and Training for the Advancement of Women (INSTRAW) is leading in this direction.<sup>16</sup>

Forty-three percent of CAP site coordinators have other voluntary work commitments outside their CAP site work accounting for an additional 7.5 hours per week on average. Extrapolated to all 390 of British Columbia’s rural CAP sites, we can estimate that CAP site coordinators contribute 1,248 additional

---

<sup>15</sup> Statistics Canada, *Households’ Unpaid Work: Measurement and Valuation*, Studies in National Accounting, System of National Accounts, catalogue no. 13-603E, #3, Statistics Canada, December 1995, adjusted to 1997 constant dollars using the Consumer Price Index. The exact value in 1997 dollars is \$13.68 for British Columbia, which is below the Canadian average for the same kind of work (\$15.66).

<sup>16</sup> Harvey, Andrew, and Arun K. Mukhopadhyay, “The Role of Time Use Studies in Measuring Household Outputs,” section 3B of “Accounting for Time,” report on work carried out for INSTRAW, *Conference of the International Association for Research on Income and Wealth*, Lillhammer, Norway, August 18-24, 1996. See also Colman, Ronald, *The Economic Value of Household Work in Nova Scotia*, GPI Atlantic, Halifax, pages 94-95, for alternative valuation methodologies of unpaid work.

voluntary work hours per week outside their CAP sites, or 64,896 hours per year. Added to the 120,250 hours of CAP site voluntary work, CAP site coordinators make a total voluntary work contribution to the British Columbia economy of 185,146 hours per year, worth \$2.8 million.

The above statistics refer only to the work of CAP site coordinators, who were the subjects of this particular survey. In addition to the voluntary hours put in by these coordinators, as noted above, there are many other volunteers who contribute to the effective functioning of CAP sites throughout the country. Indeed, 61% of CAP site coordinators report that they have volunteers working with them or for them to help provide CAP site services.

Those reporting that they did have volunteers working with or for them have an average of 6 volunteers who support their work. Averaged over all rural CAP sites, including those that do and do not use volunteer support, this amounts to 3.5 volunteers per site. This means that there are an estimated 1,355 CAP volunteers serving British Columbia CAP sites, in addition to the CAP site coordinators.

CAP sites that have volunteers (about 60% of all CAP sites) rely on an average of 43.4 volunteer hours per week per site. Averaged over all rural CAP sites, including those that do not use volunteer help, this averages out to 25.1 hours per site. This means that these CAP volunteers contribute an estimated 9,800 hours per week, or more than half a million hours per year in support of rural CAP sites in British Columbia. Added to the 120,250 voluntary hours of CAP site coordinators, it is estimated that a total of 630,000 unpaid hours per year are contributed by volunteers to B.C.'s rural CAP sites

At an estimated replacement value of \$15 an hour, the voluntary work of these CAP volunteers is worth more than \$7.6 million a year to the British Columbia economy. Added to the voluntary work hours of CAP site coordinators, the **total economic value of volunteer hours contributed at British Columbia's rural CAP sites is estimated at \$9.5 million annually. This is the equivalent of 330 full-time jobs.**

This sum can be regarded as a substantial cost saving. The work of CAP volunteers saves government and the private sector nearly \$10 million a year by providing services that do not have to be funded. From the results of the survey of rural CAP sites in British Columbia, it is estimated that every hour of paid CAP coordinator time leverages an additional 2.5 hours of volunteer time (250,000 paid CAP site coordinator hours, and 630,000 volunteer hours.) This means that even modest financial investments in support of CAP sites yield a significantly higher return in services provided.

In addition, work-related expenses are generally reimbursed to paid staff. Volunteers, on the other hand, frequently pay expenses from their own pockets. As noted by one analyst:

*A little recognized economic dimension of volunteering is the non-reimbursed expenses volunteers bear while carrying out their volunteer activities. In reality, expenses borne by volunteers could be considered a form of dollar donation, since, without these covered expenses, the work of voluntary organizations would be curtailed. Out-of-pocket expenses include costs such as babysitting, transportation, meals away from home, special clothing and supplies, and equipment necessary for the performance of the volunteer activity.*<sup>17</sup>

CAP site coordinators reported putting out an average of \$15 a week, or \$784 a year, in usual non-reimbursed expenses in order to do their CAP site work. Some of them also had significant personal one-time expenses like computer equipment, which they needed to purchase in order to do their CAP site

---

<sup>17</sup> Ross, op. cit., page 16.

work. Averaged out over all CAP sites, these one-time expenses came to another \$200 a year. For the province of British Columbia as a whole, this means that rural CAP site coordinators paid an estimated \$384,000 out of their own pockets in the year 2001 in order to do their work.

If we assume that these expenses are apportioned in direct proportion to the ratio of volunteer to paid coordinator work hours, then we could estimate that volunteer CAP site coordinators in B.C. paid about \$124,000 out of their own pockets in order to do their work. This sum, which *is* reflected in the GDP and economic growth statistics, should be added to the estimates of the economic value of CAP-related voluntary work in B.C.

## CHAPTER 3

### ECONOMIC VALUE OF CAP SITE SKILLS TRAINING

Chapter 2 dealt with the economic value of the hours actually worked by CAP volunteers, without assessing the actual content of those work hours. However, CAP sites make an additional *indirect* contribution to the market economy by providing training in technical, computer and office skills; management and organization; communications; fundraising; and interpersonal skills; as well as work experience and specialized knowledge of particular subject areas. This indirect benefit also occurs when young local residents apprentice to more skilled coordinators, and when youth take on summer jobs at the local CAP site.

The GPI CAP site survey therefore examined the kinds of work actually performed by CAP site coordinators. This is important not only to evaluate the services provided by CAP site coordinators to rural communities, but also to assess the skills training available to the CAP site coordinators themselves. While many CAP site coordinators are professionals, there are also volunteers whose on-the-job CAP site training prepares them for skilled jobs in the paid labour force.

Statistics Canada's national volunteer surveys report that 70% of all volunteers learn new skills in their voluntary jobs. More than 10% of them directly transfer their newly acquired expertise from the voluntary sector to paid work, and another 44% state that these skills have improved their job prospects. About one-half of all volunteers with non-profit organizations report that they receive actual formal training provided by these organizations.

Since these statistics apply to all volunteer organizations including those providing unskilled services, it is reasonable to expect the percentages to be considerably higher at CAP sites whose *raison d'être* is to provide skills training. There is no doubt, therefore, that CAP sites, and the volunteer work that occurs there, provide a vital and "free" training ground for the market economy, providing valuable skills, knowledge, and expertise that are applicable to paid work.

Thus, even though the contribution of the voluntary sector is invisible in conventional measures of progress that consider only paid work, and even though CAP funding is a "cost" in government ledgers, there is no doubt that the market economy benefits greatly from the training that occurs in CAP sites. A brief examination of the work actually performed by CAP site coordinators indicates the very wide range of marketable skills and on-the-job training that occurs there.

Here are the responses offered by coordinators to the GPI CAP site survey, in which they describe their actual work. Responses are listed in order of frequency. Needless to say, CAP site coordinators perform several of these functions, and one respondent added a note that she performed *all* the following tasks. It is particularly noteworthy that high proportions of volunteers undertake tasks that involve supervisory roles and financial and administrative oversight.

- General administration: 87%
- Supervise public access hours: 73%
- Provide technical advice and assistance: 68%
- Supervise other staff and volunteers: 65%
- Liaison with partner groups and other service providers: 57%
- Maintenance and repairs to equipment: 52%
- One-on-one training: 50%
- Marketing and advertising: 45%
- Financial administration: 43%
- Web page design and updates: 33%
- Design and development of courses: 24%

Several respondents also listed other tasks they perform, including equipment purchase, employment counselling, resume writing, development and revision of instructional materials, fundraising, legal referrals, tracking of statistics, and provision of Internet service to the community.

A separate question was asked in the survey about the kinds of courses offered by CAP site coordinators. Fully 71% had offered courses on Internet and email use; 61% had offered courses on basic computer skills; 54% had taught word processing; 39% had taught web page design; 30% had offered spreadsheet courses; and 26% had taught database design.

Smaller but still significant numbers of CAP site coordinators had also offered courses in more specialized topics, including E-business (22%); photo image editing (21%); computer maintenance (21%); graphic design (20%); on-line presentations (14%); programming (11%); and sound design (8%).

This range of offered courses is further testimony to the skills of CAP site coordinators, and the value of these skills to the market economy. Indeed 79% of CAP site coordinators stated that learning new skills was a very important (47%) or important (32%) motivation for them in their work.

Other survey questions asked CAP site coordinators for their own evaluation of the skills that they have gained through their work. Seventy-one percent stated that they have gained computer skills, and more than half stated that they have learned organizational and managerial skills (such as resource management, leadership, planning, and running an organization); interpersonal skills (such as conflict resolution, understanding people better, motivating people, and dealing with difficult situations); and specialized knowledge on subjects they read about on the Internet during their work time.

Nearly half of CAP site coordinators also stated that they have gained communications skills, such as public speaking, writing, public relations, or conducting meetings, as a result of their CAP site work experience; 40% said they learned technical or office skills such as accounting, cataloguing and filing; and nearly 30% said they gained fundraising skills. Other skills listed by coordinators included computer

maintenance, technical and network skills, research skills, and community partnership building. One respondent reported learning “to connect community members with each other for mutual benefit,” a description that corresponds directly with the standard definitions of social capital.

Not surprisingly, two-thirds of CAP site coordinators reported that their CAP site work had improved their employment prospects.

In assessing the economic value of the work that CAP site coordinators do, both for pay and on a volunteer basis, it is worth considering what the cost of comparable training might be to employers and formal educational institutions. It is apparent that on-the-job CAP site training is an extraordinarily cost-effective training ground for the market economy. From that perspective alone, CAP funding is an investment that may save employers and government significant sums of money later, and that may contribute substantially to Canada’s competitiveness in an era where information technology skills are in high demand.

## CHAPTER 4

# ECONOMIC BENEFITS OF CAP ACCESS AND EQUITY PROMOTION

### **1. Direct Benefits of Access to Employment and Education Opportunities**

CAP sites offer access to employment, education and training opportunities, thereby providing significant economic benefits in direct contributions to the economy and the tax base. This access also improves the earnings potential of beneficiaries. By serving a high proportion of poor and disadvantaged groups, and by providing employment and educational opportunities to these groups, CAP sites also promote social inclusion and equity, which are key components of social capital.

Again, conventional accounting systems and economic growth statistics fail to capture the economic implications of these important contributions. For example, they measure the total quantity of income without regard to how that income is shared or distributed. Thus, the economy can grow even while poverty and inequality increase.

This failing has important implications for assessments of the impact of Canada’s Community Access Program, since the program is precisely aimed at reducing the potential inequity that might arise if lower income and disadvantaged groups have reduced opportunities for access to information technology. In our standard measures of progress based on economic growth measures and conventional accounting systems, equity has no value. So long as IT fuels aggregate economic growth, it is taken as demonstrating “success” and “progress,” even if equality of access and opportunity diminish, and even if the gap between rich and poor grows as a result.

The importance of CAP sites in enhancing social inclusion by providing access to new opportunities is revealed in GPI Atlantic's survey of rural CAP sites in British Columbia. Survey respondents frequently reported on the importance of CAP sites in assisting with employment searches, in constructing resumes, and in providing online information about jobs and educational opportunities. Some CAP sites are directly affiliated with local employment agencies. The survey also found that more than 2,300 British Columbians each week take on-line educational courses at the province's rural CAP sites.

As well, CAP sites themselves may provide summer employment opportunities, and job experience for local youth. They help residents improve computer literacy and they provide computer courses and opportunities for skills upgrading. Improvement of computer skills in turn makes local residents more employable. "This CAP site helps students, adults and youth pursue their career goals," noted one respondent in a CAP site serving an aboriginal population.

CAP sites can also help communities make the often difficult transition to a knowledge-based economy. According to one survey respondent:

*"In the new economy, people need supported access to technology to make the transition from resource-based economy to knowledge-based economy. It is very hard to survive in a small community, and the access centre has helped many residents along in their learning process."*

CAP sites serve many vulnerable and disadvantaged groups. GPI Atlantic's CAP site survey found that a remarkably high proportion of users are unemployed or underemployed. It also found a high rate of usage by First Nations communities, and it found that 46% of users are 25 and under. All these demographic characteristics are correlated with low income. Access to the job search, skills training, and educational opportunities offered by CAP sites and by Internet access can therefore have a direct impact on the socioeconomic prospects of users.

A key goal of the Community Access Program is to ensure Internet access and information technology training for all Canadians, regardless of income, race, gender, age, or social group. In the words of one respondent: "CAP sites have opened up the computer world to so many people who otherwise would never have had the opportunity."

Analysts have noted the danger that, without special efforts to promote access to vulnerable and disadvantaged groups, increasing dependence on information technology could easily deepen existing social divisions and create a two-tier society, divided into those with IT access and skills and those without such access and skills. By making that access and skills training available to those who could otherwise not afford it, the Community Access Program helps ameliorate a potential deepening of social exclusion that can threaten the social fabric.

Responses to GPI Atlantic's CAP site survey therefore indicate that CAP sites play an important role in reducing social exclusion, promoting equity, and enhancing social cohesion. In these ways, CAP sites are a direct investment in social capital that can produce a significant long-term return on investment, both in direct economic benefits, and in indirect cost savings.

## 2. Indirect Savings through Avoided Social Costs

Potential social cost savings can best be understood by considering the costs society might bear if CAP sites did not perform the important social functions described above. Unemployment, poor education, poverty, inequality, and social exclusion are highly correlated with ill-health, crime, drug and alcohol abuse, and other social liabilities that produce substantial economic costs to society. Improved access to employment and educational opportunities can therefore yield indirect savings to the economy through avoided health, justice, welfare, and other social service costs. This is a function of the fact that the disadvantaged groups served by CAP sites are particularly susceptible to adverse outcomes in these areas.

### 2.1 Avoided Health Care Costs

A few examples of the high costs of poverty, unemployment, low educational attainment, and social exclusion will suffice. Educational attainment, for example, is positively associated both with health status and with healthy lifestyles. For example, in the 1996-97 National Population Health Survey, only 19% of respondents with less than high school education rated their health as "excellent," compared with almost 30% of university graduates.<sup>18</sup> Self-rated health, in turn, has been shown to be a reliable predictor of health problems, health-care utilization, and longevity.<sup>19</sup> Higher educational attainment is associated with lower rates of smoking and obesity, better diets, and higher rates of physical activity. From a health determinants perspective, education is clearly a good investment that can reduce long-term health care costs.

Poverty and unemployment are recognized as the most reliable predictors of poor health, more so than a wide range of medical factors such as high cholesterol and blood pressure levels. No matter which measure of health and cause of death are used, low income and unemployed Canadians are more likely to have poor health status and to die earlier than other Canadians.<sup>20</sup> Canadians in the lowest income households are four times more likely to report fair or poor health than those in the highest income households, and they are twice as likely to have a long-term activity limitation.<sup>21</sup> According to Health Canada, "unemployed people suffer a disproportionate share of health problems, including depression, other forms of morbidity, and reduced life expectancy."<sup>22</sup>

Canadian studies have reported that low income is nearly as important a determinant of health service use as is illness, with higher rates of visits to doctors and hospital admissions among low-income individuals than among those with adequate incomes. A detailed Statistics Canada profile of hospital users that controlled for a variety of other factors, found that poverty was an even more reliable predictor of hospital use among women than among men. Men age 15-39 with inadequate income were 46% more likely to be hospitalized than men with adequate income. Poor women were 62% more likely to be hospitalized than

---

<sup>18</sup> Federal, Provincial and Territorial Advisory Committee on Population Health (ACPH), *Toward a Healthy Future: Second Report on the Health of Canadians*, Health Canada and Statistics Canada, September, 1999 page 51; ACPH, ACPH, *Statistical Report on the Health of Canadians, 1999*, Health Canada and Statistics Canada, September, 1999, catalogue no. H39-467/1999E, page 30.

<sup>19</sup> ACPH, *Toward a Healthy Future*, page 14.

<sup>20</sup> ACPH, *Toward a Healthy Future*, page 31.

<sup>21</sup> *Ibid.*, pages 15 and 43.

<sup>22</sup> ACPH, *Statistical Report*, page 44.

non-poor women. For those age 40-64, the percentages increased to 57% and 92% respectively. One recent study in Ontario found that hospital admission rates were twice as high among poor people as among the non-poor.<sup>23</sup>

As hospitals are the single largest health care expenditure, strategic investments that alleviate help alleviate poverty by providing access to employment opportunities are likely to be highly cost effective in the long run. To the degree that CAP sites provide such employment and educational opportunities, which can in turn help alleviate poverty and inequality, they are literally saving the health care system money.

A growing body of evidence indicates that the *distribution* of income in a given society may actually be a more important determinant of population health than the total amount of income earned by society members.<sup>24</sup> Reviewing the evidence, the editor of the British Medical Journal concluded:

*What matters in determining mortality and health in a society is less the overall wealth of the society and more how evenly wealth is distributed. The more equally wealth is distributed, the better the health of that society.*<sup>25</sup>

A separate literature review by a University of Waterloo professor found convincing "statistical evidence that inequalities in health have grown in parallel with inequalities in income" and concluded that "relative economic disadvantage has negative health implications."<sup>26</sup> Again, the role of CAP sites in reducing social exclusion and promoting equity can have an indirect impact on the health status of disadvantaged groups, which in turn has cost saving implications.

The high proportion of young CAP site users is of particular relevance, since CAP sites may play a particularly important role in providing access to employment and educational opportunities for youth, and thus improving their income prospects. That, in turn, can impact health outcomes.

Low-income children are more likely to have low birth weights, poor health, less nutritious foods, higher rates of hyperactivity, delayed vocabulary development, and poorer employment prospects than those

---

<sup>23</sup> S.J. Katz, T.P Hofer, W.G. Manning, "Hospital Utilization in Ontario and the United States: The Impact of Socioeconomic Status and Health Status," *Canadian Journal of Public Health*, 1996, volume 87, no. 4, pages 253-6; Kathryn Wilkins and Evelyn Park, "Characteristics of Hospital Users," Statistics Canada, *Health Reports*, Winter 1997, volume 9, no. 3, pages 34-35.

<sup>24</sup> Mel Bartley, David Blane and Scott Montgomery, "Health and the Life Course: Why Safety Nets Matter," *British Medical Journal*, 314, 1997, pages 1194-96; George Kaplan, et. al., "Inequality in Income and Mortality in the United States," *British Medical Journal*, 312, 1996, pages 999-1003; Helen Roberts, "Children, Inequalities and Health," *British Medical Journal*, 314, 1997, pages 1122-1125; Richard Wilkinson, "Health Inequalities: Relative or Absolute Material Standards?," *British Medical Journal* 314, 1997, pages 591-595; Douglas Black, Margaret Whitehead, et. al., *Inequalities in Health*, Penguin, 1992; Douglas Carroll. George Davey Smith and Paul Bennett, "Some Observations on Health and Socio-economic Status," *Journal of Health Psychology*, 1, 1996, pages 23-39; Margo Wilson and John Daly, "Life Expectancy, Economic Inequality, Homicide, and Reproductive Timing in Chicago Neighbourhoods," *British Medical Journal*, 314, 1997, pages 1271-74; Robert A. Hahn, "Poverty and Death in the United States - 1973 and 1991," *Epidemiology*, 6, 1995, pages 490-97; George Davey Smith, David Blane and Mel Bartley, "Explanations for Socioeconomic Differentials in Mortality," *European Journal of Public Health*, 4, 1994, pages 131-44; C. McCord and H. Freeman, "Excess Mortality in Harlem," *New England Journal of Medicine*, 322, 1990, pages 173-77.

<sup>25</sup> "Editorial: The Big Idea," *British Medical Journal* 312, April 20, 1998, page 985, cited in ACPH, *Toward a Health Future*, page 39. See previous footnote for citations of several articles on the subject published by the British Medical Journal that are the basis for this editorial.

<sup>26</sup> Ted Schrecker, "Money Matters: Incomes tell a story about environmental dangers and human health," *Alternatives Journal*, 25:3, Summer, 1999, page 16

with adequate incomes.<sup>27</sup> Although they engage in less organized sports, poor children have higher injury rates, and twice the risk of death due to injury than children who are not poor.<sup>28</sup> A detailed analysis of both the National Longitudinal Survey on Children and Youth and the National Population Health Survey found that some 31 different indicators all showed that as family income falls, children are more likely to experience problems.<sup>29</sup> In short, the more CAP sites can improve the employment, income, and education prospects of users, the greater the potential savings that will result from avoided health care costs.

## 2.2 Avoided Justice Costs

What is true of the correlation between unemployment, poor education, and poverty on the one hand, and health outcomes on the other, is also true of the correlation of these factors with justice outcomes that can be even more costly to society. For example, it costs about \$45,000 to keep an inmate in prison for a year.<sup>30</sup> Not only do CAP sites provide access to employment and educational opportunities, but they also offer a constructive activity and social gathering place for youth that can help avoid delinquent or destructive behaviour. Both functions may help avoid some of these high justice costs.

Regression analyses conducted by the Canadian Centre for Justice Statistics demonstrate a strong statistical link between crime and unemployment.<sup>31</sup> In a 1984 study prepared for the U.S. Joint Economic Committee, Harvard University epidemiologist Harvey Brenner in 1984 found that a 14.3% increase in the U.S. unemployment rate (from 4.9% to 5.6%) from 1973 to 1974, was associated with 403 additional homicides and 7,000 additional assaults in that country, with many of the effects spread over a period of six years.<sup>32</sup> Fifty-two percent of Canadian prison inmates were unemployed at the time of admission to sentenced custody, five times the unemployment rate in the general population.<sup>33</sup>

Other studies have found that crime rates are also highly correlated with the business cycle and with unemployment rates over time.<sup>34</sup> Unemployment rates and crime rates have risen sharply during each of the last two recessions, then dropped back during the business cycle upturn but not to pre-recession levels. Each decade, both unemployment rates and crime rates have risen substantially. The chance of being a crime victim was three times greater in 1997 than in 1962, and the chance of being unemployed was also three times greater, indicating a potential correlation.

---

<sup>27</sup> ACPH, *Toward a Healthy Future*, page 85, and chapter 3.

<sup>28</sup> Barbara Morrongiello, "Preventing Unintentional Injuries Among Children," *Determinants of Health: Children and Youth*, Canada's Health Action: Building on the Legacy, Volume 1, National Forum on Health, 1998.

<sup>29</sup> David Ross, "Rethinking Child Poverty," *Insight, Perception*, 22:1, Canadian Council on Social Development, Ottawa, 1998, pages 9-11.

<sup>30</sup> Statistics Canada, *1978-1996 Adult Correctional Services in Canada*, catalogue no. 85-211.

<sup>31</sup> Statistics Canada, Canadian Centre for Justice Statistics, *Criminal Justice Trends Canada from 1962: Corrections Program*, page 21.

<sup>32</sup> Brenner, Harvey, *Estimating the Effects of Economic Change on National Health and Social Well Being*, a study prepared for the Subcommittee on Economic Goals and Intergovernmental Policy of the Joint Economic Committee, Joint Committee Print 98-198, U.S. Government Printing Office, Washington D.C., 1984; cited in Cobb, Clifford, Ted Halstead, and Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, San Francisco, September, 1995.

<sup>33</sup> Statistics Canada, Canadian Centre for Justice Statistics, *A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities*, catalogue no. 85-601, page 120. For Canada, the "Snapshot" shows 55% of provincial prisoners and 43% of federal prisoners unemployed at the time of admission.

<sup>34</sup> Statistics Canada, Canadian Centre for Justice Statistics, *Criminal Justice Trends Canada from 1962: Corrections Program*, page 21, reports "a strong statistical link between crime and unemployment." See Dodds, Colin, and Colman, Ronald, *The Cost of Crime in Nova Scotia*, GPI Atlantic, Halifax, 1999, chapters 5 and 6.

As noted earlier, it is not possible to make an absolute correlation between unemployment status and the propensity to commit crime, as the case of Newfoundland, with the highest unemployment rate and the lowest crime rate in the country, clearly demonstrates. The correlation is strongest in *relative* terms, when trends *within* a particular jurisdiction are tracked over time. Crime rates peaked at the height of both the last two recessions, in Canada as a whole and in almost every province.

In Canada, only 19% of the population at large have less than a grade 10 education. But 36% of all inmates, 34% of provincial inmates, and 46% of federal prisoners, who are the most serious offenders, have less than a grade 10 education.<sup>35</sup> Since offenders given sentences of two years or more serve their time in federal facilities, there appears to be a direct correlation between poor education and both overall crime rates and seriousness of offence. By contrast, crime rates appear to go down in direct proportion to level of education.<sup>36</sup>

In other words, people with jobs and a decent education are far less likely to commit crimes than those who are unemployed and poorly educated. While this certainly does not prove that unemployment and poor education *cause* crime, the correlation does indicate that investments in job creation and education are likely to produce positive spin-off benefits in reduced crime.

Aboriginals in Canada are jailed at five times their representation in the population. Aboriginals account for 16% of prison admissions compared to a 3% general population share. In Saskatchewan, aboriginals are jailed at nearly seven times their share of the population. Seventy-four percent of prisoners in that province are aboriginals, compared to an 11% population share.<sup>37</sup>

Again, the correlation demonstrates that job creation and social support programs in aboriginal communities may be particularly cost-effective investments that may reduce crime rates and crime costs while raising the standard of living and quality of life in general. A full cost-benefit analysis of CAP sites in First Nations communities should therefore include the potential reduction in health and crime costs as a potential economic benefit of the Community Access Program.

Again, it is noteworthy that Canada's Community Access Program particularly targets those vulnerable and disadvantaged groups most susceptible to the potentially adverse outcomes described above. By making employment, skills training, and educational opportunities available to the unemployed, to youth, to the poorly educated, and to First Nations communities, CAP sites can be seen as strategic investments that can avoid substantial social and economic costs. The high rate of CAP site usage by these groups, as revealed in the recent GPI survey, is testimony to the fact that the investment is reaching its target audience.

To assess the actual impact of CAP sites in reducing the social costs described above, a carefully designed study is necessary comparing outcomes in communities that have CAP sites with communities that do not. Assessed against such control groups, it would be possible to assess the effect of the CAP sites in reducing unemployment and poverty, in improving educational attainment levels, and in reducing the health and justice costs associated with unemployment, poverty, inequality, and poor education.

---

<sup>35</sup> Statistics Canada, Canadian Centre for Justice Statistics, *A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities*, catalogue no. 85-601, page 120.

<sup>36</sup> Statistics Canada, Robinson, David, et. al., "A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities", *Juristat*, catalogue no. 85-002, volume 18, no. 8, pages 5 and 6.

<sup>37</sup> Statistics Canada, *A One-Day Snapshot of Inmates in Canada's Adult Correctional Facilities*, catalogue no. 85-601.

## CHAPTER 4

# CAP IMPACTS ON PRODUCTIVITY AND GROWTH

There is a burgeoning literature on the contribution of human and social capital to productivity, competitiveness, and improved economic performance. An in-depth study of the impact of CAP sites on productivity and growth, preferably by comparison with control communities that do not have CAP sites, would be necessary to obtain reliable empirical data in this area. However, current research indicates that the wider services provided by CAP sites may play an important role in furthering economic prosperity and wellbeing. Following are just a few statements from the literature on the potential relationship between social and human capital on the one hand, and economic performance on the other.

For example, a 78-country study has demonstrated that increases in educational investment are followed by continued improvements in the levels and rates of GDP per capita.<sup>38</sup> And an analysis of OECD countries indicates that every 1% expansion of access to secondary education reduces inequality by 0.3%.<sup>39</sup> We have seen above that CAP sites play an independent role in promoting equity, but evidence indicates that their role in expanding access to educational opportunities may reduce inequality further and improve economic performance..

Andrew Sharpe, director of the Centre for the Study of Living Standards, has explained the connection as follows:

*“Inequality can be bad for growth when the poor do not have an opportunity to develop their abilities to their full potential. If the poor cannot afford to send their children to post-secondary education, growth can be impeded as capital accumulation will be reduced. Policies that redistribute income to the poor to allow access to post-secondary education can be growth-enhancing.”<sup>40</sup>*

A recent seven-country study has argued that equity may stimulate productivity and growth. The study noted that Denmark and the Netherlands have reduced the incidence of inequality and low-wage work in those countries, while at the same time achieving:

*“...strong rates of employment growth and low unemployment, and rates of per capita GDP growth and productivity growth that match or exceed those of the U.S. Both of these countries are highly export-oriented and highly integrated into regional (European) and even global markets. They have succeeded in international competition in the 1990s through “social pacts” which have maintained real wage growth and have been associated with the reduction of working time and the maintenance of generally good employment conditions.”<sup>41</sup>*

---

<sup>38</sup> Helliwell, John (ed.), *The Contribution of Human and Social Capital to Sustained Economic Growth and Well-Being*, OECD and HRDC, Hull, Quebec, 2001, page 436.

<sup>39</sup> McMahon, Walter, “The Impact of Human Capital on Non-Market Outcomes and Feedbacks on Economic Development,” in Helliwell (ed.), page 155.

<sup>40</sup> Sharpe, Andrew, “Opening Remarks at the IRPP-CSLS Conference on Linkages Between Economic Growth and Inequality,” available at <http://www.csls.ca/jan01/sharpe.pdf>.

<sup>41</sup> Canadian Council on Social Development, “Why We Don't Have to Choose between Social Justice and Economic Growth: The myth of the equity/efficiency trade-off,” available at: <http://www.ccsd.ca/pubs/2000/equity/6.htm>.

As noted, empirical data are not currently available to prove that CAP sites play a role in stimulating productivity, competitiveness and economic performance. However, the role of CAP sites in promoting equity and social inclusion indicates likely links to economic prosperity that are worthy of further exploration. The mediating concept is likely that of “social capital.”

Robert Putnam, who has played a pioneering role in advancing the concept of “social capital,” has constructed a social capital index, based on organizational membership and involvement, and “social trust.” Comparing the U.S. states, Putnam found that health, education, security, the welfare of children, tolerance, and equality were all enhanced in states with high levels of social capital, while crime rates and violence were lower.<sup>42</sup> As noted above, these social gains can also produce significant economic savings in avoided health, justice, and welfare costs.

The GPI CAP site survey in British Columbia indicated that, by all definitions, CAP sites play a significant role in building social capital. That study reported on the value of CAP sites in strengthening community, enhancing communication and reducing isolation, facilitating inclusion of youth, seniors, and disadvantaged groups, promoting equity, and providing opportunities for education, skills training, employment, and local learning. One CAP site coordinator noted:

*“This CAP project is the most important community project we have undertaken. Our community is easily polarized and I can safely say that we have 100% cooperation. Has benefited citizens of all ages and classes. Has brought us closer together and it has given us a fighting chance to be able to stay in our community....”*

This expression is highly consonant with the concept of social trust that permeates descriptions of social capital. A common question in assessing trust is: “Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people?”<sup>43</sup> Although more systematic investigation is necessary, it is fair to assume that the above respondent’s statement on the role of CAP sites in strengthening and uniting a polarized community provides evidence of growing social trust. It would be interesting to test the hypothesis that communities with CAP sites may have higher rates of positive responses to that simple question on trust than comparable communities without CAP sites.

These are not easy concepts to quantify, and it must be acknowledged that research into the connection between social capital and economic prosperity is in its infancy. However, any analysis of the economic value of CAP sites cannot ignore these more subtle but potentially significant benefits. The fundamental point is that a social capital perspective indicates that returns on investment in CAP sites are possibly much higher than their direct value in providing computer skills training and Internet access.

The reality is that CAP sites do play an important role in strengthening communities that goes beyond the technical services provided to individuals. It would be foolhardy to assume that these social benefits have no economic consequences. The challenge is to quantify their connections to productivity, competitiveness, economic performance, and prosperity through well-designed studies.

---

<sup>42</sup> Putnam, Robert, *Bowling Alone: The Collapse and Revival of American Community*, Simon and Schuster, New York, 2000; and Putnam, Robert, “Social Capital – Measurement and Consequences,” in Helliwell (ed.), op. cit., pages 117-135.

<sup>43</sup> Knack, Stephen, “Trust, Associational Life, and Economic Performance,” in Helliwell (ed.) op. cit., pages 172-202, and 436.