


MEASURING SUSTAINABLE DEVELOPMENT

*Application of the
Genuine Progress Index
to Nova Scotia*

MODULE ONE

THE ECONOMIC VALUE
of
CIVIC & VOLUNTARY WORK
in NOVA SCOTIA

Prepared by
Ronald Colman, Ph.D
 **GPI Atlantic**

Halifax, Nova Scotia
July, 1998

ACKNOWLEDGEMENTS

In preparing this sector of the Genuine Progress Index, GPI Atlantic wishes to acknowledge in particular the expert assistance and pioneering work in time-use studies of Dr. Andrew Harvey, Department of Economics, Saint Mary's University, Halifax, Director of the Time Use Research Program at the university, and President of the International Association of Time Use Research.

In addition, GPI Atlantic has received continuous outstanding assistance on the time valuation issues from Hans Messinger, Assistant Director, Input-Output Division, Socioeconomic Indicators and Interprovincial Trade, Statistics Canada, Ottawa, from the staff of the Statistics Canada Regional Office in Halifax under the direction of Andrew Maw, and from Doug Vaisey and Peter Webster of the research staff at the Saint Mary's University library. Without their knowledge of sources, advice and cooperation, it would not have been possible to gather and analyze the data for this suite of time use indicators.

Chris Jackson, senior analysts in Statistics Canada's National Accounts and Environment Division in Ottawa, who has been in the forefront of the agency's work in valuing unpaid work and who has authored several leading articles and publications on the subject, kindly reviewed the draft of this report and provided many helpful comments, corrections and suggestions, as did Dr. Harvey, Mr. Messinger and Mr Maw. The author also gratefully acknowledges the research assistance of Colin Dodds and Calista Rajasingham.

Needless to say, any remaining errors or misinterpretations, and all viewpoints expressed, are the sole responsibility of GPI Atlantic.

GPI RESEARCH ADVISORY COUNCIL
for TIME VALUATION MODULES:

Dr. Andrew Harvey, *Department of Economics and Director, Time Use Research Program, Saint Mary's University; President, International Association for Time Use Research,*

Chris Jackson, *Senior Analyst, National Accounts and Environment Division, Statistics Canada, Ottawa,*

Hans Messinger, *Assistant Director, Input-Output Division, Socioeconomic Indicators and Inter-provincial Trade, Statistics Canada, Ottawa,*

Andrew Maw, *Assistant Director, Statistics Canada Regional Office, Halifax,*

David Amirault, *Senior Economist and Director of Research, Atlantic Provinces Economic Council,*

Tom Pinfold, *Vice-President, Gardner Pinfold Consulting Economists,*

John Odenthal, *Senior Policy Analyst, Nova Scotia Department of Economic Development and Tourism*

Funding provided by the

NS DEPARTMENT OF ECONOMIC DEVELOPMENT & TOURISM AND ACOA UNDER THE
CANADA–NOVA SCOTIA COOPERATION AGREEMENT ON ECONOMIC DIVERSIFICATION,
WITH COOPERATION AND ASSISTANCE FROM STATISTICS CANADA

TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 <i>Limitations of the GDP and the Development of Expanded Accounts</i>	1
1.2 <i>Nova Scotia GPI: First Data Release and Work Plan</i>	1
2. CIVIC & VOLUNTARY WORK IN NS: SUMMARY OF MAJOR RESULTS	5
3. WHY MEASURE THE ECONOMIC VALUE OF VOLUNTARY WORK?	6
4. DEFINITIONS: WHO ARE THE VOLUNTEERS?	9
4.1 <i>Definitions</i>	9
4.2 <i>Formal Volunteers</i>	10
4.3 <i>Informal Volunteers</i>	12
4.4 <i>Motivations for Volunteering</i>	13
5. CIVIC & VOLUNTARY WORK IN NS: RESULTS & VALUATIONS	13
5.1 <i>Hours of Voluntary Work</i>	13
5.2 <i>Monetary Valuation</i>	17
5.3 <i>Job Equivalents</i>	20
5.4 <i>Indirect Contributions to the Economy</i>	20
5.4.1 <i>Skills Training</i>	20
5.4.2 <i>Contributions to Others' Work and Business</i>	22
5.5 <i>Connections Between Volunteer Work and the Market Economy</i>	22
5.5.1 <i>The Time Crunch I: Overtime, Voluntary Work and Education</i>	22
5.5.2 <i>The Time Crunch II: Women and Voluntary Work</i>	25
6. CONCLUSION AND RECOMMENDATION	28
6.1 <i>Summary of Basic Policy Issues</i>	30
6.2 <i>Beyond the GPI</i>	31
7. APPENDIX: DATA LIMITATIONS AND METHODOLOGY	32
7.1 <i>Historical Data</i>	32
7.2 <i>Monetary Valuation Methods</i>	34
7.2.1 <i>Alternative Valuation Methods</i>	36
7.3 <i>Out of Pocket Expenses and Skills Training</i>	37
7.4 <i>Job Equivalents</i>	37
7.5 <i>The Problem of "Involuntary" Voluntary Work</i>	38
7.6 <i>Exclusion of Paid Staff of Voluntary Organizations</i>	39
7.7 <i>Recommendations on Data Issues</i>	40
7.8 <i>Replicating the Value of Voluntary Work for Other Provinces</i>	41
8. ENDNOTES	43
9. REFERENCES CITED	51

LIST OF CHARTS

Chart 5.1: Average Hours of Voluntary Time, by Province _____	14
Chart 5.2: Formal Volunteer Participation Rate, Major Canadian Cities _____	15
Chart 5.3: Informal Volunteer Participation Rates, by Province _____	16
Chart 5.4: Value of Voluntary Work Compared to Annual Payrolls, Selected Industries, Nova Scotia _____	18
Chart 5.5: Provincial Gross Domestic Product at Factor Cost by Industry, Nova Scotia, and Equivalent Value of Voluntary Work _____	18
Chart 5.6: Voluntary Work Job Equivalents, Nova Scotia _____	21
Chart 5.7: Overtime Participation Rates, Canada, by Education _____	23
Chart 5.8 (Part I): Formal Volunteers, Aged 20-54, Participation Rate by Level of Education, Nova Scotia _____	24
Chart 5.8 (Part II): Formal Volunteer Participation by Educational Attainment, Canada _____	24
Chart 5.9: Volunteer Participation Rates by Sex and Marital Status, Nova Scotia and Canada _____	26
Chart 7.1: Replacement Cost (Specialist) Hourly Rate for Volunteer Work, by Province _____	35

LIST OF TABLES

Table 5.1: Participation Rates, Voluntary Work, Nova Scotia _____	16
Table 5.2: Hours, Job Equivalents & Value of Voluntary Work, NS, 1997 _____	19
Table 7.1: Value of Voluntary Work Hours, Canada & Provinces, Population, 15 and Over _____	43

1. Introduction

1.1 Limitations of the GDP and the Development of Expanded Accounts

In recent years there has been widespread acknowledgement by leading economists of the shortcomings of the Gross Domestic Product (GDP) as a comprehensive measure of progress. Indeed, as an aggregation of the market value of all goods and services, the GDP was not intended, even by its architects, as a composite index of well-being and prosperity. Its failure to value unpaid work, free time, and natural resource assets, its inability to distinguish the costs and benefits of different economic activities, and the masking of changes in income distribution, are all cited as limitations of the GDP and omissions which send misleading signals to policy makers.

Because it excludes non-monetary production, the GDP records shifts in productive activity from the household and non-market sectors to the market economy as economic growth, even though total production may remain unchanged. Thus paid child-care, hired domestic help and restaurant food preparation all add to the GDP, while the economic values of parenting, unpaid housework, home food preparation and all forms of volunteer work remain invisible in the economic accounts.

Secondly, productivity gains may result in greater output *or* increased leisure, but the GDP counts only the former, thereby potentially masking longer working hours. Both these omissions have important implications for the changing role of women in the economy, who have entered the paid workforce in growing numbers without a corresponding decline in their share of unpaid work. Thirdly, because it does not account for income distribution, GDP growth may mask growing inequality.

Fourth, the GDP is a current income approach that fails to value natural and human resources as capital assets subject to depletion and depreciation. As such it cannot send early warning signals to policy makers indicating the need for re-investment in natural and human capital. For example, the GDP registered massive fish exports as economic growth, but the depletion of fish stocks appeared nowhere in the accounts.

Finally, and perhaps most importantly, the GDP is a measure of quantitative growth only and fails to account for qualitative changes, both in the mix of economic activity and in the quality of consumer durables. Increases in crime, divorce, gambling, road accidents, and toxic pollution all add to the GDP, leading Robert Kennedy to remark 30 years ago that the GDP “measures everything...except that

which makes life worthwhile.”¹ Further, there is no recorded relationship between the cost of consumer durables and the quality of services they provide, leading to the paradox that the quicker things wear out and have to be replaced, the better for the GDP.

These shortcomings and others led to a recent joint declaration by 400 leading economists, including Nobel Laureates:

*Since the GDP measures only the quantity of market activity without accounting for the social and ecological costs involved, it is both inadequate and misleading as a measure of true prosperity....New indicators of progress are urgently needed to guide our society....The Genuine Progress Index (GPI) is an important step in this direction.*²

Fortunately, considerable progress has been made in the last 20 years by the World Bank, OECD, United Nations, World Resources Institute and other international organizations, by national statistical agencies, including Statistics Canada, and by leading research institutes and distinguished economists, in developing expanded economic accounts which include critical social and environmental variables. The new internationally accepted guidelines in *The System of National Accounts 1993* require that natural resources be incorporated into national balance sheet accounts and that governments develop a “satellite system for integrated environmental and economic accounting.” Accordingly, Statistics Canada recently released its new *Canadian System of Environmental and Resource Accounts (CSERA)*, and is developing a *Total Work Accounts System (TWAS)* which includes unpaid work.³

Some composite indices, like the Measure of Economic Welfare (MEW), the Index of Sustainable Economic Welfare (ISEW), and the Genuine Progress Index (GPI), incorporate up to 26 social and environmental indicators, including unpaid work, income distribution, changes in free time and valuations of natural capital and the durability of consumer goods.⁴ These indices also distinguish direct contributions to economic welfare from defensive and intermediate expenditures, and from economic activities that produce an actual decline in well-being. There have been continuing improvements in methodologies and data sources in recent years, and excellent models are now available for application.

The basic principle linking and integrating the components of these expanded accounts is the view of “sustainable development”, which reflects a concern (a) to live within the limits of the world’s resources, and (b) to ensure long-term prosperity and the well-being of future generations. The new accounts also use cost-benefit analysis and an investment-oriented balance sheet approach to provide a more comprehensive view of progress than is possible with the current income approach of the GDP.

According to Statistics Canada, “sustainable development implies that all people

have the right to a healthy, productive environment and the economic and social benefits that come with it”, and therefore includes in its definition of sustainability the objective of “equity, both among members of the present generation and between the present and future generations.”⁵

The GPI method, in essence, is to assess the economic value of our social and environmental assets and to calculate their depreciation or depletion as costs. Maintenance of these capital assets is seen as providing the basis for economic prosperity. Any index is ultimately normative, since it measures progress towards defined social goals, and all asset values can therefore be seen as measurable or quantifiable proxies for underlying non-market social values such as security, equity and environmental quality.⁶

The Nova Scotia GPI will not generate new methodologies or data, but will use existing sources and apply the most practical and policy-relevant methods already developed by the OECD, the World Bank, national statistical agencies and others. In particular, the Nova Scotia GPI will rely on published data from Statistics Canada and other government sources where ever possible, to ensure accessibility and ease of replication by other jurisdictions.

For more information on the background, purposes, indicators, policy applications and proposed methodologies of the Nova Scotia GPI, please see: *Measuring Sustainable Development: Application of the Genuine Progress Index to Nova Scotia*, Halifax, January 1998.⁷

The Nova Scotia GPI has been designated as a pilot project for the rest of the country by Statistics Canada which is providing ongoing assistance in data collection and analysis, and in staff support. Core funding for the Nova Scotia GPI is provided by the Nova Scotia Department of Economic Development and Tourism and by ACOA through the Canada – Nova Scotia Cooperation Agreement on Economic Diversification.

A primary goal of the project is to provide a data bank that can contribute to the Nova Scotia government’s existing outcome measures initiative. The reports and data will therefore be presented to Nova Scotia policy makers with emphasis on areas of policy relevance. Conclusions will emphasize the most important data requirements needed to update and maintain the index over time. Eventually the data should be usable to evaluate the impacts of alternative policy scenarios and investment strategies on overall progress towards sustainable development in the province.

1.2 Nova Scotia GPI: First Data Release and Work Plan ⁸

This particular report is the first release of data for the Nova Scotia GPI. It is also the first in a suite of *time valuation* variables that are part of the GPI. Data on these will be issued during the coming months, in the following order:

- 1) The value of civic and voluntary work
- 2) The value of unpaid household work and child care
- 3) The value of unpaid overtime and the cost of underemployment
- 4) The aggregate value of total productive work, and a residual valuation of leisure time or “free” time.

These are based primarily on Statistics Canada’s time use surveys, labour force surveys and on several other available sources. In 1994 Statistics Canada hosted an International Conference on the Measurement and Valuation of Unpaid Work. In his opening address, Canada’s Chief Statistician, Ivan Fellegi, remarked that the issue “is not about whether unpaid work should or can be measured and valued, it is about the most effective and efficient ways of going about it.”⁹ We are fortunate that Canada has taken the lead in this important field and that it is possible to base the first modules of the Nova Scotia GPI on the methods developed by Statistics Canada to date.

Following these first four variables, data will be released on the costs of crime for Nova Scotia, and on income distribution in the province. Work is currently proceeding on Nova Scotia’s natural resource accounts – fisheries, soils and agriculture, forestry, wildlife, and greenhouse gas emissions, and on a transportation cost analysis for the province. It is anticipated that these will be completed in draft form in the fall of 1998 and released in the winter of 1999.

At that time, work will also begin on indicators of health and education, and on the remaining social, economic and environmental factors that constitute the GPI. Altogether the Nova Scotia GPI will consist of 20 components.¹⁰ The project is scheduled for completion by the end of 1999, and an interim progress report will be presented to an inter-provincial conference in Halifax early next year.

In consultation with Statistics Canada and in the interests of policy relevance, it has been decided to adopt a sectoral approach to the Nova Scotia GPI, presenting as comprehensive a portrait as possible of each of the 20 components that comprise the Index. Wherever possible, monetary values will be imputed in order to demonstrate linkages between the market and non-market sectors of the economy.¹¹

When that process is complete, hopefully before the end of 1999, the results will be arranged in a spread-sheet, double-counting will be eliminated, and an integrated

Genuine Progress Index will be constructed in order to assess progress towards overall sustainable development in the province.

While the initial construction of the index is complex and time-consuming, as this first report demonstrates, it will be set up to be easy to maintain and update in future years, designed for comparability with other jurisdictions, and presented with a view to practical policy relevance and application. Upon completion, the Nova Scotia GPI should not be regarded as a final and rigid formula, but as a work in progress that will be constantly modified and refined to reflect improved methodologies and new approaches and data sources.

That is the basic framework for the first data release of the Nova Scotia GPI – the value of civic and voluntary work in the province, which constitutes one of the 20 components of the index. The more detailed background documents for the project, and all upcoming reports and data releases will be available to the public on the GPI web site listed in endnote 10.

2. Civic and Voluntary Work in Nova Scotia: Summary of Major Results

In 1997 Nova Scotians contributed an estimated 134 million hours of their time to civic and voluntary work, helping those in need, caring for their environment and contributing to society and local communities. Their work was worth nearly \$2 billion a year to the economy, the equivalent of 81,000 jobs and nearly 10% of GDP, but was not reported or measured in any of our economic accounts. This contribution averages out to \$2,500 a year for every adult Nova Scotian and \$3,400 for every volunteer in the province. If this voluntary contribution were withdrawn, either our standard of living would decline dramatically, or the work would have to be replaced for pay by government and the private sector.

The generosity of Nova Scotian volunteers was not limited to time. They paid out \$128 million in non-reimbursed out-of-pocket expenses to perform their voluntary work. Nova Scotians contributed another \$100 million in donations to registered charities. Volunteer organizations also contributed to the formal economy by providing valuable skills training to workers in areas such as organization and management, communications, fundraising, office and technical skills, and specialized knowledge of direct use to paid jobs.

On average, every adult Nova Scotian devoted 3 hours and 23 minutes a week to civic and voluntary work, the highest rate in the country and well above the Canadian average of 2 hours and 40 minutes a week. Most volunteers are women. One-third of adults in the province work for non-profit volunteer organizations, and three-quarters volunteer informally, visiting the sick, caring for the elderly, shopping and cooking for the disabled, providing unpaid child care for working mothers, and performing a variety of other social and civic services.

Excluding the out-of-pocket expenses and monetary donations already included in the GDP, the aggregate asset value of voluntary work hours in Nova Scotia for 1997 is estimated at **\$1,754 million**. This is the figure included in the provincial **Genuine Progress Index** and represents the amount that would have to be paid in the government and private sector to replace existing voluntary work in the province.

3. Why Measure the Economic Value of Voluntary Work?

In interviews conducted in a national survey, the vast majority of Nova Scotian volunteers cited “helping others” as the main motivation for their work. By contrast, among 15 possible reasons presented for volunteering, the least important was “improving one’s job opportunities”.¹² If the motivation for volunteering is so clearly altruistic, why assign an economic value to it?

- 1) Firstly, though motivated by generosity and care, civic and 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. Particularly in an era of fiscal restraint and government cutbacks, we depend even more directly on the work of voluntary organizations and informal volunteers. In the words of Statistics Canada’s report *Giving Freely: Volunteers in Canada*: “Volunteers are instrumental in programs or groups addressing critical issues of our times, such as a rapidly growing elderly population, marital breakdown, disaffected youth, and environmental protection, to name a few.”¹³

The original Genuine Progress Index developed in the United States described its rationale for including the value of voluntary work in this way:

Work done here is the nation's informal safety net, the invisible social matrix on which a healthy market economy depends. Whether each additional lawyer, broker or advertising account executive represents a net gain for the nation is arguable. But there is little question that workers in the under-served community and volunteer sectors – the churches and synagogues, civic associations and informal neighborly efforts – are doing work that is desperately needed. Despite its crucial contribution, however, this work goes entirely untallied in the GDP. The GPI begins to correct this omission.¹⁴

- 2) Thus, failing to measure and value voluntary work directly renders it invisible in the economic accounts from which policy makers take their cues and which guide the behaviour of governments, businesses and individuals. It appears nowhere in the GDP though it contributes direct value to the economy, nor in the employment statistics though it is definitely productive work, nor in our output measures though it produces clearly defined services. Care of seniors, the sick or disabled is counted as a contribution to the GDP and to economic growth when it is paid for, but not when it is voluntary.

What is not counted and measured is often insufficiently valued and given secondary priority in policy planning. This 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. This is illustrated by the data in section 5.5 below, which indicates 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. Similarly, analysts have noted that “women’s ‘double day’ of paid work and unpaid domestic labour” has led to an emerging “crisis of care-giving, a direct result of the ‘time crunch’ that now characterizes the female life course.”¹⁵

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 Canadian Department of the Secretary of State, 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.¹⁶

Indeed a primary function of the GPI is precisely to draw attention to such hidden factors that directly impact our quality of life, our well-being and our prosperity, and to make explicit the linkages between the economy and social and environmental factors. In succeeding reports, the GPI will similarly point to the value of natural resources, the costs of pollution, trends in income distribution, the economic value of investments in human capital like health and education, and other factors that are currently hidden in our conventional accounting systems. In all these cases the logic remains the same as that suggested by Ross. As the economic dimensions of our social and environmental assets are quantified and measured, they will become more visible and valued, and thus incorporated more readily into the framework of policy discussions on the provincial economy.

- 3) Thirdly, and perhaps most importantly, the network of community and voluntary organizations is widely regarded as the backbone of “civil society”, and their active strength as a critical indicator of healthy democracy. This “social economy” is the arena in which we participate most fully as citizens, freely choosing our interests and associations, and expressing our deepest aspirations to help others.¹⁷ The strength of a society’s commitment to voluntary work is, for many social scientists, a touchstone of social health, stability and harmony.

A weak civil society, by contrast, is more subject to social unrest, alienation and disintegration. It is associated with higher rates of crime, drug abuse and other dysfunctional activities, which eventually produce much greater social and economic costs than wise investment in the community and voluntary associations that strengthen the fabric of civil society.

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.¹⁸

- 4) Finally, as will be clear from the data below, the voluntary sector is of particular importance to this province. Nova Scotians devote more time to voluntary activity than other Canadians, and have the highest proportion of volunteers involved in caring for the environment and working for their communities of any

province. By explicitly acknowledging and measuring both the social and economic value of our voluntary work, we can value and make visible one of this province’s primary assets and strengths. It is a hallmark of our quality of life, community strength and care for each other. In the long run, the province’s high degree of civic consciousness contributes to social stability.

Note: Nothing in this report should be construed to imply either

- a) that assigning an economic value to voluntary work means it should be paid,
- b) that voluntary work is motivated by economic considerations, or
- c) that the GDP itself should be changed to include the value of unpaid work.

The GDP will undoubtedly continue to function for the purpose for which it was originally intended – as a gross aggregate of final market production. Rather, the GPI data point to the need for more comprehensive measures of overall progress than currently exist.

4. Definitions: Who are the Volunteers?

4.1 Definitions

Voluntary work can be offered either through a formal non-profit organization or independently of any group by people helping on their own. These are called “formal” and “informal” volunteers, respectively. About one-third of voluntary activity in Nova Scotia is rendered through formal organizations and the other two-thirds is given informally.

The designation “voluntary” work is therefore used here to refer both to work and services performed willingly and without pay through volunteer organizations, and also to informal unpaid help and care rendered to those outside one’s own household and to adults, such as elderly relatives, within the household.

Voluntary work refers to three types of assistance:

- (a) help provided directly to others, as in answering a help line or caring for the elderly and disabled,
- (b) working for the environment or wildlife, and
- (c) providing benefit to society at large or to the local community.¹⁹

“Work of civic value” is defined by Statistics Canada, in a research paper on human capital, as

unpaid non-investment activity undertaken by an individual that, by its nature, is thought to yield more public, community or societal benefits than

*private or family benefits....Such activities are thought to be essential to the promotion of peace, order and good government; effective and just local communities; more publicly sensitive schools, hospitals, businesses and other institutions; and civic minded and environmentally sensitive citizens. It is only by quantifying the civic contributions of citizens that the value of basic institutions such as the family, school, faith community and voluntary associations will be more fully appreciated.*²⁰

Because the published 1992 GSS data conveniently aggregate the hours devoted to civic work and voluntary work, and because there is considerable overlap between the definitions, they are considered as a single category in this study.²¹ It should be noted that the 1992 GSS definition of civic and voluntary activity includes *organizing* religious services, but not *attendance* at religious services.

The simplest common definition of volunteering is perhaps that of a 1989 report for the Voluntary Action Directorate of Multiculturalism and Citizenship Canada:

*In the end, that seems to be what defines a volunteer: a belief that it is important to give, formally or informally, whatever time and help you can.*²²

4.2 Formal Volunteers

Non-profit organizations include groups committed to health care, education and youth development, social services, religious activity, sports and recreation, environmental protection, law and justice, employment opportunities, arts and culture, and general public benefit. Examples of “formal” volunteer work include:

Health: Cancer Society, Heart Foundation, Lung Association, Multiple Sclerosis Society, Diabetes Association, VON, nursing homes, hospitals, first aid groups, mental health associations.

Education and Youth Development: Brownies and Girl Guides, Boy Scouts, extra-curricular activities in schools such as leading choirs, theatre and sports, Big Brothers, work with school boards, literacy programs, museum education, special education and adult education programs.

Social Services: Food banks, soup kitchens, homes and shelters for abused women and children, the disabled, or addicts, home care organizations, help lines, groups which help and counsel victims, and multi-purpose services like the Children’s Aid Society or Easter Seals.

Sports and Recreation: Coaching and refereeing for neighbourhood sports associations, organizing hobby and common interest groups and camps, helping

maintain sports and recreation facilities.

Law and Justice: Legal aid and education, crime prevention associations like Block Parents, Neighbourhood Watch, Crime Stoppers, offender and ex-offender groups (John Howard Society, Elizabeth Fry Society).

Employment and Economic Interests: Job counselling, sheltered workshops, consumer protection groups, occupational health and work safety, tax advice and staff organizations, Junior Achievement.

Religious Organizations: Conducting formal religious education and services, choirs, church camps and youth groups. Note: Many religious organizations and churches also provide a wide variety of secular services including elderly care, marriage counseling, food preparation and so on (see social services above).

Arts and Culture: Dance and music ensembles, arts and crafts groups, photographic and writers associations, community theatres, maintaining museums, galleries, archives and libraries.

Social and Public Benefit: These groups are regarded as the primary forum for participatory democracy, including town councils and groups concerned with local politics, human rights and social justice, women's groups serving the community, search and rescue teams, emergency, safety and fire-fighting volunteers, United Way, groups devoted to maintaining community facilities.

Environment and Wildlife: Pollution prevention and cleanup, resource conservation groups, wildlife and nature organizations like the Canadian Wildlife Federation, Sierra Club and Audobon Society, environment protection groups like Greenpeace, recycling associations, animal care and protection like the Humane Society and the SPCA.

International Organizations: Oxfam, UNICEF, CARE, Amnesty International, Ploughshares, and others concerned with poverty, hunger, human rights and peace throughout the world.

Multi-Domain Organizations: Service clubs, lodges, Masons, multi-purpose women's organizations, native and ethnic organizations, Red Cross, Salvation Army, YM/YWCA.

37% of Nova Scotian women volunteered formally through such non-profit organizations, compared to 27% of men. More than half of Nova Scotian volunteers worked for more than one organization, and more worked for religious organizations (22% of all volunteers compared to 17% nationwide) than for any other single

category described above. However, religious groups also account for 38% of all voluntary jobs providing care and for a third of all voluntary jobs providing food to those in need, so that a considerable proportion of social service support in the province is rendered through such groups.

Volunteers for law and justice organizations, like legal aid societies and Block Parents, logged the highest number of weekly hours, an average of 6 hours and 40 minutes a week. Volunteers in general demonstrate considerable stability in their commitments. 82% of volunteers surveyed in the 1987 National Survey on Volunteer Activity had been working for the same organization for more than a year.²³

4.3 Informal Volunteers

Examples of informal voluntary activity include: ²⁴

- Visiting and caring for the elderly
- Caring for the sick and disabled
- Shopping for or driving those unable to do so themselves
- Assisting those in need with housework and cooking
- Assisting others with house maintenance and repair
- Assisting those in need with correspondence
- Unpaid babysitting for those outside one's own household
- Various forms of medical and personal care for adults
- Coaching
- Caring for the environment
- Working for the local community or society at large
- Unpaid help for a business or farm

Among *informal volunteers*, the most common activity is providing direct help to others. About 57% of informal volunteers visit the sick or elderly, 49% shop for or drive those unable to do so themselves, and 47% provide unpaid child care for those outside the household in order that others can take paid jobs.

However Nova Scotians also have the highest percentage of informal volunteers in the country working for the environment (35% compared to 24% nationwide) and engaged in wider community and social concerns (20% compared with 14% in Canada as a whole).²⁵ 63% of Nova Scotian volunteers informally helped seniors 65 and older, 45% helped children and youth, and 27% provided care for the disabled.

4.4 Motivations for Volunteering

The National Survey on Volunteer Activity also polled volunteers on their reasons for volunteering. Fifteen choices were offered. “Helping others” was the most important motivation cited for voluntary work by 68% of Nova Scotians and 63% of Canadians surveyed, while 66% of Nova Scotians and 60% of Canadians also cited “helping a cause you believe in” as a “very important” reason for volunteering. The reason most often cited as “not important at all” was “making contacts useful for employment.”

86% of Nova Scotian volunteers were satisfied or very satisfied with their voluntary experience, and more than 90% said that, of all the things they did in the last year, their voluntary work was important or very important to them. Three-fifths of Nova Scotian volunteers emphasized that it is “very important” to *enjoy* the voluntary work one is doing, and most of the rest said it was “important”.

In short, it is quite clear from the subjective portion of the National Survey questionnaire that Nova Scotians do not regard voluntary work as a burden but as a source of satisfaction and enjoyment that gives meaning to their lives. This is reinforced by the finding that more than 70% stated they were willing to give more time to voluntary work, and that three-fourths of the remaining group said that only lack of time prevented them doing so.²⁶

5. Civic and Voluntary Work in Nova Scotia: Results & Valuations ²⁷

5.1 Hours of Voluntary Work

The average Nova Scotian contributes 3 hours and 23 minutes a week in unpaid civic and voluntary work, 43 minutes longer than the Canadian average, and the highest rate in the country (Chart 5.1).²⁸

Average Hours of Voluntary Time, by Province

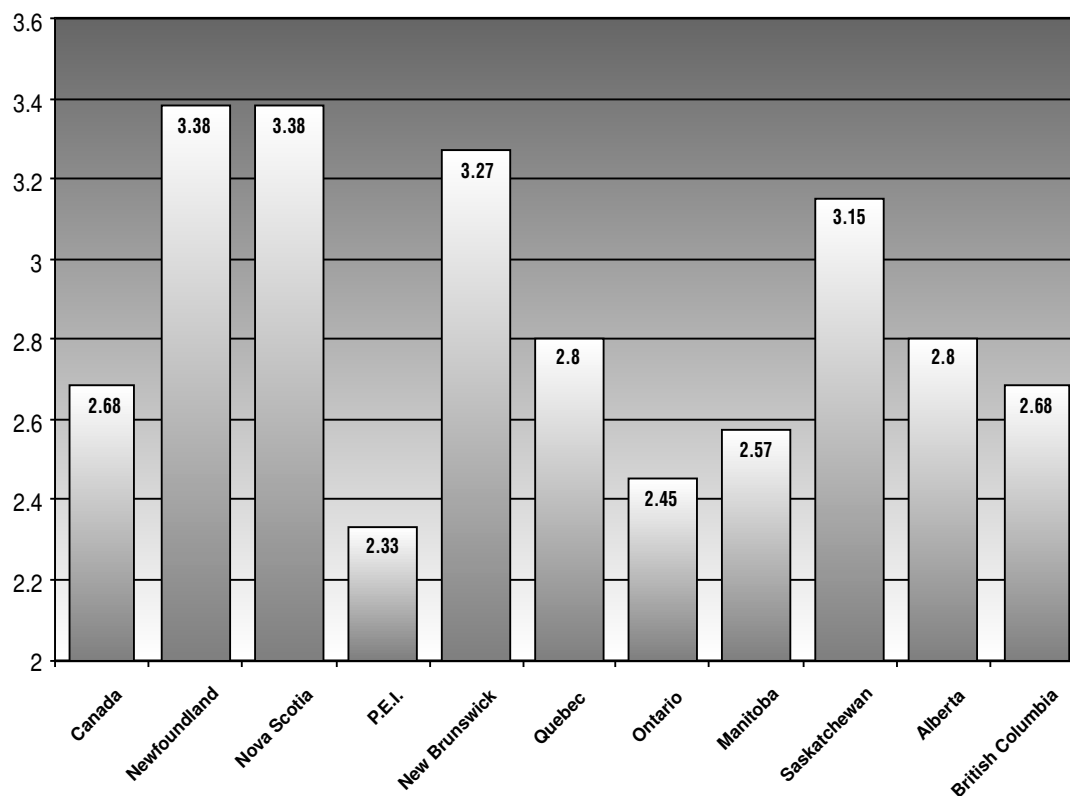


Chart 5.1 Source: Statistics Canada, *General Social Survey*, 1992

About one-third of this is work with “formal” non-profit organizations, such as churches, schools, food banks, shelters for victims, volunteer fire fighting teams, service clubs, museums, youth camps, sheltered workshops, town councils, and groups devoted to protecting the environment, providing legal aid, supporting arts and culture, providing social services, and promoting human rights and social justice. The remaining two-thirds is “informal” voluntary work, such as visiting and providing care for the sick and elderly, shopping and preparing food for those unable to do so, helping the disabled, and caring for the children of working mothers.²⁹

In 1997, an estimated 244,000 Nova Scotians, 32% of the population 15 years and older, contributed an average 188 hours a year of “formal” work through non-profit organizations, a total of 46 million hours a year. The Canadian participation rate was 27%. In Nova Scotia 37% of women and 27% of men worked for volunteer organizations (Tables 5.1, 5.2). Across the country the participation rate was generally higher for rural and small urban centres than for big cities. But in Nova Scotia the urban participation rate was slightly higher than the rural rate. 34% of

Halifax residents worked for volunteer organizations, the fifth highest rate among census metropolitan areas in the country, and the highest of any Canadian city east of Winnipeg. (Chart 5.2)³⁰

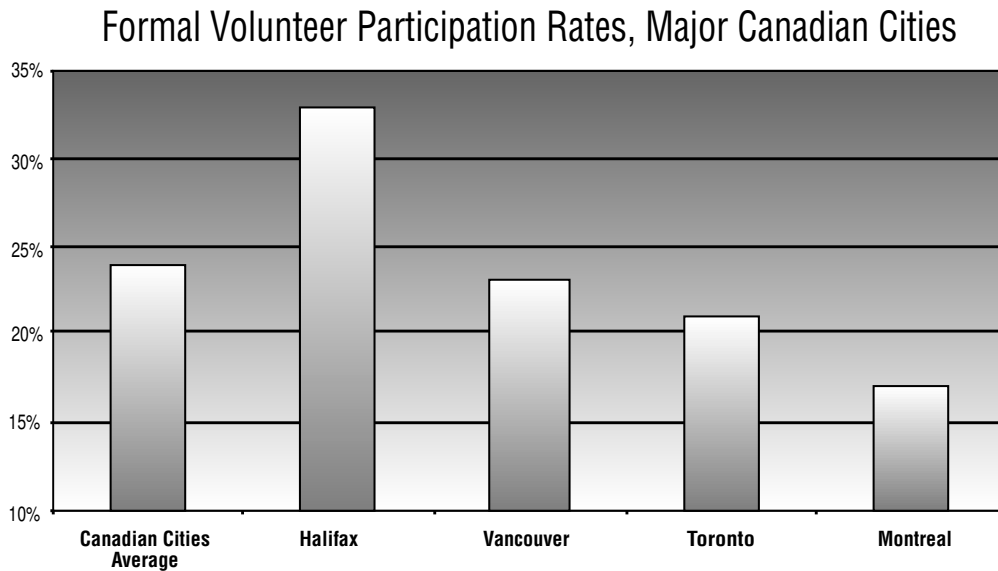


Chart 5.2 Source: Duchesne, *Giving Freely: Volunteers in Canada*, Statistics Canada, 1989, page 16:.

565,000 Nova Scotians, about 74% of the population 15 and over, participated in informal voluntary work, adding another 89 million hours a year, or 157 hours a year per volunteer.³¹

The Canadian participation rate for informal volunteers is 66% (Tables 5.1, 5.2). Of these Nova Scotian informal volunteers, 235,000 or 42%, also worked for formal volunteer organizations, indicating that almost every person who performed formal voluntary work also contributed informally.³²

Altogether the three Maritime provinces have by far the highest rate of informal volunteers in the country, occupying the top three positions for participation levels (Chart 5.3). Among cities, Halifax again ranks high, with 71% of the city’s adult population engaging in informal voluntary activity, compared to a 63% average for other census metropolitan areas in Canada

FORMAL VOLUNTEERS						
	Pop. 15+	Pop. 15+ male	Pop. 15+ female	Major Cities	% Volunteers Male	% Volunteers Female
Canada	27%	24%	30%	24%	43%	57%
N.S.	32%	27%	37%	34% (Hfx)	41%	59%
Informal Volunteers						
Canada	66%	64%	69%	63%	47%	53%
N.S.	74%	72%	77%	71% (Hfx)	47%	53%

Table 5.1: Participation Rates, Voluntary Work, Nova Scotia

Source: Duchesne, *Giving Freely: Volunteers in Canada*, Statistics Canada, pp.13, 18, 81, 83, and 85; Webber, *Volunteers in Sports and Recreation*, pp. 11-14 (estimates). Participation rates are from the 1986/87 National Survey of Volunteer Activity.

Informal Volunteer Participation Rates, by Province

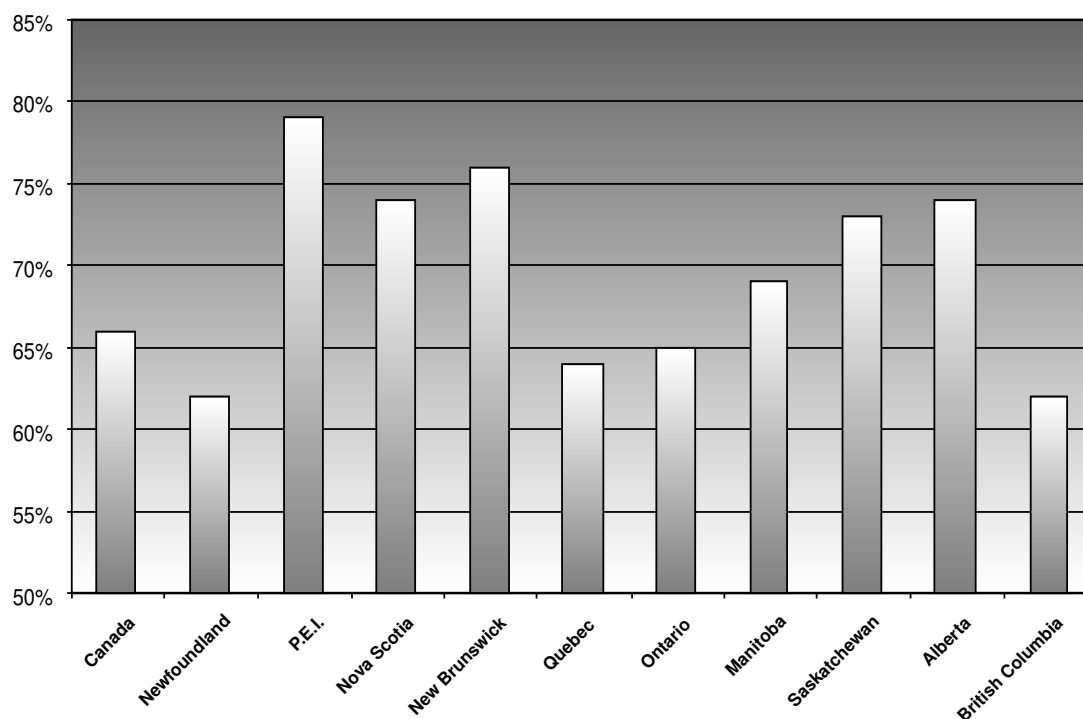


Chart 5.3 Source: Duchesne, op.cit., page 81

Civic and voluntary work amounts to more than 15% of the total time devoted to paid work and related activities in the province, or 10 minutes for every hour of paid work.³³ According to the 1992 General Social Survey, on any given day 25% of Nova Scotians are engaged in some form of civic or voluntary work, the highest participation rate in the country.

These figures are averages, but the hours are clearly not evenly distributed. For example, the 1996 census revealed that 23,450 Nova Scotians worked 10 or more hours a week providing unpaid care to the elderly, and 26,845 more spent 5 to 9 hours a week caring for senior citizens, not counting other voluntary work commitments.³⁴

As noted above, the National Survey on Volunteer Activity found that formal volunteers were also likely to contribute informally, so that the actual total number of voluntary hours contributed by formal volunteers is well above the provincial average. In fact, 31% of Nova Scotians who volunteered for a non-profit organization said they also “often” volunteered informally, and another 42% said they “occasionally” volunteered informally.

Significantly, 72% of Nova Scotian volunteers said they would be willing to give more hours to volunteer organizations. Of those unable to do so, three-fourths of Nova Scotians and two-thirds of Canadians said the reason was only because they had no more time to give.

5.2 Monetary Valuation

The total voluntary time of Nova Scotians, 134.7 million hours a year, is valued at \$1,754 million for 1997 at the replacement cost rate of \$13.02 per hour.³⁵ This \$1.7 billion is not reflected in the GDP, employment statistics or in any of the standard economic accounts, but amounts to 9.3% of total GDP value, and nearly twice the annual payroll of all paid health and social service workers in the province (Table 5.2 and Chart 5.4). It exceeds the wage bill for all public administration in the province, including the armed forces, and amounts to 20% of total salaries and wages paid in the province.³⁶

Fifty per cent of formal volunteers reported that they incurred out-of-pocket expenses that were not reimbursed, in order to carry out their voluntary activities. These expenses include spending on required equipment, supplies and uniforms as well as food and transportation costs to assist the elderly and disabled.

If these expenses are taken into account, Nova Scotian volunteers contributed an additional \$128 million to the provincial economy, for a total of nearly \$1.9 billion, or 10% of GDP value (Chart 5.5). This voluntary activity averages out to a total economic contribution of \$2,500 annually for every Nova Scotian 15 years and older and \$3,400 for every active volunteer (Table 5.2).

Value of Voluntary Work compared to Annual Payrolls, Selected Industries, Nova Scotia, 1997 (\$1997 millions)

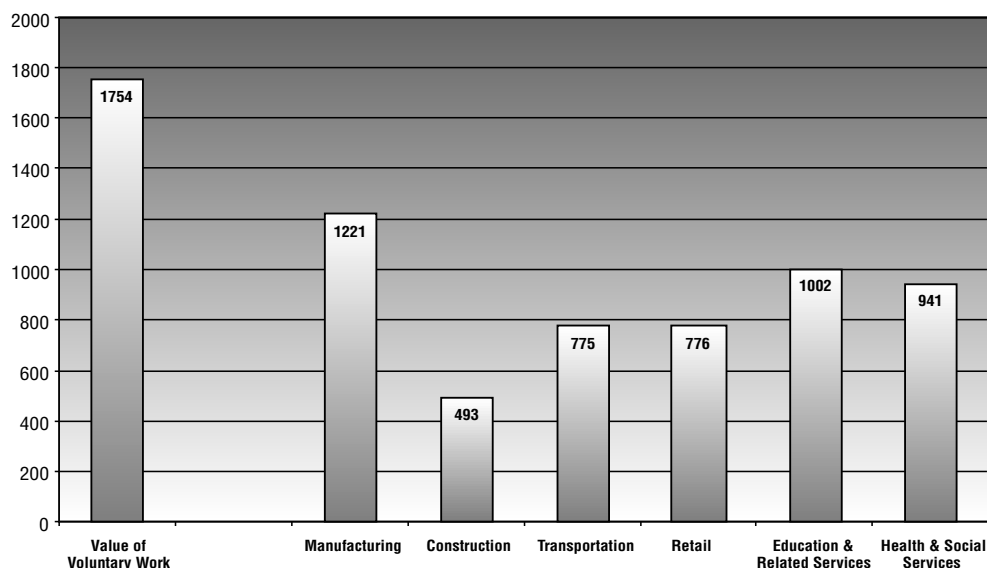


Chart 5.4 Sources: Statistics Canada, *General Social Survey, 1992; Households' Unpaid Work, 1995; Employment, Earnings and Hours, 1997*

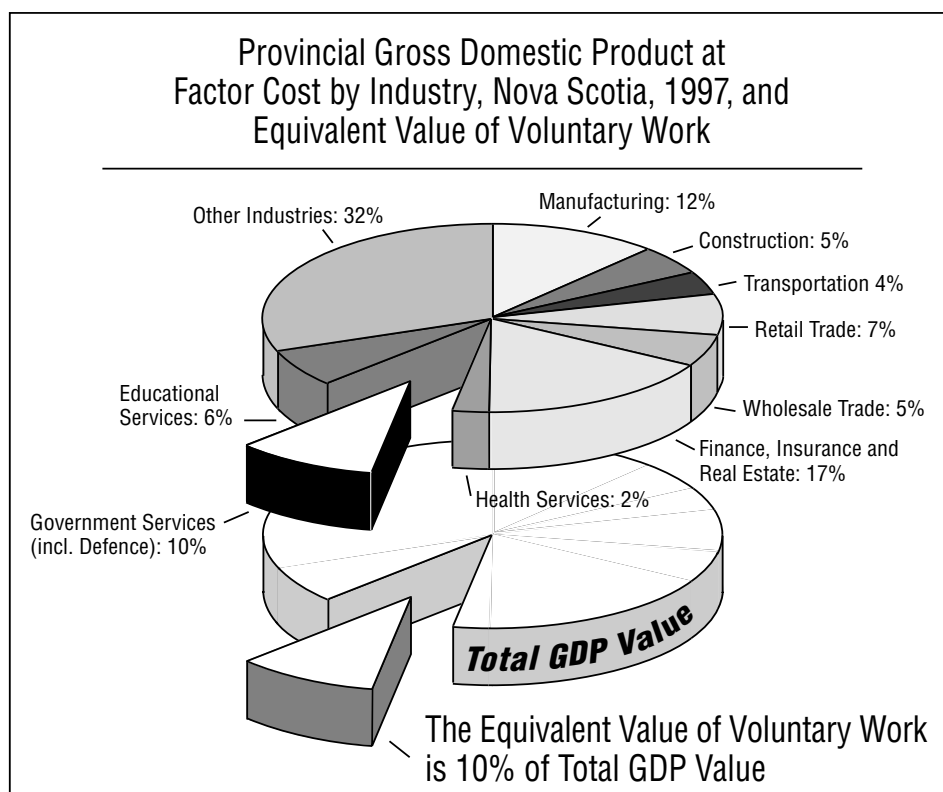


Chart 5.5 Source: Statistics Canada, *Provincial Gross Domestic Product by Industry*³⁷

As discussed in more detail in the appendix on data and methodology, it is possible to use alternative methods to assess the monetary value of voluntary work. If the “specialist” cost replacement rate of \$13.02 per hour is applied only to formal volunteer work for non-profit organizations, and if a lower “generalist” rate of \$9.86 an hour, corresponding to the average hourly wages for domestic services in the province, is applied to the informal volunteer sector, then the economic value of voluntary work hours in Nova Scotia is \$1,470 million a year instead of \$1,754 million.

If the “opportunity cost” method is used to reflect the wages that volunteers would earn if they were to engage in their normal work instead of volunteering, then voluntary work hours in the province are worth \$2,290 million a year (Table 5.2).³⁸

Annual Volunteer Hours	Hours	Full-time job Equivalents	Full & part-time jobs (avg 34.6 hrs/wk)
Formal	46 million	23,800	27,540
Informal*	89 million	46,200	53,460
Total	135 million	70,000	81,000
	Replacement Cost (Specialist)	Replacement Cost (Generalist)	Opportunity Cost (Pre-tax)
Value of Volunteer Work Hrs 1997 dollars	\$1,754 million	\$1,470 million	\$2,290 million
Expenses	\$218 million	\$218 million	\$218 million
Total	\$1,972 million	\$1,688 million	\$2,508 million
% of GDP value	10.5%	9%	13.3%
Per capita value	\$2,582	\$2,210	\$3,284
Per volunteer value	\$3,490	\$2,987	\$4,438
Registered donations to charities 1997 dollars	\$98 million		

Table 5.2: Hours, Job Equivalents and Value of Voluntary Work, Nova Scotia, 1997

* Informal hours are imputed from 1992 GSS and 1986/87 National Survey. See footnote 23. Sources: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*; Duchesne, *Giving Freely: Volunteers in Canada*; Ross, *Economic Dimensions of Volunteer Work in Canada*; Statistics Canada, *Households' Unpaid Work: Measurement and Valuation*; and Statistics Canada publications on population, employment, GDP, and CPI: see endnotes for section 7 and References Cited (section 8); Donations data from Hans Messinger, Statistics Canada, personal communication.

It should be noted that these estimations account only for voluntary activity as defined in section 4 above, and **exclude the work of paid staff of volunteer organizations**. There is currently no way to aggregate these wages to arrive at a figure for the total economic contribution of volunteer organizations.

Since **charitable donations** to non-profit organizations, amounting to about \$100 million a year in Nova Scotia, are also **excluded** from the valuations in this study, the totals clearly understate the economic contribution of the voluntary sector as a whole. (Revenue Canada reported \$92 million in individual charitable contributions in 1995 from 168,260 Nova Scotians, with an average donation of \$547. Since this includes only donations for which official tax receipts are available and which are reported for tax deduction purposes, the actual total of donations is likely to be considerably higher.)³⁹

This study therefore measures the value of voluntary work rather than the economic contribution of the volunteer sector as a whole.

As discussed in the appendix on data issues, the monetary valuations here assume that Nova Scotians contributed civic and voluntary work in 1997 at the same rate as that reported in the 1992 General Social Survey. Whether this assumption is correct will be clarified in 1999 with the release of data from the 1998 General Social Survey

5.3 Job Equivalents

Volunteers contributed the equivalent of 70,000 full-time jobs, equal to 22% of all full-time employees in the province, a ratio 38% higher than the Canadian average and the second highest in the country after Newfoundland.⁴⁰ More accurately, given the current distribution of full-time and part-time jobs in health and social services in the province, the volunteer hours of Nova Scotians would produce 81,000 full and part-time jobs with an average 34.6 hour week, if voluntary work were actually replaced by paid labour. This is double the number of all paid health and social service employees and 21% of the 391,000 employees in the province (Chart 5.6).

5.4 Indirect Contributions to the Economy:

5.4.1 Skills Training

The formal voluntary sector also makes an important indirect contribution to the market economy by providing training in technical and office skills, management and organization, communications, fundraising and interpersonal skills, as well as work experience and specialized knowledge of particular subject areas.

The 1987 National Survey on Volunteer Activity reported that 70% of all formal volunteers learned new skills in their voluntary jobs. More than 10% of them directly transferred their newly acquired expertise to paid work, and another 44% stated that these skills had improved their job prospects. About one-half of all volunteers with non-profit organizations, about 120,000 Nova Scotians, receive actual formal training provided by these organizations.

Voluntary Work Job Equivalents, Nova Scotia, 1997

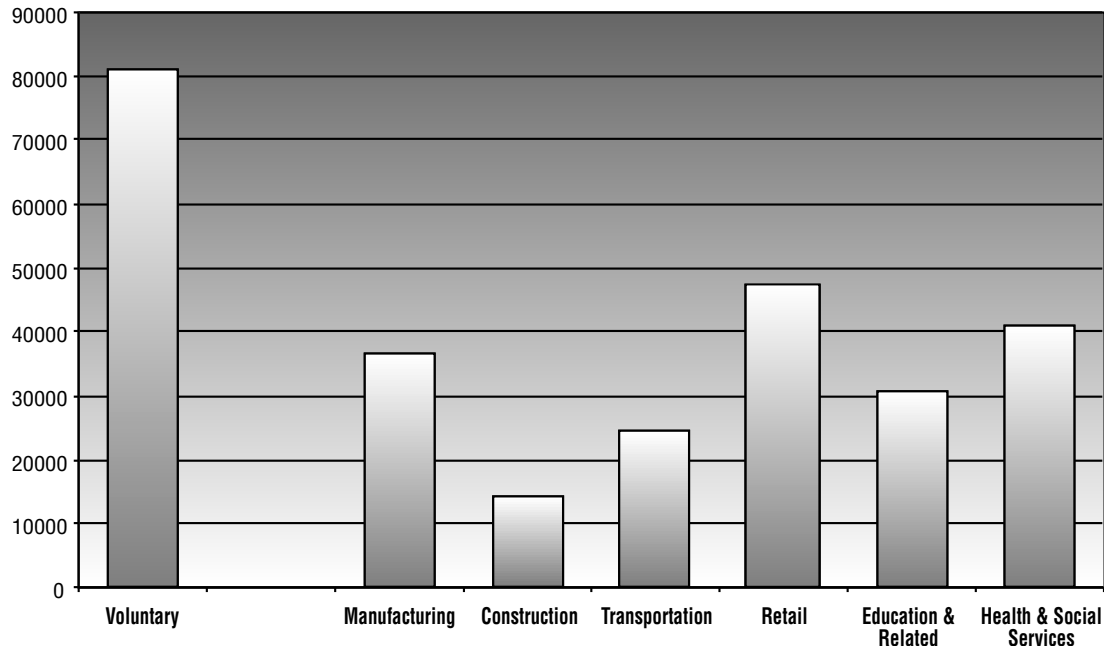


Chart 5.6 Sources: Statistics Canada, *General Social Survey, 1992; Employment, Earnings and Hours; Labour Force Survey*

In Nova Scotia, 36% of formal volunteers reported that they gained organizational and managerial skills, learning to organize resources and manage the work of others. 32% gained fundraising skills and increased their expertise in communications, including conducting meetings, public relations, writing and public speaking. More than 20% also increased their knowledge in areas like the environment, legal matters, health and women’s issues.⁴¹

As noted above, job training ranks very low as a reported motivation for voluntary work, with the vast majority of respondents citing “helping others” as their main purpose. “Making contacts useful for employment” was most often cited as “not important at all” as a reason for voluntary work. Nevertheless, as a secondary and largely unintentional benefit, the civic and voluntary sector is clearly a vital and “free” training ground for the market economy, providing valuable skills, knowledge and expertise applicable to paid work.

5.4.2 Contributions to Others' Work and Business

Many forms of voluntary work make direct contributions to society and provide services to the economy that would have to be replaced by paid labour if they were withdrawn. However, some informal voluntary work enables others to take paid jobs, which in turn contribute to GDP growth. For example, the largely invisible network of unpaid child care provides paid work opportunities for many mothers, but only the formal paid child care industry is registered in the official accounts and appears in the statistics.⁴² Without this voluntary child care, female labour force participation would likely be considerably lower, directly impacting economic growth rates.

In addition an estimated 89,000 Nova Scotians every year informally provide unpaid voluntary help to others operating a business or doing farm work.⁴³ This contributes to the viability of many operations, increases output and provides spin-off benefits to the market economy.

5.5 Connections Between Volunteer Work and the Market Economy

5.5.1 The Time Crunch I: Overtime, Voluntary Work and Education

Evidence to be presented in the third module of the Genuine Progress Index, to be released in the fall, indicates that the work week has been getting longer for many Nova Scotians, particularly the highly educated. This is also the group with the highest rate of participation in formal volunteer work in the province. Since hours are finite, there is a strong possibility that voluntary hours have decreased in proportion to the increase in work hours for the highly educated. It must be emphasized that there is currently no firm evidence of this, since data on volunteer hours have not been issued since 1992.

Statistics Canada's studies of overtime in Canada reveal that of all occupations, teachers, managers, administrators, and professionals in the natural sciences, engineering and mathematics, are the most likely to work long hours. These occupations require high levels of education. 27% of paid workers with a university degree worked overtime, compared with only 9% of workers with a primary school education, 13% of those with a high school diploma and 17% of those with a post-secondary certificate. In addition, the average weekly number of overtime hours is greatest among university graduates (10 hours and 24 minutes a week). (Chart 5.7)

Further analysis of this data is required. But it appears that the tendency for overtime hours to be concentrated among the most educated is even more marked in the Atlantic provinces than in the rest of Canada. A study by Statistics Canada on the potential for

new job creation from the redistribution of overtime hours indicates that 58% of such jobs in the Atlantic region would require at least a post-secondary diploma compared to 47% in Canada as a whole. In any case, the agency does conclude that “the propensity to work overtime rises with an employee’s educational attainment.”⁴⁴

Overtime Participation Rates, Canada, by Education

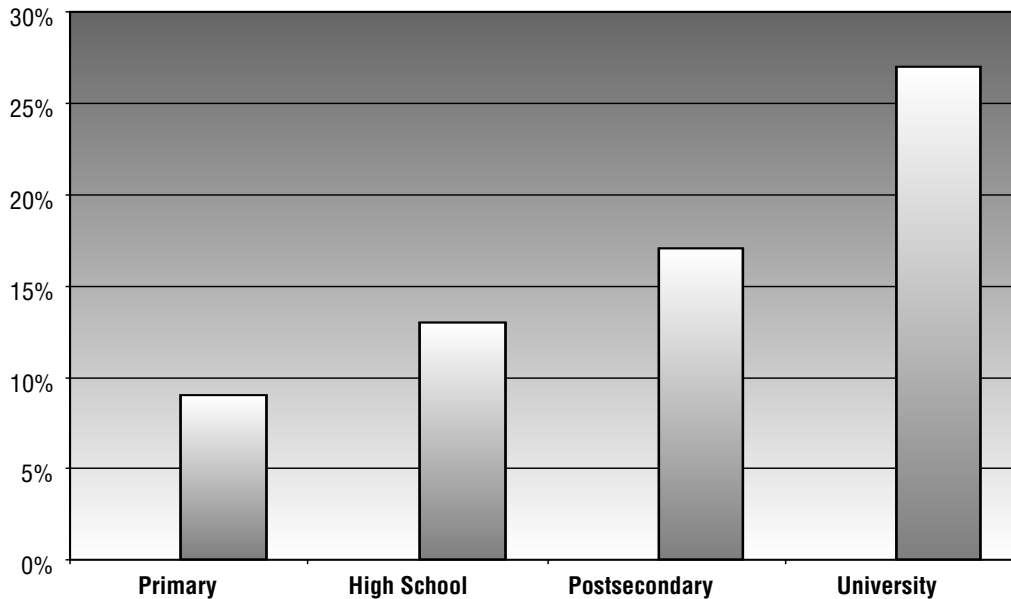


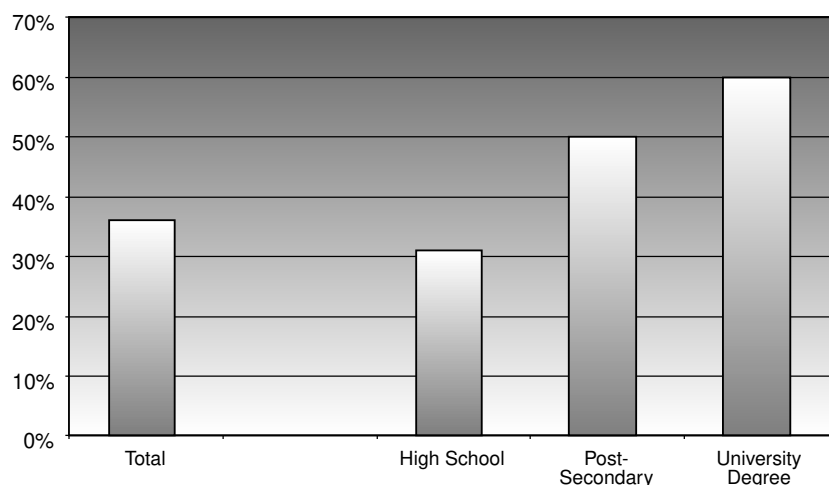
Chart 5.7 Source: Statistics Canada, *Perspectives on Labour and Income*, Winter 1997

What is the connection between potential trends in voluntary work and the tendency of highly educated people to work longer hours? In Nova Scotia fully 60% of all university degree holders aged 20-54 worked for volunteer organizations in 1987, nearly twice the provincial average and considerably higher than the 46% participation rate of university graduates in Canada as a whole. Among volunteers in Nova Scotia, 32.5% have a postsecondary degree or diploma, compared to only 15% among non-volunteers. In statements that mirror Statistics Canada’s conclusions on overtime, reports based on the 1987 National Survey on Volunteer Activity state conclusively that “the tendency to volunteering rises with the level of education” (Chart 5.8).⁴⁵

Among *informal* volunteers in Nova Scotia, level of education is particularly strongly related to the propensity to help care for the environment and for the community and society at large, implying that these areas might be particularly adversely affected by growing time pressures on professionals and those with university degrees. In the 1987 National Survey, help in both these crucial areas increased steadily as the level of education increased. The proportion of informal volunteers involved in caring for the environment rose from 21% for those with less than grade nine education to 27% for those with a postsecondary degree, and voluntary work for the community and society rose from 9% to 20%.⁴⁶

Direct help to individuals exhibited less marked differences by educational level among informal volunteers in the province. Overall, level of education had a much greater effect on the rate of participation in formal volunteer work through organizations than it did on informal voluntary work.

Formal Volunteers, aged 20-54, participation rate by level of education, Nova Scotia



Formal Volunteer Participation by Educational Attainment, Canada

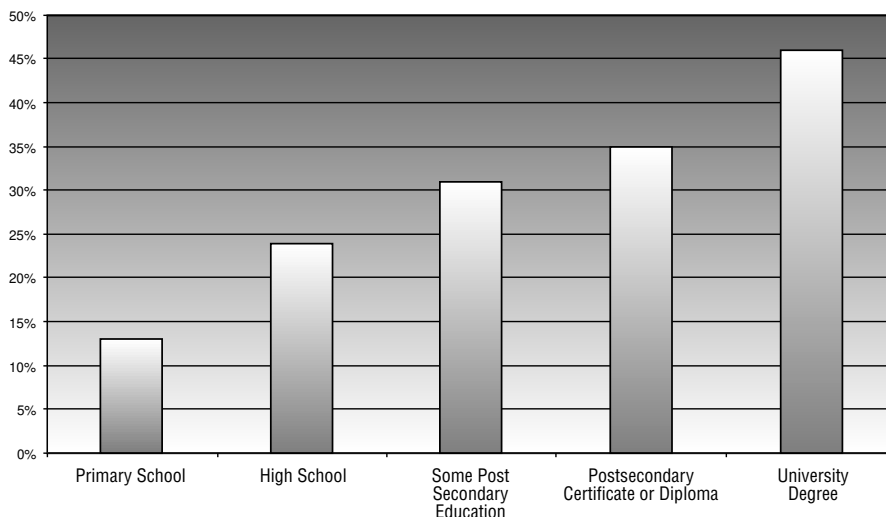


Chart 5.8: Sources: Webber, *Volunteers*; Duchesne, *Giving Freely*; Catano, *Volunteers in Nova Scotia*

At present, these data stand as two separate bodies of information on overtime and voluntary work respectively. But the circumstantial evidence for a link between longer work hours and a potential time squeeze that may threaten the economic and

social contribution of volunteer organizations is strong. Evidence from another Statistics Canada study indicates that there is a real opportunity to reverse this potentially problematic trend. Among all segments of the population surveyed, university graduates were the least likely to desire extra work hours, and the most willing to trade fewer hours for less pay.⁴⁷

The high proportion of university graduates among Nova Scotia volunteers indicates further that the \$13.02 an hour assessment of the replacement cost value of voluntary work used in this study is probably less than these graduates could earn in comparable work. If opportunity cost methods were used to assess the economic value of civic and voluntary work, the dollar value would likely be considerably higher than this study indicates, given the potential earnings of university graduates.

From the perspective of the GPI, this example illustrates the critical importance of tracking trends in unpaid work. An increase in overtime hours in the market economy will show up as economic growth and as an increase in the GDP. At the same time, a potential cost or consequent loss of economic and social value in the volunteer sector remains invisible in the accounts. It may manifest later only in a gradual and subtle deterioration in the quality of life.

The GPI view is that it is more prudent to track such potential problems in a more comprehensive system of accounting that includes the value of civic and voluntary work. This, in turn, can function as an early warning system to enable policy makers to arrest such a potential decline in volunteer work in its early stages, and before it manifests in social problems that may produce additional costs. The current system inevitably places higher value on what is measured and visible, producing a tendency to increase production through additional overtime in the market economy. By increasing the visibility of volunteer work and explicitly measuring its economic value, the cost-benefit approach of the GPI can bring a more balanced perspective to market trends.

5.5.2 The Time Crunch II: Women and Voluntary Work

Women constitute the majority of volunteers both in Nova Scotia and in Canada (see Table 5.1). Their role is particularly critical in care-giving activities of which the principal beneficiaries are the elderly, the disabled, and the very young. The data to be presented in the second module of the GPI indicates clearly that women's rapidly expanding participation in the paid labour force has not been matched by a corresponding decline in women's share of unpaid domestic labour, leading to a "double day" for many working women. According to John Myles,

The result is that the end of the 20th century society faces a crisis of care-giving, a direct result of the 'time crunch' that now characterizes the female life course.⁴⁸

In data to be presented in the fourth module of the GPI, it is also clear that women have experienced a corresponding decline in leisure time, with full-time employed mothers experiencing the heaviest time crunch of all.⁴⁹ Based on questionnaires in the 1992 General Social Survey, Statistics Canada reported that among 25 to 44 year olds, “one out of three full-time employed, married mothers suffered from extreme levels of time stress”, as measured by positive responses to seven out of ten questions on time perceptions, and 70% of this group reported feeling rushed on a daily basis.⁵⁰

While the implications of these trends for women will be described in more detail in the upcoming data releases of the GPI, it is noteworthy here that they will likely impact the quantity and quality of voluntary work directly. The 1987 National Survey showed that married women, who are the most highly time stressed group in the population, also have the highest rate of formal volunteer activity, with particularly high rates in Nova Scotia, where 39% of married women in the province worked for volunteer organizations.(Chart 5.9)⁵¹.

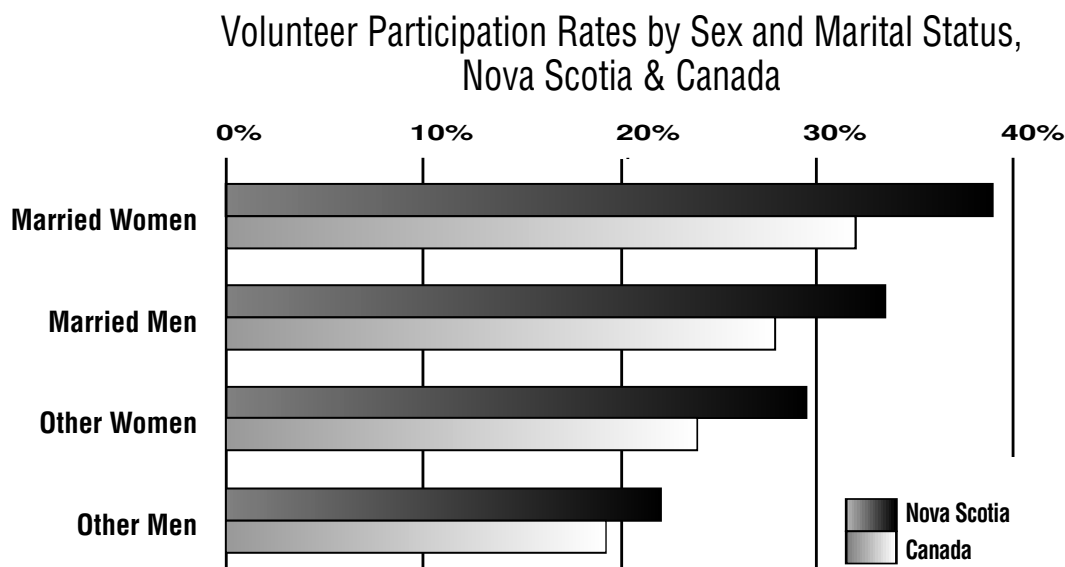


Chart 5.9: Source: Webber, *Volunteers*, page 12

Again, current data do not allow a quantification or confirmation of the impact on levels of voluntary activity of increased time stress on women. But, as with the consequence of increased overtime noted above, it is clear that trends in the market economy directly influence non-market activity, which in turn affects the standard of living and quality of life in the province.

An ordinary example from the informal volunteer sector illustrates the potential problem: A working couple with family moved from Cape Breton or the Annapolis

Valley to Halifax for reasons of employment and education. Every couple of months they returned to visit an elderly aunt living alone in their home town. While there, they undertook needed house repairs, maintenance and yard work, did shopping, and prepared and froze some meals for her. Time stress has now increased and they have not managed to visit the aunt in six months. Either the yard is overgrown with weeds and the aunt's house is beginning to deteriorate, or else she has replaced her relatives' voluntary work with paid work, if she can afford to do so. If her financial situation is precarious, and she devotes additional funds to livelihood necessities, then her quality of life may deteriorate in other areas.

The impacts of increased time stress on the formal volunteer sector, where married women are particularly active, are likely to be less subtle and more dramatic. The significance of these connections and linkages, which the GPI is designed to elucidate, illustrates the necessity of regularly valuing and monitoring trends in voluntary work. This is particularly important in a period of fiscal restraint and public service reductions, when losses in the volunteer sector are not easily replaced by the public sector.

Conversely, increased attention to flexible work options for women in the market economy can yield dividends in the non-market sector, which can help maintain the quality of critical voluntary services. As an example, one recent American study found that every dollar invested in family-friendly work arrangements produced a return of between \$2 and \$6 in reduced absenteeism, increased employee productivity and higher rates of retention.⁵²

Since that ratio reflects only gains to business in the market sector, the effects of reduced time stress on women will produce an even greater overall social dividend if they result in the maintenance of a high level of volunteer services in caring for the elderly, disabled and very young. Assigning explicit economic value to social assets like voluntary activity in our accounting procedures is therefore a necessary step to integrating effective social and economic policy and planning.

Given the paucity of data on long-term trends in voluntary work, it must be emphasized again that these final sets of findings, pointing to potential trends in the relationship between the volunteer sector and the market economy, are based on circumstantial evidence. They constitute hypotheses that will be tested by next year's release of the 1998 General Social Survey data on time use. Nevertheless, because of the strength of the data on the connecting variables in these cases – education and women's work load, they are examples of the important links between the two sectors, and warning signals that the economic and social contributions of voluntary work cannot be taken for granted.

6. Conclusion and Recommendation

Voluntary work in Nova Scotia provides critically important services to the province that contribute to our standard of living, quality of life, social stability and economic well being. The strength of the network of community and non-profit organizations in the province and the powerful commitment of Nova Scotians to civic and voluntary work constitute a vital social and economic asset that merits support and recognition. The province leads the country in the time commitment of its citizens to civic and voluntary work.

The aggregate asset value of voluntary work hours in Nova Scotia is estimated at \$1,754 million for 1997, based on the average per capita time commitment of 3.38 hours per week for the population 15 years and older, as recorded in the 1992 General Social Survey. This is the monetary value included in the Genuine Progress Index.

Despite the size, economic importance and value of the volunteer sector in Nova Scotia, it is currently omitted from the conventional accounts, which track only market activity. What is not measured remains largely invisible in the policy arena and is in danger of being undervalued. Lack of support may threaten the viability of organizations providing vital services, and time pressures, such as working longer hours to make ends meet, may reduce the time commitment of individuals to voluntary work.

There is growing recognition of the pressures on families struggling to balance paid work and domestic commitments and on students juggling school and work responsibilities. The pressures on volunteer time are less visible, but just as real. Just as the quality of family life and schoolwork can be affected by excessive work commitments, so too can the quality and effectiveness of voluntary services. In fact, vital and cost effective voluntary services may be threatened just when they are most needed, after a period of prolonged government cutbacks.

If just a tiny proportion of the resources and apparatus currently devoted to collecting data on the market economy were dedicated to tracking trends in civic and voluntary work, there would be an enormous improvement in the quality of information available on this important sector and a dramatic increase in the visibility of volunteer work and the value assigned to it. That in turn would naturally lead to stronger public and policy support of voluntary work, increased attention and assistance to voluntary groups, enhanced financial security and viability for volunteer non-profit organizations, and thus an even greater contribution by this sector to the economy and society of Nova Scotia.

In short, the annual measurement and valuation of civic and voluntary work in Nova Scotia would likely be a very cost-effective investment in an important asset in which the province already has considerable strength. Explicitly valuing the services of the volunteer sector can also help shed light on critical links between the market economy and unpaid work and provide an example for the rest of the country. Above all, this step will bring the consideration of volunteer work from its current identity as individual acts of charity into the framework of policy discussions on the provincial economy. Recognition of the economic benefits and value of services provided does not diminish the primary goal of volunteer organizations in rendering help and care nor the underlying motivation of generosity.

As the Statistics Canada report on *Human Capital and the Use of Time* noted: “It is only by quantifying the civic contributions of citizens that the value of basic institutions such as the family, school, faith community and voluntary associations will be more fully appreciated.”⁵³ Regularly measuring the value of voluntary work in the province can serve to acknowledge the high degree of civic consciousness and strength of civil society that distinguish Nova Scotia, that make such an important contribution to the quality of life, and that can contribute directly to future well being and prosperity in the region.

The two basic measurements needed to maintain this component of the GPI over time are:

- a) the percentage of the population 15 years and older engaged in voluntary work, *and*
- b) the annual number of volunteer hours contributed.

Simple though they are, these two measures can serve as a proxy indicator for the health of civil society, and provide a quantifiable basis for comparison with other provinces and countries if they follow Nova Scotia’s lead in tracking these measures. Observing these trends over time can also indicate whether the network of civic, voluntary and community organizations is strengthening or weakening, and whether we are successfully nurturing an existing asset.

It must be emphasized again that the voluntary work on which we depend so strongly in Nova Scotia cannot be taken for granted. Overwork and time stress can easily crowd out the space required for voluntary activity. Unstable funding dependent on donations can threaten the financial viability of important volunteer organizations. And, more subtly over time, increased materialism, economic pressure, or a turning inwards towards the survival of one’s immediate household can all undermine voluntary work and weaken civil society. For example, a 1994 Gallup Organization survey in the United States showed a steady decline of about 4.5% a year in annual hours volunteered in that country since 1989.⁵⁴

While the 1992 GSS clearly indicates that civil society is still strong in the Maritimes, it is not certain whether such potentially disturbing trends are also at work in this region. It is all the more important then to value this existing asset explicitly, to measure and track its health and viability, to strengthen it further, and to repair any erosion that may have occurred in some sectors.

Time use studies are a particularly powerful tool of analysis for this purpose. Since hours are finite and equally allocated to all segments of the population, shifts in the proportion and balance of different sectors of the economy and between paid and unpaid work can be readily assessed. They are the most useful instruments available to assess whether market trends, like increased overtime and female labour force participation, are impacting the contribution of volunteer organizations.

Most importantly, time use survey methods are the optimal means for assuring accurate reporting of time allocation. Specific recommendations on the use of these surveys to provide the data necessary to maintain the GPI are given in section 7.7 below.

The economic valuation of civic and voluntary activity, which is part of the Genuine Progress Index, highlights both the direct and indirect contribution of the volunteer sector to society and to the market economy. It draws attention to the value of critical services on which we depend and raises the profile of volunteer work from its current context as isolated individual acts of charity to the framework of policy discussions on the provincial economy.

By emphasizing the relationship between the paid and unpaid sectors of the economy, the GPI points to the potential costs to government and the formal economy of any diminution of voluntary activity and to the benefits of providing support to voluntary work and to civic and volunteer organizations. It is an arena in which Nova Scotia is particularly well placed to take the lead.

6.1 Summary of Basic Policy Issues

In sum, the basic policy issues raised by this data include:

- 1) What are the critical services provided by civic and voluntary work in Nova Scotia and what is the actual economic and social value of volunteer services to the province?
- 2) Are these services being adequately maintained over time, and how are they affected by pressures like public sector cutbacks, funding constraints, and time pressures?
- 3) To what extent have cuts in government services due to budgetary restraints been absorbed by voluntary workers?

- 4) What is the extent of involuntary “voluntary” work in the province, and is there a growing use of volunteers to replace paid workers?
- 5) Will the province regularly collect basic time use data on volunteer participation and hours in order to measure, track and maintain the visibility of voluntary work?
- 6) How can the province publicly acknowledge and reward the generosity of Nova Scotian volunteers, ensure that voluntary organizations have the support and resources necessary to provide vital services, and otherwise maintain the strength and asset value of civic and voluntary work in the province?

6.2 Beyond the GPI

As this study demonstrates, the Genuine Progress Index assesses the economic value of social and environmental assets by imputing market values to the services provided by our stock of human, social and environmental capital. This is a necessary step in order to overcome the tendency to undervalue the services of unpaid labour, natural resources and other “free” assets, to make their contribution to prosperity clearly visible, and to bring them more fully into the policy arena.

However, in concluding this report, it is important to emphasize that the imputation of market values should be seen as a temporary measure only, and as a tool of communication with the world of conventional economics, rather than as an end in itself. It is necessary only while financial structures, such as prices, taxes and monetary incentives, provide the primary cues for the actual behaviour of businesses, consumers and governments. And it serves to demonstrate the linkages and connections between non-market and market factors, such as the reality that depletion of a natural resource will produce an actual loss of value in the market economy.

We may acknowledge the absurdity of assigning monetary values to non-market assets, yet we do so consistently in almost every sphere except for our economic accounts. We may pay a higher apartment rent for the aesthetic pleasure of overlooking a park rather than a busy street. Insurance companies determine premiums based on non-market risk assessments and assign monetary values to the loss of human limbs and lives. Courts make financial awards for grief and suffering, and, since the 1992 Canadian Supreme Court decision in the case of Verna Fobel, for lost capacity to do unpaid work. Without such monetary assessments, social and environmental assets will likely be undervalued and their loss inadequately compensated.

Ultimately, however, it must be recognized that money is a poor tool for assessing the non-timber values of a forest, the costs of pollution or global warming, the value of caring work, or the quality of education. A materialist criterion cannot adequately assign value to the non-material values which give human life meaning.

Eventually, therefore, the Genuine Progress Index itself should give way to multi-dimensional policy analysis across a number of data bases. New Zealand economist Marilyn Waring suggests a basic triad of indicators – time use studies, qualitative environmental assessments, and market statistics – as a comprehensive basis for assessing well-being and progress.⁵⁵ There is ultimately nothing to be gained by assigning monetary values to the time use and environmental indicators, *provided* they are given full weight in policy assessments and decision-making.

In the meantime, and only so long as market statistics dominate our economic thinking and our policy and planning processes, the GPI can provide a useful tool for communication between the market and non-market sectors. Certainly it provides a more accurate measure of overall progress than can be achieved by measures which omit critical social and environmental variables entirely. By pointing to important linkages between the sectors, the GPI itself can provide a means to move beyond monetary assessments towards a more comprehensive and integrated policy and planning framework.

7. Appendix: Data Limitations and Methodology

7.1 Historical Data

The only reliable data sources on voluntary activity in the province are Statistics Canada's General Social Surveys (GSS) of 1986 and 1992, which included time use surveys, and the one-time National Survey on Volunteer Activity in 1986/87 which interviewed 70,000 Canadians 15 years and older. This last survey spawned several excellent analytical reports based on the results, which are used in this report and listed among the references.

Very limited data on care for the elderly are available from the 1996 census, but were collected in such a way as not to be comparable to the 1986 and 1992 data. Similarly the 1986/87 survey data are comparable with those of the 1992 GSS for the formal volunteer sector only, since the latter measured time devoted to both

formal and informal voluntary work, while the former only totaled the actual hours of formal volunteers. The initial screening questionnaire in the 1986/87 study determined whether individuals had been involved in formal or informal volunteering, but the more detailed follow-up questionnaire in the fall of 1987 only gathered information on the formal volunteers.

Also the 1992 GSS used time diaries while the 1986/87 survey was based on questionnaires. Bernard Paille has demonstrated convincingly that different collection methods yield different results, further rendering any comparison between the two data sets unreliable.⁵⁶

The 1986 GSS data included “organizational, voluntary and religious” activity within “free time activities” rather than as a category of unpaid work or productive activity and included different components than the 1992 GSS definition of “civic and voluntary activity”, again creating problems with comparability over time. For example, “help and personal care to adults” was categorized separately from voluntary work as was unpaid child care that enabled mothers to work.⁵⁷ These different definitions do not allow comparisons of voluntary activity between the two surveys. A 1979 survey of volunteer workers defines voluntary work much more narrowly than the later surveys, and is therefore also not comparable with them.⁵⁸

A time use survey is being administered as part of the 1998 General Social Survey and the results will be available in 1999. This should be fully comparable to the 1992 data. Also, a National Survey of Volunteering, Giving and Participation was conducted in the fall of 1997 as an extensive and elaborate update to the 1987 National Survey on Volunteer Activity. These results will be released later this year along with several analytical studies that are now under way.⁵⁹

The paucity of data is evidence of the degree to which voluntary activity is currently undervalued and invisible in the conventional annual accounts. Because data on the hours of volunteers are available for only two years (1986/87 and 1992), and even these are not fully comparable, no meaningful time series is currently possible to determine whether the scope of voluntary activity is increasing or declining in the province. This should be possible for the first time next year with the release of the 1998 GSS data and with the upcoming results of the National Survey of Volunteering.

Since time diaries, of the kind used in the 1992 GSS, are considered the most accurate method of time use data collection, and because the 1992 data are the most recent available, they are used as the basis for calculations in this report.⁶⁰ The published 1992 data also have the advantage of combining both formal and informal civic and voluntary work in the presentation of the results, so that an aggregate value can be easily derived. At the same time, a more detailed break-down between formal and informal voluntary work is possible by reference to the Daily Activity Codes used in the 1992 Time Use Survey. These separate out “social

support, civic and voluntary activity” into 23 separate types of activity. For the purposes of this report, such detailed micro-analysis has not been possible.⁶¹

Time use calculations in this study are based on the eleven tables (for Canada and all the provinces) that constitute Table One of the *Initial Data Release from the 1992 General Social Survey on Time Use*. The average daily time spent on “civic and voluntary activity” for the total population 15 years and over (participants and non-participants) is multiplied by 365 and again by the population 15 and over to derive the estimated annual hours for the province as a whole.

Imputations for 1997 have been made by adjusting the 1992 GSS results to reflect changes in population, hourly wage rates, and the consumer price index.⁶² However it is important to note that the assumptions on actual volunteer time per person for 1997 are still based on the 1992 data. *Formal* volunteer hours and the separate participation rates of formal and informal volunteers cited in this study are from the 1986/87 survey, since they are conveniently aggregated there in the published reports. As noted above, deducing these rates from the 1992 GSS would require microdata analysis of the 23 separate activity codes that constitute “civic and voluntary work”.

7.2 Monetary Valuation Methods

The method used in this study for calculating the economic value of volunteer hours is the “replacement cost (specialist)” method, and reflects the hourly wage rate that would be paid in Nova Scotia to replace existing voluntary activities at market prices for the same types of work.

For Nova Scotia, the replacement cost (specialist) rate for voluntary work in 1997 has been assessed at \$13.02 an hour compared to the Canadian average of \$15.70. This is based on Statistics Canada’s *Households’ Unpaid Work: Measurement and Valuation*,⁶³ and has been adjusted to 1997 dollars using the Consumer Price Index for Nova Scotia (Chart 7.1).⁶⁴ Section 5.2 (above) and Table 7.1 (below) also give a generalist replacement cost valuation and a pre-tax opportunity cost valuation for purposes of comparison and in order to indicate lower and upper bound estimates of the value of voluntary work.

Replacement Cost (Specialist) Hourly Rate for Volunteer Work, by Province (1997)

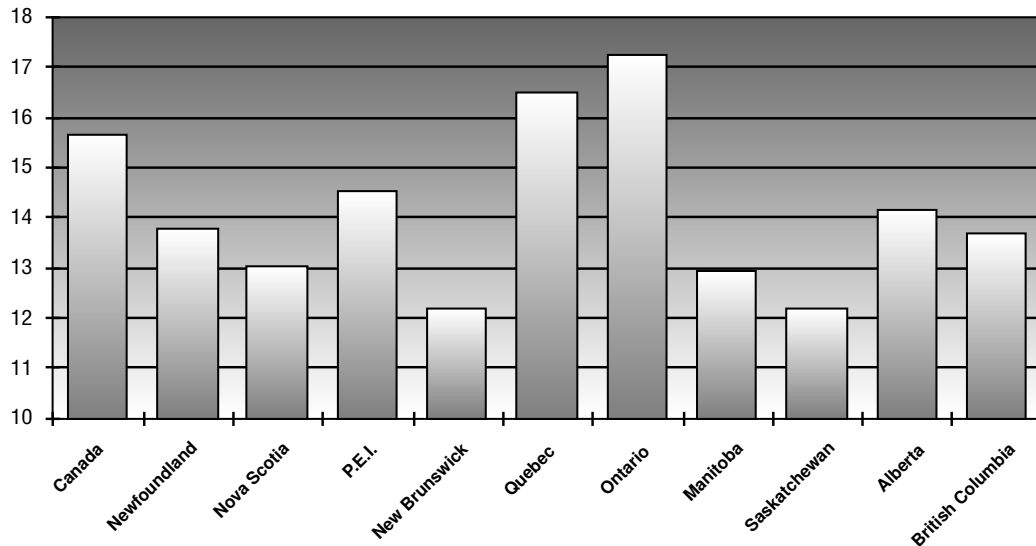


Chart 7.1: Source: Statistics Canada, *Households' Unpaid Work: Measurement and Valuation, 1995*

The accuracy of the replacement cost (specialist) estimate used in this study was tested against Statistics Canada's *Employment, Earnings and Hours 1997*,⁶⁵ which shows that average weekly earnings in the health and services industry in Nova Scotia were \$455 including overtime. Divided by the average 34.6 hours of work in that industry in the province, including both full-time and part-time work, industry earnings were \$13.15 an hour. The comparison indicates that the \$13.02 figure used in this report is a reasonable one.

Duncan Ironmonger in Australia and New Zealand economist Marilyn Waring argue that replacement cost estimates, in order to mirror accurately conditions in the paid labour force, should include the value of employer contributions to employment insurance, pension plans, workers' compensation, supplementary health benefits and other fringe benefits in the hourly rate, as well as an adjustment for the value of paid statutory holidays and vacations.⁶⁶

The Statistics Canada replacement cost estimates used in this report do include employer contributions to employment insurance and Canada Pension Plan, and are adjusted for paid time off. However, they do not include contributions to private pension plans, health and accident insurance or worker's compensation. On the other hand, the Statistics Canada figures are based on the earnings of full-year full-time workers and may therefore over-estimate the replacement cost value to the

extent that part-timers and “non-standard” workers generally earn less and receive fewer fringe benefits.⁶⁷ Given these caveats on both sides of the equation, the replacement cost estimates used in this report appear to provide a reasonably accurate equivalence to paid labour values.

7.2.1 Alternative Valuation Methods

Alternative methods for assessing the value of volunteer work are the *replacement cost (generalist)* method, which will be employed in the next GPI data release on the value of unpaid housework, and the *opportunity cost* method. Rather than value the different types of work according to the hourly rates paid to employees in similar occupations, (the *replacement cost (specialist)* method used in this report), the generalist method imputes the market replacement cost value on the basis of the hourly earnings of domestic employees and child-care workers. The *opportunity cost* method assesses the value of voluntary work on the basis of the anticipated hourly earnings of volunteers in their own normal fields of work.⁶⁸

The pre-tax opportunity cost method would yield results at least 30% higher than the estimates in this report. Since a disproportionate number of workers for volunteer organizations are highly educated (see section 5.5.1), opportunity costs may actually be considerably higher in the formal volunteer sector.

For Nova Scotia, the replacement cost (generalist) method would yield results about 84% of those cited in this report. This percentage is derived as follows. The generalist method used by Statistics Canada does in fact apply the specialist valuation (\$13.02) to that portion of unpaid labour performed in the *formal* volunteer sector. However, *informal* voluntary work is considered by Statistics Canada to be more equivalent to work in and around the house⁶⁹, which is valued at \$9.86 an hour in Nova Scotia, or about 76% of the rate applied to the formal volunteer sector. If that rate were applied to the roughly two-thirds of voluntary work that is not given through formal organizations, then the average rate for *all* voluntary work would be \$10.94 an hour in Nova Scotia for the generalist approach rather than \$13.02 using the specialist method. The generalist method would therefore yield a GPI asset value for voluntary hours in Nova Scotia of \$1,473 million rather than \$1,754 million.

All of these methods use labour inputs into voluntary work as the basis for monetary valuation. Methods have not yet been fully developed to value voluntary work on the basis of outputs, or services actually provided, though this would undoubtedly yield a more accurate picture of the social benefits of voluntary work. In principle, Statistics Canada regards such a direct valuation of the outputs of unpaid work as methodologically “the best approach”, partly because it makes

unpaid work more directly comparable to market valuations, but the agency notes that the absence of appropriate data renders the output valuation method impracticable at the present time.⁷⁰

7.3 Out of Pocket Expenses and Skills Training

In addition to the hourly value of volunteer time, the National Survey on Volunteer Activity found that Canadian formal volunteers contributed an average of an additional 83 cents an hour (in \$1986) in out-of-pocket non-reimbursed expenses to conduct their activity.⁷¹ This was mostly for gas and transportation, food contributions, equipment and supplies. This figure has also been adjusted to 1997 dollars using the Consumer Price Index for the purposes of this report.

However actual Nova Scotia out-of-pocket expenses were \$137 per volunteer in 1986, compared to the national average of \$158. The national average adjusted to 1997 dollars has therefore been discounted by 13.3% to reflect the provincial difference, and expenses estimated at \$128 million for the province rather than the \$148 million figure that would derive from the national average.

It should be noted here that these expenses (about 7% of the hours value) already show up in the GDP, since they are market expenditures, while the value of voluntary hours does not. Nevertheless, non-reimbursed expenses are included in this report in order to estimate the overall economic value of voluntary work in the province, and because they are generally not included in the charitable contributions reported to Revenue Canada.

The value of volunteer skills training to the market economy is not assessed in monetary terms in this report.⁷² Future studies might attempt to value the cost to employers of comparable training in organization and management methods, office and technical skills, and other training currently provided by volunteer organizations. Far more precise data on the training programs themselves are needed before accurate monetization is possible.

7.4 Job Equivalents

In order to calculate how many paid jobs would likely be created if voluntary work were replaced by the government or private sector, two calculations are made. First, full-time job equivalents are estimated by multiplying a 40-hour work week by 48, to obtain an estimate of the yearly hours actually worked by full-time employees (1,920 hours) after vacations, holidays and leaves are subtracted. Since the volunteer hours are all working hours, and do not include paid statutory holidays and annual leave as the Statistics Canada employment data do, it is necessary to subtract 20 days from the

52 weeks paid employment of full-time full-year workers to obtain job equivalents based on volunteer hours.⁷³ These 1,920 hours are then divided into the total annual hours contributed by volunteers, to yield about 70,000 full-time jobs.

Since the number of jobs created by the replacement of voluntary work would actually correspond to the mixture of full-time and part-time jobs, a second calculation is made based on the average hours actually prevailing in equivalent industries. About 31% of jobs in health and social services, for example, are part-time, with an average work week of 34.6 hours taking into account both full and part-time positions in that industry.⁷⁴ This would produce more than 81,000 jobs.

7.5 The Problem of “Involuntary” Voluntary Work

Finally, a data problem that we have been unable to resolve in this study is the issue of “involuntary” voluntary work which, according to recent reports on youth unemployment, is a growing concern. Young people in particular, unable to find paid employment, seem increasingly to be taking on voluntary work in order to strengthen their resumes and as a stepping stone to paid employment.⁷⁵ If they had the choice, they would rather be paid. There have been reports that some businesses, too, are increasingly using unpaid internships to “test” potential employees. At the 15th annual Topshee Conference held June 13-14, 1998 at St. Francis Xavier University, numerous anecdotal accounts emerged of the gradual replacement of paid workers with volunteers in nursing homes, shelters, health care facilities and other private and public institutions providing care, counselling, shelter and support.

Current data do not allow us to determine the extent of this phenomenon and its effect on voluntary hours worked in the province. There are clearly major definitional problems in this area, since involuntary volunteerism and the deliberate use of voluntary labour to replace paid workers distort the basic concept of volunteer activity and can lead to serious abuses in practice. From the viewpoint of assessing “genuine progress” towards greater prosperity and well-being, increases in involuntary volunteer work should clearly not produce an increase in the asset value of voluntary work in the GPI. On the contrary, a shift to the market sector in such cases will likely signify greater progress.

The recent National Survey of Volunteering, Giving and Participation may produce the first evidence on motivations for undertaking voluntary work since the last national survey eleven years ago. If, for example, there is a significant decline in the proportion of volunteers citing “helping others” as their primary motivation, there is good reason to explore this trend further.

Explicit questions asking whether voluntary work was undertaken because paid work

was unavailable, and whether the current volunteer job replaced a paid job, would produce more concrete evidence and enable a proportionate adjustment of the value of voluntary work in the GPI. Such questions are already asked in Statistics Canada’s annual Labour Force Surveys to determine the extent of involuntary part-time work and involuntary self-employment in order to track changes in levels of under-employment, so they can be easily adapted to determine changes in the nature of voluntary work.

This data gap illustrates a deeper problem – the lack of information on the relationship between the voluntary sector and the market economy altogether. There is circumstantial evidence that unpaid work is generally “counter-cyclical” in relation to economic growth. According to Statistics Canada, the premise for this hypothesis is that:

*when the market economy is growing rapidly, activity in the non-market sector grows more slowly or declines and vice versa. The market sector draws resources from the non-market sector in periods of expansion and releases them in periods of decline. As a result, measured economic growth rates, which essentially track the course of the market economy, will tend to exaggerate the magnitude of economic cycles.*⁷⁶

This means that current growth rates are likely exaggerated, while the unpaid sector cushions some of the effects of recessionary trends during economic slowdowns.

As noted, however, we have as yet no direct evidence on the relationship between the *voluntary* sector specifically and the market economy, because of the paucity of data on voluntary work and the lack of any reliable time series indicating increases or decreases in the volume of voluntary work over time. Given the size of the voluntary sector and our reliance on its critical services, this is a serious omission. For example, it seems vitally important to measure the extent to which cuts in government services due to budgetary restraints have in fact been absorbed by voluntary workers.

7.6 Exclusion of Paid Staff of Volunteer Organizations

There is currently no way to tabulate the wages of the paid staff of volunteer organizations, since they were excluded from the National Survey on Volunteer Activity, and because the standard industry classification used by Statistics Canada does not list volunteer organizations as a group. Instead paid workers for volunteer organizations are combined with other workers according to their industry – health and social services, education, and so on. The time use surveys distinguished unpaid from paid work but did not separately identify paid employees of volunteer groups. Therefore, there is currently no means to calculate the total economic contribution of volunteer organizations or even the number of their employees.

This study therefore reports only on the contribution of the volunteers themselves, and clearly understates the economic contribution of the voluntary sector as a whole.

7.7 Recommendations on Data Issues:

It is quite clear from 7.1 above, that there is a serious shortage of good data on voluntary work, and no real evidence on its rate of growth or decline. As a result, this vitally important sector is currently undervalued, and its relationship with the market economy is unclear. This shortcoming is easy to correct, so that proper weight can be assigned in the future to a powerful provincial asset and so that we can further strengthen a sector in which Nova Scotia has already taken the lead.

1. The current valuation of voluntary work in Nova Scotia should be updated in 1999 using data from the 1998 GSS time use survey, and a time series both on the hours and value of voluntary work in the province should be constructed from 1992 to 1998 to determine trends in this area. The values can be compared with national trends, available from the same sources and from the National Survey of Volunteering, Giving and Participation, from which the results will be released shortly.
2. From the year 2000, the data should be updated annually in order to maintain the visibility of voluntary work in the public eye and to emphasize its social and economic importance in the policy arena. In the absence of annual Statistics Canada time use surveys, the province can conduct very simple and inexpensive annual sample surveys to determine basic trends in voluntary and household work in between the more detailed six-yearly Statistics Canada studies. While full-scale surveys of volunteer activity along the lines of the 1986/87 national survey and the 1997 National Survey of Volunteering, Giving and Participation provide very useful and important information, a much simpler annual sample survey will suffice to maintain the measurements required for this sector in the GPI.

The valuation of voluntary work in the GPI and the assessment of trends over time require only basic participation rates and the aggregate number of hours contributed by volunteers. Since these data are not easily obtained by stylized questionnaires, time diaries tracking trends in both voluntary and household work could be used for greater accuracy.

We are fortunate to have in Halifax one of the world's experts and pioneers in time use survey methods, Dr. Andrew Harvey of the Economics Department at Saint Mary's University and director of the Time Use Research Program at the university, and president of the International Association for Time Use Research. He could be asked to design the province's annual survey of unpaid household and voluntary work.

3. In order to study the phenomenon of “involuntary” voluntary work directly, the survey could contain the following two questions: “Is your main reason for volunteering the fact that you cannot find paid work?” and “To the best of your knowledge, has your voluntary job replaced a paid job?” Since the value of voluntary work appears as an *asset* in the Genuine Progress Index and is defined as work *willingly* undertaken without pay (see section 4 above), the currently hidden hours of “involuntary” volunteers should be subtracted from this particular valuation.

Needless to say, these “involuntary” volunteers may still be producing work of economic benefit to society and acquiring useful skills training, but it would be more accurate to list this work separately from the valuation of voluntary work, since its motivation is fundamentally different and since its absorption by the market sector will likely produce a net gain for society.

Within a few years, such provincial time series as recommended here would produce the first direct evidence in the country, and perhaps in the world, of the relationship between voluntary work and the market economy. Such pioneering work in Nova Scotia would undoubtedly attract considerable interest from outside, since it would allow accurate estimations of possible biases in current growth measurements due to the counter-cyclical trends mentioned above.

4. Beyond the data collection itself, there are many policy implications to the measurement and valuation of voluntary work. Stronger financial support can be provided to voluntary sectors where the delivery of essential services is more cost effective than it would be if the responsibility were shouldered by government or the private sector. Stronger public recognition of models of selfless and generous service on the part of Nova Scotians could provide further appreciation of this vitally important provincial asset.

7.8 Replicating the Value of Voluntary Work for Other Provinces

In the interests of comparability, it may be helpful to suggest some basic common data sources and methods that can be used to assess the value of civic and voluntary work in all provinces and in Canada as a whole.

Row 1: In **Table 7.1** below, average time spent on civic and voluntary activity is taken from the eleven tables that constitute Table One of the *Initial Data Release from the 1992 General Social Survey on Time Use*, (Statistics Canada, catalogue 11-612, #30), and represents minutes per day per person for the total population 15 years and over, including participants and non-participants.

Row 2 simply multiplies that figure by 365 to obtain the total average hours per year per person spent on civic and voluntary activity.

Row 3 represents the provincial population 15 years and over, as reported in the *Annual Demographic Statistics, 1997* (Statistics Canada, catalogue no. 91-213-XPB) in thousands.

Row 4 multiplies Rows 2 and 3 to obtain the total annual hours of civic and voluntary activity for each province in millions.

Row 5 gives the hourly replacement cost (specialist) value for volunteer work for each province, as reported in *Households' Unpaid Work: Measurement and Valuation*, (Statistics Canada, System of National Accounts: Studies in National Accounting, catalogue no. 13-603E, no. 3, Table A4, page 71, line 20), adjusted to 1997 dollars. This represents the comparable rates of pay in each province in the industries that would most likely replace existing voluntary activity.

Row 6 multiplies Rows 4 and 5 to give the total replacement cost (specialist) value of civic and voluntary work for each province, in millions of 1997 dollars. This is the asset value used in the Nova Scotia GPI, and is printed in bold type to signify the comparable values for other provinces.

Row 7 estimates the replacement cost (generalist) value of civic and voluntary work, and assumes that the specialist value applies only to formal volunteer work for organizations (about one-third of total hours) and the “domestic work” rate (*Households' Unpaid Work*, Table A4, page 71, line 9) to informal voluntary work (two-thirds of hours). For the purposes of this table, the ratio between the generalist and specialist valuations of unpaid work in Tables B5 and B4 of *Households' Unpaid Work* is used as an approximation of this value.

Row 8 assesses the value of civic and voluntary work at opportunity cost before tax, and uses the ratio between Tables B2 and B4 of the same publication as the basis for the estimation.

	Can.	N.S.	Nfld.	PEI	N.B.	Que.	Ont.	Man.	Sas.	Alta.	B.C.
Mins / Day / Person	23	29	29	20	28	24	21	22	27	24	23
Hours / Year / Person	139.9	176.4	176.4	121.7	170.3	146	127.7	133.8	164.2	146	139.9
Population 15+ ('000)	24,294	766	457	108	618	6,044	9,138	900	793	2,219	3,179
Total Hours—millions	3,399	135	81	13	105	882	1,167	120	130	324	445
Repl. Cost (Spec.) \$/ hour	15.66	13.02	13.78	14.53	12.70	16.51	17.22	12.94	12.21	14.14	13.68
Annual Economic Value (Repl. Cost Spec.) \$ million, (in GPI)	53,228	1,758	1,116	189	1,333	14,562	20,096	1,553	1,587	4,581	6,088
Repl. Cost Gen.	42,050	1,471	732	195	912	10,936	15,856	1,298	1,208	3,898	5,181
Opp. Cost Pre-Tax	67,121	2,294	1,529	232	1,760	18,188	25,200	1,907	1,868	6,024	7,683

Table 7.1: Value of Voluntary Work Hours, Canada and Provinces, population 15 and over, (1997 hours and values imputed from 1992 GSS time use survey)

(Note: Numbers may not correspond precisely to text references, due to rounding in this table and to slight differences in population estimates for 1997 between the *Quarterly Demographic Statistics* used in the text and the *Annual Demographic Statistics* used in this table.)

8 Endnotes

Section 1

1 Robert Kennedy, “Recapturing America’s Moral Vision”, March 18, 1968, in *RFK: Collected Speeches*, Viking Press, 1993

2 Signatories include Robert Dorfman, Professor Emeritus, Harvard University, Robert Heilbroner, Professor Emeritus, New School for Social Research, Herbert Simon, Nobel Laureate, 1978, Partha Dasgupta, Oxford University, Robert Eisner, former president, American Economics Association, Mohan Munasinghe, Chief, Environmental Policy and Research Division, World Bank, Stephen Marglin and Juliet Schor, Harvard University, Don Paarlberg, Professor Emeritus, Purdue University, Emile Van Lennep, former Secretary General, OECD, Maurice Strong,

Chair, Ontario Hydro and Secretary General, Rio Earth Summit, and Daniel Goeudevert, former Chairman and President, Volkswagen AG. Full text and signatory list available from *Redefining Progress*, One Kearny St., San Francisco, CA. 94108.

3 Statistics Canada, *Econnections: Linking the Environment and the Economy: Concepts, Sources and Methods of the Canadian System of Environmental and Resource Accounts*, catalogue 16-505-GPE, issued December 4, 1997; Leroy Stone, Ph.D and Marie-Therese Chicha, Ph.D, *The Statistics Canada Total Work Accounts System*, Statistics Canada, catalogue 89-549-XPE, 1996.

4 Hans Messinger, Statistics Canada, *Measuring Sustainable Economic Welfare: Looking Beyond GDP*, June 1997, compares the MEW and the original GPI and replicates the models for Canada.

5 Statistics Canada, *Econnections*, catalogue 16-515-GPE, page 10.

6 For the Nova Scotia GPI, these norms are defined in *Measuring Sustainable Development: What the Genuine Progress Index Can Do For Nova Scotia*, pages 12-15: presentation to the N.S. Government Inter-Departmental Consultation, March 3, 1998, World Trade and Convention Centre, Halifax. Available on the GPI web site at <http://www.gpiatlantic.org>

7 This document is available at the following web site: <http://www.gpiatlantic.org> and can be downloaded from that site by chapter. The full text, including bibliography, is 135 pages.

8 In preparing this sector of the Genuine Progress Index, GPI Atlantic wishes to acknowledge the invaluable assistance of Hans Messinger, Andrew Harvey, Chris Jackson and Andrew Maw.

9 Statistics Canada, *International Conference on the Measurement and Valuation of Unpaid Work: Proceedings*, catalogue no. 89-532E, August 1994, page 19.

10 These are listed and described in the two GPI Atlantic background publications *Measuring Sustainable Development*, available on the GPI web site at <http://www.gpiatlantic.org>

11 See Section 6.1 below for a further discussion of this issue.

Section 3

12 The National Survey on Volunteer Activity was conducted by Statistics Canada on behalf of the Department of the Secretary of State in a two-stage process. The initial screening questionnaire determined whether individuals had been involved in formal and/or informal volunteering from November 1986 to October 1987. A follow-up questionnaire in the fall of 1987 gathered more detailed information on formal volunteering through organizations. That survey reached about 70,000 Canadians 15 years of age and older. A statistical overview of the results, *Giving Freely: Volunteers in Canada* by Doreen Duchesne, has been published by Statistics Canada (Labour Analytic Report No.4, Catalogue 71-535, #4, Minister of Supply and Services Canada, August 1989).

13 Idem. Page 5.

14 Clifford Cobb, Ted Halstead, Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, September 1995, page 15. The name was changed to the Genuine Progress Index in 1997.

15 John Myles, “Women, the Welfare State and Care-Giving”, *Canadian Journal on Aging*, vol. 10, no. 2, 1991, cited in Judith Frederick, *As Time Goes By...Time Use of Canadians*, Statistics Canada, catalogue no. 89-544E, page 7.

16 David Ross, *Economic Dimensions of Volunteer Work in Canada*, Department of the Secretary of State, January 1990, page 7.

17 See, for example, Manisha Bharti, “Building on the Social Economy” in *Report of the Advisory Committee on the Changing Workplace*, Human Resources Development Canada, June 1997, pp. 36-43; and the report of the *Working Group on the Social Economy* to the Quebec Social and Economy Summit, October 1996.

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

Section 4

19 See Maryanne Webber, Labour and Household Surveys Division, Statistics Canada, *Volunteers in Sports and Recreation*, presentation to the 16th annual conference and general meeting of the Recreation Association of Nova Scotia, November 16-19, 1989, pp. 5-6, for precise definitions of formal and informal volunteers.

Definitions of voluntary work frequently exclude care provided to members of one’s own household. Since Statistics Canada includes care provided to household adults in its definition of “civic and voluntary activity” for the purposes of the 1992 Time Use Survey (codes 271, 272, 282, and 292), and since that survey provides the basis for the time valuations in this report, care of household adults is included in this study.

20 Frank Jones, *Human Capital and the Use of Time*, Research Paper Series No.79, Analytical Studies Branch, Statistics Canada, 1995, page 15.

21 For readers interested in further detail, the 23 activity codes that constitute the category “civic and voluntary activity” in the 1992 Time Use Survey do allow a more precise analysis of the actual mix of voluntary work. This breakdown is possible through the public access micro-data for the 1992 General Social Survey.

22 Janis Wood Catano, *Volunteers in Nova Scotia: A Profile of Volunteers based on the 1987 National Survey on Volunteer Activity*, Profile No. 28, Voluntary Action Directorate, Multiculturalism and Citizenship Canada, Department of the Secretary of State, 1989, page 6.

23 Duchesne, *Giving Freely*; Catano, *Volunteers in Nova Scotia*; Webber, *Volunteers in Sports and Recreation*: Statistics Canada analytical reports based on the 1986/87 National Survey of Volunteer Activity.

24 See daily activity codes 671-680, 271, 272, 282, and 292, 1992 GSS Time Use Survey, received for this report from Chris Jackson, National Accounts Division, Statistics Canada.

25 See Andrew Harvey, *Informal Volunteers: Doing It On Their Own: A Profile of Volunteers based on the 1987 National Survey on Volunteer Activity*, Profile No.33, Voluntary Action Directorate, Multiculturalism and Citizenship Canada, Department of the Secretary of State, 1989, page 3.

26 Duchesne, Catano, Webber, Harvey, op. cit., Statistics Canada

27 For details on the methods and data sources for the calculations in this section, please see the Appendix on Data and Methodology (section 7). Also, please note that many footnotes in this section identify references in abbreviated form. Full text references are given both in “References Cited” (section 8) at the end of this study, and also in the footnotes to the Appendix on Data and Methodology (section 7).

Section 5

28 Statistics Canada, *Initial Data Release from the 1992 GSS on Time Use*, Table 1. Unless otherwise indicated all aggregate numbers refer to the combined total contribution of formal and informal voluntary work. As noted above, attendance at religious services is *not* included in the 1992 GSS definition of civic and voluntary activity, but *organizing* such services is.

29 The 1/3 – 2/3 split between formal and informal voluntary work is estimated both from the initial screening questionnaire of the 1986/87 National Survey, and from comparisons between the aggregate voluntary work time reported in the 1992 GSS and the formal volunteer hours reported in the National Survey. Formal volunteer hours constitute 46 million hours (34%) out of the total estimated 135 million hours of voluntary work time in the province: See Table 5.2

30 Duchesne, *Giving Freely*. Major cities data is on pages 16-17.

31 Informal hours are not directly available from the data and are imputed as the residual of the 1992 data on formal and informal voluntary work combined, minus the formal volunteer hours from the 1986/87 data in the National Survey, both figures adjusted for the 1997 Nova Scotia population 15 and over.

32 This figure is the residual of the number of informal volunteers (74% of the Nova Scotian population age 15 and over) minus the number reporting that they only undertook informal and not formal voluntary work, (304,000 in 1987). (Webber, *Volunteers in Sports and Recreation*, page 11). The figures are adjusted for 1997 population levels.

33 Paid work time calculated from the 1992 GSS Time Use Survey includes “related activities” such as commuting. The percentage is even higher if only paid time at the place of work is considered. It should be emphasized that the 1992 GSS definition of “civic and voluntary activity” excluded activity code 640 (“religious services/prayer/Bible readings”), which are classified under “personal activities” and are therefore not included in the calculations in this report.

34 Census of Canada, 1996, *Household Activities – Unpaid Work, Canada, Provinces*, Nation Series #93F0027XDB96000, released April 1998.

35 Aggregate annual hours are based on the 29 minutes per day average for “civic and voluntary activity” reported for Nova Scotians in the 1992 GSS: Statistics

Canada, *Initial Data Release*, Table 1 (provincial tables), multiplied by 365 and again by the population 15 and over. See Appendix on Data and Methodology, section 7.2, on monetary valuation methods.

36 GDP from Statistics Canada, *Provincial Economic Accounts, Annual Estimates*, catalogue no. 13-213-PPB, and from Statistics Canada, *Canadian Economic Observer*, catalogue no. 11-210-XPB 1996/1997. Comparative wages, salaries and employment figures are from Statistics Canada, *Employment, Earnings and Hours*, catalogue no. 72-002 and from the *Labour Force Survey*.

37 Statistics Canada, *Provincial Gross Domestic Product by Industry*, System of National Accounts, catalogue no. 15-203-XPB.

38 See Appendix, section 7.2.1

39 Donation figures supplied by Hans Messinger, Statistics Canada, personal communication, June 9, 1998.

40 Job equivalents calculated from total annual volunteer hours. Ratios to full-time employment are calculated from Statistics Canada, *Employment, Earnings and Hours*, catalogue no. 72-002.

41 Catano, op.cit., page 5.

42 For more information on unpaid informal child care, see Statistics Canada, *Canadian National Child Care Study*, 1988, especially the reports *Parental Work Patterns and Child Care Needs*, catalogue no. 89-529E, *Shared Diversity: An Interprovincial Report on Child Care in Canada*, catalogue no. 89-536-XPE, and the Nova Scotia Report in *Canadian Child Care in Context: Perspectives from the Provinces and Territories*, volume II, pages 258-317.

43 Catano, op.cit., page 2, reports that 15.7% of volunteers in Nova Scotia helped someone outside their own household with the operation of a business or with farm work. The figure given here, 89,000 for 1997, assumes that this percentage is unchanged since 1987. The recent *Beyond the Campus* study on the impact of universities on society estimated that Nova Scotia faculty provided nearly \$4.5 million in unremunerated help in 1992, about one-third to business and government (Andrew Harvey, personal communication, June 7, 1998).

44 Statistics Canada, *Perspectives on Labour and Income*, Winter 1997, catalogue no. 75-001-XPE, pages 5, 6, 13, 14 and 27.

45 Webber, *Volunteers*, page 9, Duchesne, *Giving Freely*, pages 22-23, Catano, *Volunteers in Nova Scotia*, page 1.

46 Harvey, *Informal Volunteers*, page 3.

47 Drolet, Marie and Rene Morissette, *Working More? Working Less? What Do Canadian Workers Prefer?*, Statistics Canada, Analytic Studies Branch, Research Paper Series #104, catalogue no. 13-539-90, and 11F0019MPE, 1997; and Statistics Canada, *Perspectives*, Winter 1997, pages 6 and 35.

48 “Women, the Welfare State and Care Giving”, *Canadian Journal of Aging*, volume 10, no. 2, 1991, cited in Frederick, *As Time Goes By*, Statistics Canada, catalogue no. 89-544E, page 7.

49 Frederick, op. cit., page 32.

50 idem., pages 28, 31.

51 Webber, op. cit., pp. 11-12.

52 Merrill-Palmer Institute, Work/Family Department, Wayne State University, Detroit, Michigan, 1995, cited on the International Association of Time Use Research web-site: <http://www.stmarys.ca/partners/iatur/iatur2.htm>

Section 6

53 Jones, op. cit., page 15.

54 Independent Sector, *Giving and Volunteering in the United States, 1994*, Washington, D.C., cited in Redefining Progress, *The Genuine Progress Indicator: Summary of Data and Methodology*, 1995, pages 15-16.

55 Marilyn Waring, *Women, Work and Well Being*, address delivered at Kings College, Halifax, 30 April, 1998

Section 7

56 Bernie Paille, *Estimating the Volume of Unpaid Activities in Canada, 1992: An Evaluation of Data from the General Social Survey*, General Social Survey Working Paper #10, Statistics Canada, January 1994. On the use of time diaries, see also Andrew Harvey and W. Stephen Macdonald, "Time Diaries and Time Data for Extension of Economic Accounts", *Social Indicators Research* 3 (1976, pp. 21-35; Andrew Harvey, *Time Use Module of the General Social Survey*, General Social Survey Working Paper #8, Statistics Canada, 1987; and Andrew Harvey, *Time Based Indicators*, prepared for the United Nations Statistical Office, September, 1989.

57 Andrew Harvey, Katherine Marshall and Judith Frederick, *Where Does Time Go?*, General Social Survey Analysis Series, catalogue no. 11-612E, #4, Statistics Canada, August 1991.

58 Statistics Canada, *An Overview of Volunteer Workers in Canada*, catalogue no. 71-530, February, 1980.

59 Chris Jackson, National Accounts Division, Statistics Canada, personal communication, June 9, 1998.

60 Actual volunteer hours for the provinces are derived from Table 1 on "average time spent on activity groups for the population 15 years and over" in the *Initial Data Release from the 1992 General Social Survey on Time Use*, catalogue no. 11-612, #30, Statistics Canada. Category #3 is "civic and voluntary activity". Table 1 actually consists of 11 separate tables – for Canada and each of the provinces. For a general summation of results from the 1992 time use survey, see Judith Frederick, *As Time Goes By...Time Use of Canadians*, General Social Survey, catalogue no. 89-544E, Statistics Canada, December, 1995.

61 Chris Jackson, National Accounts Division, Statistics Canada, personal communication, June 9, 1998. For example, the 23 activity codes separate out volunteer work (organizations) (660), fraternal and social organizations (e.g. Lions' Club) (651), child, youth, family organizations (620), religious organizations (630), support groups (e.g. AA) (652), coaching (800), and professional, union, general

(600) within the formal sector; and an even larger number of activities within the informal sector (e.g. codes 671-680). It should be noted that codes 271, 272, 282 and 292 all refer to care provided to adults within the household, such as elderly relatives, but have been included by Statistics Canada in the definition of “civic and voluntary activity.” It should also be noted that “religious services/prayer/Bible readings” (code 640) are *not* included in the 1992 definition, but are separately listed under “personal activities”. By contrast, code 640 was classified with “organizational, voluntary and religious activity” in the 1986 General Social Survey.

62 Historical population statistics are from the *Census of Canada* profiles, catalogue no. 95-312, from the *Revised Intercensal Population and Family Estimates*, catalogue no. 91-537 and from the *Provincial Economic Accounts, Annual Estimates*, catalogue no. 13-213-PPB; 1997 population data are from the *Quarterly Demographic Statistics*, catalogue no. 91-002-XPB, volume 11; figures for the population 15 years and older are from the 1996 census data, catalogue no. 93F0021XDB96001, from the *Historical Labour Force Statistics*, catalogue no. 71-201-XPB, and from Statistics Canada’s CANSIM data base. All catalogue numbers refer to Statistics Canada publications.

Adjustments to \$1997 for Nova Scotia are from *The Consumer Price Index*, February 1998 and December 1997, catalogue no. 62-001-XPB, and from *Consumer Prices and Price Indexes*, catalogue no. 62-010-XPB, and from the CANSIM data base. We are also grateful to Wayne Smith, Director, Communications Division, Statistics Canada, Ottawa, for his assistance with the CPI conversions.

Chris Jackson, National Accounts Division, Statistics Canada, (personal communication, June 9, 1998), points out that Statistics Canada uses a wage index rather than the CPI to estimate replacement costs. He writes: “replacement costs for 1992 are derived from 1991 census data on 1990 employment earnings and indexed for wage inflation between 1990 and 1992”. Future updates of this report would be advised to use this method to maintain consistency with Statistics Canada methodologies, and to create comparability for time series on the subject as data become available.

Hourly wage rates are from *Employment, Earnings and Hours*, catalogue no. 72-002, Statistics Canada, and from *Households’ Unpaid Work: Measurement and Valuation*, Studies in National Accounting, System of National Accounts, catalogue no. 13-603E, #3, Statistics Canada, December 1995.

63 Table A4, page 71 gives the replacement cost (specialist) value for volunteer work by province. See pages 23-28 of this publication (cat. no. 13-603E, #3) for a detailed discussion of the alternative monetary valuation methods.

64 See footnote 62 above on the advisability of indexing replacement cost estimates for wage inflation rather than using the CPI for this adjustment, in order to maintain consistency with Statistics Canada methodologies.

65 Catalogue no. 72-002-XPB.

66 Marilyn Waring, *Women, Work and Well Being: A Global Perspective*, address delivered at Kings College, Halifax, N.S., 30 April, 1998; see also Duncan Ironmonger, “Modelling the Household Economy”, cited in Marilyn Waring, *Three Masquerades: Essays on Equality, Work and Human Rights*; Ironmonger, “Why Measure and Value Unpaid Work?”, *Conference Proceedings on the Measurement and Valuation of Unpaid Work*, Statistics Canada, Ottawa, 28-30 April, 1993; Ironmonger, “The Value of Care and Nurture Provided by Unpaid Household Work”, *Family Matters* No. 37, Australian Institute of Family Studies, April 1994, which is the source for the Australia Institute’s valuation of household and community work in *The Genuine Progress Indicator: A new index of changes in well-being in Australia*, Discussion Paper No. 14 by Clive Hamilton, October 1997.

67 Chris Jackson, National Accounts Division, Statistics Canada, Ottawa, personal communication, 9 June, 1998.

68 See Statistics Canada, *Households’ Unpaid Work*, pages 23-28, for a comprehensive discussion of these alternative valuation methods.

69 Idem.

70 Statistics Canada, *Households’ Unpaid Work*, pp.21-22, and page 28. The International Research and Training Institute for the Advancement of Women (INSTRAW), a United Nations agency, has taken the lead in research on unpaid work outputs since 1992 (Andrew Harvey, personal communication, June 17, 1998).

71 Ross, op.cit., page 4, and pages 16-19. Ross’ estimates are based on data from the National Survey on Volunteer Activity and apply only to formal volunteer work. Since no data are available on expenses of informal volunteers, we have assumed that informal volunteers have the same rate of expenditure as formal volunteers. In actual practice it is likely that informal volunteers have higher out-of-pocket expenses, since there is no formal organization to reimburse at least a portion of them.

72 Discussion of skills training in this study is based primarily on Duchesne, *Giving Freely*, pages 74-75; Ross, op.cit., pages 4-5 and 20-27; and Catano, op. cit., page 5.

73 Ross, op. cit., page 29.

74 Statistics Canada, *Employment, Earnings and Hours*, catalogue no. 72-002, and Statistics Canada, *Labour Force Survey 1997*.

75 See, for example, “Skills, time freely given: many professionals among growing number seeking unpaid work”, *Winnipeg Free Press*, December 28, 1993, page B1.

76 Statistics Canada, *Households’ Unpaid Work*, page 2, see also page 46; Ironmonger, op. cit., 1993; Waring, op. cit., 1998. Chris Jackson, Statistics Canada, regards the current evidence on counter-cyclicity as “weak but indicative” (personal communication, June 9, 1998).

9. References Cited

- Bharti, Manisha, “Building on the Social Economy” in *Report of the Advisory Committee on the Changing Workplace*, Human Resources Development Canada, June 1997
- Catano, Janis Wood, *Volunteers in Nova Scotia: A Profile of Volunteers based on the 1987 National Survey on Volunteer Activity*, Profile No.28, Voluntary Action Directorate, Multiculturalism and Citizenship Canada, Department of the Secretary of State, 1989
- Cobb, Clifford, Ted Halstead, Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, September 1995
- Colman, Ronald, *Measuring Sustainable Development: Application of the Genuine Progress Index to Nova Scotia*, GPI Atlantic, Halifax, January 1998, and *Measuring Sustainable Development: What the Genuine Progress Index Can Do For Nova Scotia*, presentation to Nova Scotia government inter-departmental consultation, Halifax, March 3, 1998 can both be downloaded from the web at <http://www.gpiatlantic.org>
- Drolet, Marie, and Rene Morissette, *Working More? Working Less? What Do Canadian Workers Prefer?*, Statistics Canada, Analytic Studies Branch, Research Paper Series #104, catalogue no.13-539-90 and 11F0019MPE
- Duchesne, Doreen, *Giving Freely: Volunteers in Canada*, Statistics Canada, Labour Analytic Report No.4, Catalogue 71-535, #4, Minister of Supply and Services Canada, August 1989
- Frederick, Judith, *As Time Goes By...Time Use of Canadians*, General Social Survey, catalogue no. 89-544E, Statistics Canada, December, 1995
- Harvey, Andrew, Marshall, Katherine, and Frederick, Judith, *Where Does Time Go?*, General Social Survey Analysis Series, Statistics Canada, catalogue no. 11-612E, #4, , August 1991
- Harvey, Andrew *Informal Volunteers: Doing It On Their Own: A Profile of Volunteers based on the 1987 National Survey on Volunteer Activity*, Profile No.33, Voluntary Action Directorate, Multiculturalism and Citizenship Canada, Department of the Secretary of State, 1989
- Harvey, Andrew, *Time Based Indicators*, prepared for the United Nations Statistical Office, September, 1989.
- Harvey, Andrew, *Time Use Module of the General Social Survey* Statistics Canada, General Social Survey Working Paper #8, , 1987
- Harvey, Andrew and Macdonald, W. Stephen, “Time Diaries and Time Data for Extension of Economic Accounts”, *Social Indicators Research* 3 (1976)
- International Association for Time Use Research web-site: <http://www.stmarys.ca/>

- partners/iatur/iatur2.htm
- Ironmonger, Duncan, “Modelling the Household Economy”, cited in Marilyn Waring, *Three Masquerades: Essays on Equality, Work and Human Rights*, Auckland University Press, 1996
- Ironmonger, Duncan, “The Value of Care and Nurture Provided by Unpaid Household Work”, *Family Matters* No. 37, Australian Institute of Family Studies, April 1994, cited in Clive Hamilton, *The Genuine Progress Indicator: A new index of changes in well-being in Australia*, Discussion Paper No. 14, October 1997
- Ironmonger, Duncan, “Why Measure and Value Unpaid Work?”, *Conference Proceedings on the Measurement and Valuation of Unpaid Work*, Statistics Canada, Ottawa, 28-30 April, 1993
- Jones, Frank, *Human Capital and the Use of Time*, Research Paper Series No.79, Analytical Studies Branch, Statistics Canada, 1995
- Messinger, Hans, *Measuring Sustainable Economic Welfare: Looking Beyond GDP*, Statistics Canada, June, 1997.
- Paille, Bernie, *Estimating the Volume of Unpaid Activities in Canada, 1992: An Evaluation of Data from the General Social Survey*, General Social Survey Working Paper #10, Statistics Canada, January 1994
- Ross, David, *Economic Dimensions of Volunteer Work in Canada*, Department of the Secretary of State, January 1990.
- Rifkin, Jeremy, “The End of Work”, *New City Magazine*, vol.17(4), Summer, 1997
- Statistics Canada, *Historical Labour Force Statistics*, catalogue no. 71-201-XPB
- Statistics Canada, *Households’ Unpaid Work: Measurement and Valuation*, Studies in National Accounting, System of National Accounts, catalogue no. 13-603E, #3, December 1995.
- Statistics Canada, Initial Data Release from the 1992 General Social Survey on Time Use, catalogue no. 11-612, #30,
- Statistics Canada, *International Conference on the Measurement and Valuation of Unpaid Work: Proceedings*, catalogue no. 89-532E, August 1994
- Statistics Canada, *Perspectives on Labour and Income*, Winter 1997, catalogue no. 75-001-XPE
- Statistics Canada, *Employment, Earnings and Hours*, catalogue no. 72-002.
- Statistics Canada, *Provincial Economic Accounts, Annual Estimates*, catalogue no. 13-213-PPB
- Statistics Canada, *Canadian National Child Care Study*, 1988, especially the reports *Parental Work Patterns and Child Care Needs*, catalogue no. 89-529E, *Shared Diversity: An Interprovincial Report on Child Care in Canada*, catalogue no. 89-536-XPE, and the Nova Scotia Report in *Canadian Child Care in Context: Perspectives from the Provinces and Territories*
- Statistics Canada, *An Overview of Volunteer Workers in Canada*, catalogue no. 71-530, February, 1980
- Statistics Canada, *Econnections: Linking the Environment and the Economy: Concepts,*

- Sources and Methods of the Canadian System of Environmental and Resource Accounts*, catalogue 16-505-GPE, December, 1997
- Statistics Canada, *Provincial Gross Domestic by Industry*, System of National Accounts, catalogue no. 15-203-XPB
- Statistics Canada, *Canadian Economic Observer*, catalogue no. 11-210-XPB 1996/1997
- Statistics Canada, *The Consumer Price Index*, February 1998 and December 1997, catalogue no. 62-001-XPB
- Statistics Canada, *Consumer Prices and Price Indexes*, catalogue no. 62-010-XPB
- Statistics Canada, *Census of Canada 1996: Household Activities - Unpaid Work*, Canada, Provinces, Nation Series no. 93F0021XDB96000 and 96001, released April, 1998
- Statistics Canada, *Census of Canada* profiles, catalogue no. 95-312
- Statistics Canada, *Quarterly Demographic Statistics*, catalogue no. 91-002-XPB, volume 11
- Statistics Canada, *Revised Intercensal Population and Family Estimates*, catalogue no. 91-537
- Stone, Leroy, and Marie-Therese Chicha, *The Statistics Canada Total Work Accounts System*, catalogue 89-549-XPE, 1996
- Waring, Marilyn, *Women, Work and Well Being: A Global Perspective*, address delivered at Kings College, Halifax, N.S., 30 April, 1998
- Webber, Maryanne, *Volunteers in Sports and Recreation*, Labour and Household Surveys Division, Statistics Canada, presentation to the 16th annual conference and general meeting of the Recreation Association of Nova Scotia, November 16-19, 1989
- Winnipeg Free Press*, December 28, 1993, "Skills, time freely given: many professionals among growing number seeking unpaid work".

