

MEASURING SUSTAINABLE DEVELOPMENT:

APPLICATION OF THE GENUINE PROGRESS INDEX TO NOVA SCOTIA

THE ECONOMIC VALUE
of
UNPAID HOUSEWORK *and* CHILD CARE
in NOVA SCOTIA

Ronald Colman, Ph.D



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MODULE TWO

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FORWARD

1. Limitations of the GDP as a Measure of Progress

The most commonly used measure of economic and social well-being is the Gross Domestic Product (GDP). Yet, in recent years there has been increasingly widespread acknowledgement by leading economists of the shortcomings of the 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 economic welfare and prosperity.

Using GDP levels and growth rates to measure progress takes no account of the value of unpaid work, free time, and natural resource assets. It does not allow policy makers to distinguish the costs and benefits of different economic activities, and it masks changes in income distribution. Such fundamental omissions and limitations render the GDP an inadequate measure of social and economic well-being.

It should be noted that these are not flaws of the GDP per se, but of its use as a benchmark of economic and social health, prosperity and welfare. Simon Kuznets, who designed the Gross National Product, never endorsed its modern use as an overall measure of progress:

The welfare of a nation can scarcely be inferred from a measurement of national income as defined (by the GDP)....Goals for 'more' growth should specify of what and for what.¹

When the GDP is misused in this way, it frequently sends misleading and inaccurate signals to policy makers that can result in the depletion of vital resources and investment in economic activities that carry hidden social and environmental costs. What we count and measure is a sign of what we value. By focusing on quantitative material growth as our primary measure of progress, we under-value the human, community and social values and environmental quality which are the true basis of long-term well-being, prosperity and wealth.

Because it excludes most non-monetary production², 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.

¹ Kuznets, Simon, *The New Republic*, Oct. 20, 1962

² The Canadian System of National Accounts does include imputations for some non-market production, including farmers' own-account production of food and the implicit rent paid and received by homeowners (Chris Jackson, Statistics Canada, personal communication, 14 September, 1998).

Secondly, market productivity gains may result in greater output *or* increased leisure, but the GDP counts only the former. Longer paid working hours add to GDP growth by increasing output and spending, but free time is not valued in our measures of progress, so its loss counts nowhere in our accounting system. Given this imbalance, it is not surprising that the substantial economic productivity gains of the last 50 years have manifested in increased output, incomes and spending, while there has been no real increase in leisure time.

Omitting the value of unpaid work and free time from our measures of progress has 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. Indeed, as the fourth module of the GPI demonstrates, women have experienced an increase in their total work load and an absolute loss of leisure time.

Thirdly, because it does not account for income distribution, GDP growth may mask growing inequality. GDP may rise substantially, as it has in recent years, even while most people are getting poorer and experiencing an actual decline in real wages and disposable income. The benefits of what experts refer to as “strong” and “robust” economic growth, based on GDP measurements, may be distributed very unequally. The trend towards rising inequality in a period of strong economic growth has been even more pronounced in the United States than in Canada.³

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 quantitative measure only and fails to account for qualitative changes, both in the mix of economic activity and in the quality of goods and services. There is no recorded relationship, for example, between the cost of consumer durables and capital investments on the one hand and the quality of services they provide on the other, leading to the paradox that the more quickly things wear out and have to be replaced, the better for the GDP.⁴

³ Messinger, Hans, *Measuring Sustainable Economic Welfare: Looking Beyond GDP*, Statistics Canada, June, 1997. Messinger demonstrates that the absolute decline in the original U.S. Genuine Progress Index since the early 1970s is largely due to growing disparities in income distribution in that country. Rising inequality is registered in column B of the original GPI as an adjustment to personal consumption based on the share of national income received by the poorest 20 percent of households: Cobb, Clifford, Ted Halstead and Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, September, 1995.

⁴ As Chris Jackson correctly points out (personal communication, September 14, 1998), the Canadian System of National Accounts (CSNA) as a whole does provide information on shifts in the mix of economic activity by sector, industry, commodity and province. The critique that follows, therefore, applies only to the use of GDP as a measure of progress, since industry and commodity shifts registered in the CSNA are rarely if ever invoked as signals of changes in societal well-being and prosperity. Jackson also notes that the CSNA does include the stock of consumer durables on the balance sheet of the personal

More seriously, increases in crime, divorce, gambling, road accidents, disease, obesity, mental illness and toxic pollution all make the GDP grow, simply because they produce additional economic activity. More prisons, security guards, burglar alarms, casinos, accident costs, dieting pills, anti-depressants, lawyers, oil spill and pollution clean-ups, and the costs of setting up new households after family breakups all add to the GDP and are thus counted as progress.

This anomaly led Robert Kennedy to remark 30 years ago:

Too much and too long, we have surrendered community excellence and community values in the mere accumulation of material things....The (GDP) counts air pollution and cigarette advertising and ambulances to clear our highways of carnage. Yet the gross national product does not allow for the health of our children, the quality of their education, or the joy of their play. It measures neither our wit nor our courage; neither our wisdom nor our learning; neither our compassion or our devotion to our country. It measures everything, in short, except that which makes life worthwhile.⁵

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 direction⁶.

2. The Development of Expanded Accounts

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

sector despite the international SNA guidelines to keep it out. The paradox described here, however, still holds true.

⁵ Kennedy, Robert, "Recapturing America's Moral Vision", March 18, 1968, in *RFK: Collected Speeches*, Viking Press, 1993.

⁶ 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.

accepted guidelines in *The System of National Accounts 1993*⁷ suggest that natural resources be incorporated into national balance sheet accounts and that governments develop a “satellite system for integrated environmental and economic accounting,” and a satellite account to measure the value of household work.

Accordingly, Statistics Canada recently released its new *Canadian System of Environmental and Resource Accounts (CSERA)*, which consists of natural resource accounts linked to the national balance sheets, material and energy flow accounts linked to the input-output tables, and environmental protection expenditure accounts. Statistics Canada has sponsored an international conference on the measurement of unpaid work, produced its own extensive valuations of household work, and is developing a *Total Work Accounts System (TWAS)* which includes both paid and unpaid work.⁸ Every six years an extensive time use survey is now part of Statistics Canada’s General Social Survey. Other agencies are also moving in this direction. Human Resources Development Canada, for example, has recently issued an Index of Social Health for each province and for the country as a whole.

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; valuations of natural capital; and the durability of consumer goods.⁹ 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 and the community’s resources, and (b) to ensure the long-term prosperity and 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.

⁷ United Nations Department of Economic Affairs Statistical Office, *A System of National Accounts*, United Nations, New York, 1993.

⁸ 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; Statistics Canada, *Households’ Unpaid Work: Measurement and Valuation*, catalogue 13-603E, #3; Leroy Stone, Ph.D, and Marie-Therese Chicha, Ph.D, *The Statistics Canada Total Work Accounts System*, Statistics Canada, catalogue 89-549-XPE, 1996.

⁹ 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. On the original GPI, see Cobb, Clifford, Ted Halstead and Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, September, 1995.

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.”¹⁰

The GPI method, in essence, is to assess the economic value of 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.¹¹

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 wherever 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 1998.¹²

The Nova Scotia GPI has been designated as a national pilot project by Statistics Canada, which is providing ongoing assistance in data collection and analysis and 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.

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

¹¹ 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 www.gpiatlantic.org

¹² This document is available at the following web site: www.gpiatlantic.org and can be downloaded from that site by chapter. The full text, including bibliography, is 135 pages.

3. Nova Scotia GPI: Second Data Release and Work Plan

This particular report is the second release of data for the Nova Scotia GPI. It is also the second in a suite of *time valuation* variables that are part of the GPI. Data on these are being issued in the following order:

- 1) The value of civic and voluntary work (released July, 1998),
- 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 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.”¹³ 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.¹⁴

¹³ Statistics Canada, *International Conference on the Measurement and Valuation of Unpaid Work: Proceedings*, catalogue no. 89-532E, August 1994, page 19.

¹⁴ In particular GPI Atlantic wishes to acknowledge the pioneering work of Dr. Andrew Harvey, Chris Jackson, William Chandler, Judith Fredrick, and many others at Statistics Canada who have provided the source material for this report through their excellent and innovative research and time use surveys. Dr. Marilyn Waring in New Zealand and Duncan Ironmonger in Australia have also paved the way for this project through their comprehensive use of time use surveys, and their work is used throughout this study. The discussion in this study on measurement of household work using output valuations owes a particular debt to Luisella Goldschmidt-Clermont, who has promoted this work actively for decades.

Several Statistics Canada publications have provided a wealth of source data for this module: *Households’ Unpaid Work: Measurement and Valuation*, catalogue no. 13-603E, #3; Chandler, William, “The Value of Household Work in Canada, 1992”, in *National Income and Expenditure Accounts, Fourth Quarter, 1993*, catalogue no. 13-001, April, 1994; Jackson, Chris, “The Value of Household Work in Canada, 1986” in *National Income and Expenditure Accounts, First Quarter, 1992*, catalogue no. 13-001; Frederick, Judith, *As Time Goes By...Time Use of Canadians*, catalogue no. 89-544E, December, 1995; and Harvey, Andrew, Katherine Marshall and Judith Frederick, *Where Does Time Go?*, catalogue no. 11-612E, #4, General Social Survey Analysis Series.

To maintain consistency with the first GPI module on *The Economic Value of Civic and Voluntary Work in Nova Scotia*, GPI Atlantic, Halifax, July, 1998, the same basic data source for time use patterns has been used in this study, namely Statistics Canada’s *Initial Data Release from the 1992 General Social Survey on Time Use*, particularly the provincial tables in Table 1, catalogue no. 11-612, #30. Although this produces valuations slightly different from those in Chandler and in *Households’ Unpaid Work*, *The Initial Data Release* does enable the separation of civic and voluntary work outside the household from unpaid work in the household economy, which is not possible using the above studies. Nevertheless, Chandler, Jackson, Harvey, Frederick and *Households’ Unpaid Work*, are used for the data on trends over time, women’s share of household work and other details.

In the coming months data will also 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.¹⁵ 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.¹⁶

When that process is complete, the results will be arranged in a spreadsheet and double-counting will be eliminated. Indicators will be weighted 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 these first reports demonstrate, 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 second data release of the Nova Scotia GPI – the value of unpaid housework and child-care in the province, which constitutes the second of the 20 components of the index. The more detailed background documents for the project, the first and second modules of the index, and all upcoming reports and data releases will be available to the public on the GPI web site at www.gpiatlantic.org.

¹⁵ These are listed and described in the two GPI Atlantic background publications entitled *Measuring Sustainable Development*, available on the GPI web site at www.gpiatlantic.org

¹⁶ See Section 6.1 of *Measuring Sustainable Development, Module One: The Economic Value of Civic and Voluntary Work in Nova Scotia*, for a further discussion of this issue.

4. What the GPI is Not

Just as the GDP has been misused as a measure of progress, there are also several potential misinterpretations of the GPI and misuses of the data it presents. These will be discussed in detail as the separate modules are presented, but it may be helpful to list some of the major issues at the start:

- 1) **The GPI is not intended to replace the GDP.** The GDP will undoubtedly continue to function for the purpose for which it was intended – as a gross aggregate of final market production. It is not, therefore, that the GDP itself is flawed. It is the *use* of the GDP as a comprehensive measure of overall progress that is being challenged, and it is this need that the GPI attempts to address.
- 2) Identifying omissions from measures of progress does **not imply that the GDP itself should be changed** to include these assets. The purpose of this report, therefore, is not to suggest that unpaid work should be included in the GDP. Nor will upcoming natural resource accounts and environmental quality valuations recommend the creation of a “green GDP”, or “net domestic product” which subtracts defensive expenditures on environmental protection. This can be done, but it is not the purpose of the GPI.

Rather than suggesting changes to the GDP, the GPI in effect adopts a qualitatively different approach. While the GDP is a current income statement, the GPI presents a balance sheet of social, economic and environmental assets and liabilities and reports the long-term flows or trends that cause assets to appreciate or decline in value. It is only the current obsession with short-term GDP growth trends that is misplaced. The GPI seeks to “put the GDP in its place” rather than to abolish or change it.

- 3) The GPI assesses the economic value of social and environmental assets by imputing market values to the services provided by the stock of human, social and environmental capital. But this **imputation of market values is not an end in itself.** It is a temporary measure, necessary only as long as financial structures such as prices, taxes and monetary incentives continue to provide the primary cues for the actual behaviour of businesses, consumers and governments.

Monetization is only a tool to communicate with the world of conventional economics, not a view that reduces profound human, social and environmental values to monetary terms. It is a necessary step, given the dominance of the materialist ethic, to overcome the tendency to undervalue the services provided by 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. 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.

In order to separate ends from means in these reports, the time use valuations are always presented first as the basis of the secondary, dependent, monetary valuations. Similarly, in the natural resource and environmental accounts that will be presented in the coming year, physical accounts will always precede and form the basis for the subsequent monetary accounts. As the grip of market statistics on the policy arena is gradually loosened, the desired direction for the GPI is to return to the direct use of time and environmental quality variables in decision making. This will also permit greater accuracy and precision than relying on derivative economic values.

While the assignment of monetary values to non-market assets may appear absurd and even objectionable, we accept court awards for grief and suffering and insurance company premiums on life and limbs as necessary measures to compensate actual human losses. We pay higher rents for dwellings with aesthetically pleasing views and we sell our time, labour and intelligence often to the highest bidder. Similarly, in a world where “everything has its price”, monetizing social and environmental variables assigns them greater value and provides a more accurate measure of progress than excluding them from our central wealth accounts.

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 central triad of indicators – time use studies, qualitative environmental assessments, and market statistics – as a comprehensive basis for assessing well-being and progress.¹⁷

In the meantime, and only while market statistics dominate economic thinking and policy and planning processes, the GPI can provide a useful tool for communication between the market and non-market sectors. By pointing to important linkages between the sectors, the GPI itself can provide a means to move beyond monetary assessments towards a more inclusive and integrated policy and planning framework.

- 4) Monetizing a hidden asset like unpaid work, does **not imply that unpaid work should be paid** or taxed, nor that economic motives are found beneath the caring and giving work that constitutes a considerable portion of non-market production. Unpaid work clearly has its own function and value outside the market economy. Instead, the explicit acknowledgement of the economic value of unpaid work argues that social support systems that enable its effective functioning should be viewed as essential social infrastructure rather than potentially dispensable welfare measures.

¹⁷ Waring, Marilyn, *Women, Work and Well Being: A Global Perspective*, address delivered at Kings College, Halifax, 30 April, 1998.

- 5) Identification of vital activities like unpaid household production, child-care and voluntary work which are explicitly valued in the GPI, does **not imply that “more” is necessarily “better”**. That, in fact, is one of the fundamental flaws in the philosophy underlying the use of the GDP as a measure of societal well being. Recognizing the economic value of housework and voluntary hours in the GPI does not imply that longer housework hours signify progress, or that a shift from government provision of essential services to the volunteer sector improves well-being.

More efficient use of resources, by sharing household capital for example, may result in improved housework outputs with less labour and capital inputs, as in the examples given of Danish and Swedish cooperative housing. Higher rates of employment for youth seeking to enter the job market may produce lower rates of “involuntary” voluntary work, performed because the worker cannot find paid work and is using the volunteer position to strengthen his resume.

Further, to assess progress or net changes in economic welfare, further steps towards full cost accounting are necessary. This module, for example, focuses on time use in the household economy, but this variable must be balanced against quantitative and qualitative changes in the nature of housework, as well as assessments of resource and energy use in household production, in order to determine overall shifts in welfare.

Until more effective methods for measuring the actual outputs of unpaid work are developed and accepted, therefore, GPI measurements should be taken only as recognition of the social and economic value of these activities, and not as a measure of progress. Closer analysis of the data sets and trends within each sector is currently required to assess progress. For this reason the Nova Scotia GPI is being developed on a detailed sector by sector basis, rather than rushing towards a bottom-line index.

- 6) The Genuine Progress Index is **not a final product**, but a small step in the direction of more comprehensive measures of progress than those currently in use. The GPI itself should be seen as a work in progress subject to continuous revision, improvement in methodologies, and inclusion of additional variables. It will continue to evolve in form and content with further research, the development of new methods of measurement, and the availability of improved data sources.

In this particular report, the time use of households is valued to focus attention on one critical variable that is currently invisible in our economic accounts. As noted above, there are many additional aspects of household production that are not yet included in the benefit - cost analysis here. These include changes in the quantity, quality and diversity of household outputs; increased physical space within household; the flexibility provided by changes in household capital; and the psychological benefits and costs of balancing paid and unpaid work. Similarly, the costs of natural resource and energy use embodied in rising household capital expenditures are not considered here. In other words, although the study of time use in households greatly expands

our understanding of total economic production, we are still a long way from a “full cost accounting” of the household economy.

Given these caveats, all interpretations and viewpoints expressed in this study and in future ones are designed to raise important issues for debate and discussion rather than to be definitive conclusions or prescriptions. Overly simplistic interpretations of this data can lead to a serious misuse of the material. For example, assessing the time stress costs of juggling work and family responsibilities should under no circumstances be used to undo the hard-earned gains of women in the market economy. The real and more complex challenges are to balance paid and unpaid work duties more sanely to reduce time stress, and to overcome gender inequities in both sectors.

- 7) **The valuations are not precise.** Any attempt to move beyond simple quantitative market statistics to the valuation of goods and services that are not exchanged for money in the market economy will produce considerable uncertainty. In this study, for example, five different valuation methods are compared to estimate the economic value of unpaid housework, each producing different aggregates. This problem will be accentuated further in the natural resource accounts with attempts to value ecological services and the non-market functions of natural assets.

Despite all these major qualifications it is finally important not to throw the baby out with the bath water! The GPI is a far from perfect tool, and is in its earliest stages of development. But it is still considerably *more* accurate to assign explicit economic value to unpaid production, natural resources and other social and environmental assets than to assign them an arbitrary value of zero, as is currently the case in our conventional economic accounting system.

Indeed, the new System of National Accounts and Canada’s international commitments demand that the effort be made. The costs of continuing to ignore our social and environmental assets are too great. Measuring progress in strictly materialist terms, without reference to social and spiritual values and the quality of the environment, ultimately undermines well-being and prosperity.

With all its limitations, the GPI is still a small step towards measuring sustainable development more precisely than prevailing accounts are able to do. It is itself a work in progress designed to help lay the foundations for the new economy of the 21st century, an economy that genuinely will reflect the social, spiritual, environmental and human values of our society.

PART I

Measuring Household Production: What, Why, How?

1. Summary of Major Results

Nova Scotians each contribute an average of 1,230 hours a year of unpaid household work to the economy, for a total of 941 million hours in 1997, the equivalent of 490,000 full-year full-time jobs. This is 25% more than the 707 million hours Nova Scotians worked for pay in 1997.

If this unpaid work were replaced for pay in the market economy, at the average rate of \$9.20 an hour paid to domestic help in the province and \$7.58 an hour for child-care, household work would be worth \$8.5 billion a year to the economy, equivalent to 51% of GDP at factor cost. The three largest sectors of the Nova Scotian economy would be household food services, house cleaning and laundry, and servicing household production through shopping for goods and services.

The value of unpaid housework dwarfs its market equivalents. At a replacement cost value of \$2.4 billion, unpaid household meal preparation and cleanup in Nova Scotia is worth three times the contribution of the entire food and beverage industry plus all accommodation and food services in the market economy. At \$1.7 billion a year, the value of unpaid house cleaning and laundry is 12 times the size of the entire personal and household services industry in the market economy.

Work performed in households is more essential to basic survival and quality of life than much of the work done in offices, factories and stores, and is a fundamental precondition for a healthy market sector. If children are not reared with attention and care and if household members are not provided with nutritious sustenance, workplace productivity will likely decline and social costs will rise. Physical maintenance of the housing stock, including cleaning and repairs, is also essential economic activity.¹⁸

Yet this huge unpaid contribution registers nowhere in our standard economic accounts. When we pay for child-care and housecleaning, and when we eat out, this adds to the GDP and counts as economic growth and “progress”. When we cook our own meals, clean our own house and look after our own children it has no value in our measures of progress.

Thus, shifts from the household economy to the market economy inaccurately register as growth, even though no additional production may be taking place. It is estimated that such shifts from unpaid to paid work overstate GDP growth by up to 0.8 percentage points a year.

¹⁸ Cobb, Clifford, Ted Halstead and Jonathan Rowe, *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress, September, 1995, Page 14.

1.1 Women's Share of Unpaid Household Work

Despite a doubling of the female labour force participation rate, women's share of unpaid housework has hardly changed in nearly 40 years. In 1961, Nova Scotian women were doing 67.6% of unpaid work, which actually rose to 68.4% in 1986 before dropping slightly to 65.5% in 1992.

Because their share of paid working hours is rising much faster than their share of unpaid hours is dropping, employed women are increasingly time stressed trying to juggle home and workplace duties. In 1961 25% of Canadian mothers with infants under age 2 were in the paid labour force. By 1995 that figure had shot up to 62.3%. Not surprisingly, a Statistics Canada survey found that "one out of three full-time employed mothers suffered from extreme levels of time stress" and fully 70% "felt rushed on a daily basis."

Working mothers put in an average workday of more than 11 hours, including 7 hours of paid work, 2¹/₄ hours of domestic chores, an hour of primary child-care, and 50 minutes of shopping. Even on weekends there is little respite. Employed mothers put in an average of 7¹/₂ hours of daily unpaid work on Saturdays and Sundays, including more than 3 hours of domestic chores, 1³/₄ hours of primary child care, and a major Saturday shopping trip.

On average, Nova Scotian women spend about 2 hours more per day than men doing unpaid household work. They spend about three times as much time cooking and washing dishes as men and nearly seven times as much time cleaning house and doing laundry. Even when both spouses are employed full-time, mothers spend more than an hour and a half more per day than fathers on unpaid household work. Women have experienced an absolute decline in their free time since 1961.

Averaged over a 7-day week, employed married mothers with children under age 5 spend just one hour and 36 minutes per day directly relating to their infants and toddlers compared to 3 hours per day for those not employed.

Full-time employed single mothers have only an hour a day total directly engaged with their children, 1¹/₂ hours less than those who are not employed. In fact, employed single-parent families spend three times as much on paid child-care as married families.

For these reasons, paid work is not an option for most single mothers and they are dependent on the household economy, putting in an average of 50 hours a week of productive household work. Because that work is not measured or valued, more than 70% of single mothers in Nova Scotia live in poverty which is passed on to their children. 27% of Nova Scotian children under the age of 12 live in families below the low-income cut-off, the third highest rate of child poverty in the country.

Measuring and valuing unpaid household work is therefore a necessary step to end child poverty, to reduce poverty levels among single mothers, to advance gender equity, and to give policy priority to the creation of flexible workplace arrangements that would reduce time stress and allow parents to balance their home and employment duties more effectively.

1.2 Time Spent on Housework Unchanged Despite “Labour-Saving Devices

Nova Scotians put in an average of 23 and a half hours a week of unpaid household work, an amount that has hardly changed in 40 years, despite dramatic increases in spending on household appliances. As in 1961, Nova Scotians still spend an average of an hour a day cooking and washing dishes, 40 minutes cleaning house and doing laundry, 40 minutes shopping, 15 minutes on maintenance and repair, and half an hour on other domestic chores.

36% of Nova Scotian households now have dishwashers, double the number in 1982, and 87% of families have microwave ovens, compared to only 6% 15 years ago. 79% of households in the province now have electric automatic washing machines, compared to only 55% in 1982. In fact, spending on household equipment has increased even while real incomes have been steadily declining. Not surprisingly, debt levels have also risen, and many Nova Scotians are working longer hours to meet their expenses.

The introduction of indoor plumbing, electricity and gas, and a vast array of appliances, has dramatically altered the nature of housework, but there has been no fundamental change in the hours of full-time housewives in the last 100 years. Non-employed mothers are still putting in an average of 52 and a half hours a week of unpaid household work, about the same as at the beginning of the century.

One major reason appears to be the decline in household size from an average of 5.5 persons per household in 1881 to 2.5 today. Houses are also getting larger, so that there are now an average of 2.4 rooms per person in Nova Scotia compared to 1.4 in 1951. This has decreased efficiencies in household production, as it does not take twice as long to cook and clean for six people as it does for two, and there are fewer teenagers to help with housework.

Despite the constancy of housework hours, there have been shifts among activities. Nova Scotians are eating out more and cooking less. They are using more paid child-care and spending about 10% less time directly relating to their own children than in 1961. Because restaurant and child-care prices have risen faster than the overall consumer price index, and because real incomes have been declining, Nova Scotians are paying more for these shifts from the household to the market economy and working longer hours to meet their expenses.

Overall time spent cleaning house and doing laundry have remained virtually unchanged since 1961, except that Nova Scotian women actually spend 14% more time cleaning and doing laundry than in 1961 despite the dramatic increase in the number of Nova Scotian households with automatic washers and dryers.

Of all activities within the household economy, the one that has seen the sharpest growth is shopping. Nova Scotians now spend about 4½ hours a week shopping, 25% more time than they spent 30 years ago. Nova Scotians still shop about 50 minutes less per week than the average Canadian, but about an hour and a half more than the French and more than twice as much as the Japanese.

Not all people do as much housework as Canadians. In Denmark, average unpaid household hours are about 8 hours a week less, and Danes have about 11 hours more free time per week than Canadians. One reason may be the greater preference for collaborative and cooperative housing arrangements in that country that allow for shared household facilities and more efficient sharing of housework, options that may be worth exploring in this country.

2. Why Measure Unpaid Housework and Child Care?

2.1 The Contribution of Household Work to the Economy

Simon Kuznets, principal architect of the GDP and a pioneer of modern national accounts, wrote in 1941:

*The productive activities of housewives and other family members, rendered within the family circle...are an important complement to the market-eventuating process in supplying goods to ultimate consumers, and should be considered in any attempt to evaluate the net product of the social system in terms of satisfying wants with scarce means.*¹⁹

According to one report,

*The market economy cannot exist without the shadow economy. The market economy is dependent upon people (mostly women) to maintain those who work in the formal economy, to care for those who are unable to care for themselves, to raise children, and to support and operate voluntary and charitable services. But the market economy pays nothing for this work. In effect, then, the shadow economy, or the informal economy, subsidizes the market economy.*²⁰

Aside from its qualitative importance, the household sector is also the single largest productive and service sector in the Canadian economy. Indeed, New Zealand economist Marilyn Waring points out that even if broken down into specific activities, the three largest areas of industrial and service operations in the economy measured on an hourly basis are:

- 1) Meal preparation in the household economy;
- 2) Cleaning and laundry in the household economy, and
- 3) Servicing, by way of shopping, the household economy.²¹

The results of this study confirm that Waring's conclusions are true for Nova Scotia.

Despite its importance, the contribution of the household economy remains invisible in our economic accounts. Although it is clearly productive activity it does not show up in the GDP, in employment statistics, or in any economic output measure because money is not exchanged. Eating at a restaurant is counted in the GDP and registers as economic growth, but preparing a meal at home is not valued in the accounts. Paying someone to

¹⁹ Kuznets, Simon, *National Income and its Composition, 1919-1938*, Vol. II, New York, National Bureau of Economic Research, 1941, cited in Statistics Canada, *Households' Unpaid Work: Measurement and Valuation*, System of National Accounts, catalogue 13-603E, No. 3, page 3

²⁰ Economic Justice Report, "Out of the Shadows: Policy Principles to Recognize Women's Unpaid Work", *Economic Justice Report*, vol. 8, no. 3, October, 1997, pages 1-8

²¹ Cited in Joel, Jan, "The invisible work-force: Marilyn Waring challenges the way nations traditionally account for the work done by women", *Briarpatch*, vol. 26 (3), April, 1997, pages 13-15.

clean house or look after children is counted as economic growth and “progress”, but cleaning one’s own house or looking after one’s own children is not counted.

This invisibility has kept vitally important quality of life issues out of the policy arena. Measuring unpaid housework and child-care on a regular basis will assign explicit value to the significant contribution of the household sector to human welfare; provide more accurate statistics on total production and actual growth rates; help overcome gender discrimination; and focus policy attention on issues like flexible work options, female and child poverty and the need for family support.

What we measure is a sign of what we value – a visible symbol of what *counts* in our social system. By measuring unpaid housework and child-care we quite literally will value it more and provide the household economy with the social supports necessary for its effective functioning.

2.2 Correcting GDP Growth Estimates

The history of industrialization and economic growth has been the shift of productive resources from households to production for the market. Because the GDP does not measure unpaid household production, it cannot track this development accurately and effectively counts every transfer from the household to the market sector as if it were an absolute increase in output. Since production in the economy as a whole may not have increased by the same margin, this flaw produces inaccurate estimates of actual economic growth when both market and non-market sectors are considered.

As early as 1932, the classic economist Cecil Pigou stated this paradox as follows:

*“The services rendered by women enter into the dividend when they are rendered in exchange for wages, whether in factory or in the home, but do not enter into it when they are rendered by mothers and wives gratuitously to their own families. Thus, if a man marries his housekeeper or his cook, the national dividend is diminished.”*²²

This paradox is not just theoretical. It has a direct impact on our official growth estimates because unpaid work appears to be “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.”*²³

²² Pigou, A. C., *The Economics of Welfare*, 4th edition, London: MacMillan. 1932, cited in Statistics Canada, *Households’ Unpaid Work*, page 3

²³ Statistics Canada, op. cit., pages 2 and 46; and Ironmonger, Duncan, “Why Measure and Value Unpaid Work?”, *Conference Proceedings on the Valuation and Measurement of Unpaid Work*, Statistics Canada,

This means that current growth rates are likely to be exaggerated, while the unpaid sector cushions some of the effects of recessionary trends during economic slowdowns. For example, if both married partners work full-time they may have shifted from home meal preparation to fast food take-out in order to save time. Though actual economic consumption and output remain relatively unchanged, the GDP will measure the shift as absolute economic growth. If one partner is laid off, they may revert to home-cooked meals. The GDP registers this shift to home cooking as absolute economic decline even if the identical meal is prepared and consumed at home.

Evidence on shifts between the market and non-market sectors in food production, presented in chapter 4 of this report, appears to confirm this counter-cyclical relationship.²⁴ Spending on restaurant and take-out food dropped dramatically in Nova Scotia during the recession of the 1990s, arresting the steady decline in time spent on household food preparation that had continued unabated since 1961. Since 1993, spending on restaurants and take-outs has increased rapidly. If the counter-cyclical hypothesis is correct, then the 1999 release of data from Statistics Canada's 1998 time use survey may show a further drop in time spent on meal preparation in the household.

These shifts between the household and market economies require a reassessment of actual GDP growth rates. A pioneering Finnish study cited international studies to calculate that "the annual growth rate of GDP has been 0.2 – 0.3 percentage points slower than the official growth figures, if the value of household production is included."²⁵

More recently Statistics Canada calculated that between 1961 and 1992, "the increase of GDP overstates economic growth between 0.6 to 0.8 percentage points a year" in Canada, assuming no increase in household productivity.²⁶ With a one percent annual gain in productivity, the 'bias' would be smaller and more in line with the Finnish estimates.

Only by regular measurement of unpaid household production can these shifts between the market and non-market sectors be tracked accurately, and actual growth rates for the whole economy assessed. Since unpaid work in Nova Scotia constitutes a higher percentage of GDP than in any other province except Prince Edward Island, the accurate measurement of unpaid work in relation to GDP growth is of particular importance to this province.²⁷ Government restructuring and spending cuts may also have produced a shift in work and services to the unpaid household sector which cannot be tracked without the measurement of unpaid work.

Ottawa, 28-30 April, 1993. Chris Jackson notes that the evidence for this counter-cyclical relationship is still weak (personal communication, 14 September, 1998).

²⁴ See chapter 4, section 4.2.2, and particularly chart 4.8.

²⁵ Taimio, Hilikka, *Kotitaloustuostanto Ja Taloudellinen Kasvu*, (Household Production and Economic Growth: A Survey of Methods of Measurement and Empirical Results with an Estimate of Household Production in Finland in 1860-1987), Helsinki: Elinkeinoelämän Tutkimuslaitos, The Research Institute of the Finnish Economy, Sarja B 74 Series, 1991, page 109.

²⁶ Statistics Canada, *Households' Unpaid Work*, page 45.

²⁷ See Section 5.6.4 for value of unpaid housework in relation to GDP.

As noted, the most recent revisions of the internationally accepted United Nations System of National Accounts 1993, which provide the guidelines for all national accounting systems, specifically call for the development of satellite accounts to measure the value of unpaid household work.²⁸

2.3 Overcoming Gender Discrimination

As Statistics Canada has recognized,

*Since women do most of the unpaid household and volunteer work, their significant contribution to overall production and economic welfare is grossly understated in the major economic aggregates.*²⁹

Or, in the words of one women's group:

*They don't count women's work, but they count on women's work.*³⁰

Failing to value women's unpaid work can produce a subtle "wage discrimination" by devaluing women's work as a whole. The invisibility of unpaid work in the home and the fact that housework and child-care are assumed to be part of a "woman's role" has contributed to gender inequality in the labour market and to female poverty.³¹

For example, work that is similar to that done in the home, such as cleaning, cooking and child-care, also brings particularly low wages in the market economy. Nova Scotia women employed full-time still earn only 66 cents to the full-time male dollar. For all earners the ratio is less: 56.5 cents to the dollar.³² 19% of all women in Nova Scotia live with incomes that fall below the low-income cut-off.

In fact, the very kinds of market work most akin to household work are still explicitly devalued by legislation in some provinces, including Nova Scotia. According to the Nova Scotia Labour Standards Code of 1972 (revised and amended in 1991) paid domestic service workers who put in less than 24 hours a week, are exempted from the minimum wage laws. This includes "housework, property maintenance, supervision or service, including help or personal care for the comfort, safety or convenience of one or more members of the household," who are not related to the care-giver.³³ The Labour

²⁸ United Nations, Inter-Secretariat Working Group on National Accounts, *System of National Accounts 1993*, para. 6.19-6.22, cited in Statistics Canada, *Households' Unpaid Work*, page 3, footnote 11.

²⁹ Statistics Canada, *Households' Unpaid Work*, page 3

³⁰ Selma James, "Counting Women's Unwaged Work", *International Women Count Network*, August, 1995.

³¹ The following references to this issue are provided by Stella Lord, Nova Scotia Advisory Council on the Status of Women: Pat and Hugh Armstrong, *The Double Ghetto: Canadian Women and Their Segregated Work*, Patricia Connelly, *Last Hired, First Fired*, 1979, Patricia Evans, "The Sexual Division of Poverty: The Consequences of Gendered Caring" in Carol Baines (ed), *Women's Caring*.

³² Statistics Canada, *Women in the Workplace*, 2nd edition, catalogue no. 71-534, page 42.

³³ Province of Nova Scotia, *Labour Standards Code*, Chapter 246 of the Revised Statutes, 1989 as Amended by 1991, c. 14, and Regulations, the Queen's Printer, Halifax, 1996; Nova Scotia Department of Labour, Labour Standards Division, *Guide to the Labour Standards Code of Nova Scotia*, Halifax, 1997.

Standards Code provision therefore excludes most part-time child-care and elder-care, as well as part-time cooking, cleaning, laundry and other household tasks from minimum wage requirements.

This kind of work is still overwhelmingly performed by women, with the part-time provision of the law particularly affecting women with children who are unable to work full-time because of their own unpaid household responsibilities. What this means, in effect, is that working mothers can be paid less than \$5.50 an hour, the minimum wage in the province. In this way, the failure to value unpaid work has been carried by law into a devaluation of paid work traditionally done by women and long assumed to be “free”.

By contrast, women’s groups have argued that measuring and valuing unpaid work will not only raise pay equity issues but support adequate compensation for skills acquired in household work that are also valuable in the market economy, including the ability to carry out multiple tasks, conflict management and organizational skills.³⁴

Failing to value women’s unpaid work can also adversely affect women’s access to credit, and produce other subtle forms of economic discrimination. “Historically”, writes Robin Douthitt, “policy makers have neglected to consider the implications of home production and its value to the family and society when developing social programs.”³⁵

For example, since Canada Pension Plan contributions and benefits are based on paid work, many women tied to the unpaid household economy have insufficient security in old age. 47% of unattached women in Nova Scotia over age 65 live below the “low income cut-off”, popularly called the “poverty line”, compared with only 8% of senior women living in families.³⁶ The difference in part reflects dependence on pensions tied to earnings and the lack of provision for CPP contributions and benefits based on unpaid work. In Nova Scotia, 37% of women aged 65 and over live alone.³⁷

The Canada Pension Plan does make provision for women, provided they are labour force participants, to raise their own children at home from infancy to elementary school age, counting these years as contributions to the plan in calculating retirement benefits. But there are no provisions for women who do not enter the labour force, nor for contributions based on the substantial housework and child-care time of part-time workers or for parents of school aged children. In actual practice, as Douthitt points out, the benefit of this CPP child-rearing provision falls largely to middle class families, since

Definition of “domestic service” from N.S. Department of Labour, personal communication, 25 September, 1998.

³⁴ *Economic Justice Report*, *ibid.* See also *The Daily News*, Halifax, 26 August, 1998, on pay equity appeal by Michelle Falardeau Ramsay, Q.C. Chief Commissioner of the Canadian Human Rights Commission.

³⁵ Douthitt, Robin, “The Inclusion of Time Availability in Canadian Poverty Measures”, in *ISTAT. Time Use Methodology: Toward Consensus*, Istituto Nazionale di Statistica, Roma, Italy, 1993, page 90

³⁶ Statistics Canada, *Women in Canada*, 3rd edition, catalogue no. 89-503E, page 85; Statistics Canada, *Selected Statistics on Women in Nova Scotia*, August 1995, catalogue no. 89-503.

³⁷ Statistics Canada, *Selected Statistics on Women in Nova Scotia*.

working poor families often cannot afford for one parent to stay home full time with young children.³⁸

Changes to employment insurance qualifications mean that it now takes longer for most part-time workers, especially those working less than 25 hours a week, to qualify for benefits, a policy that disproportionately affects women who work these hours in order to care for children and keep house.

The failure to value unpaid work, until very recently, produced subtle forms of discrimination in court awards. It was not until 1992 that the Canadian Supreme Court for the first time awarded direct compensation to a Saskatchewan woman, Verna Fobel, for lost capacity to do unpaid work. Prior to that, compensation typically was awarded to a husband for loss of his wife's services.³⁹

Women's rights groups noted that even in this landmark case, the court assessed the replacement rate of Verna Fobel's work at \$5.50 an hour for a 15-hour week, even though the average provincial rate for domestic services at the time was \$7.54 an hour, and the actual hours of housework considerably more than 15. Advocacy groups also referred to job evaluation plans used by human resource consultants, which valued unpaid housework at the equivalent of \$32,000 a year.

In the last 30 years women have entered the paid work force in increasing numbers, but still do most of the household work when they come home from their jobs.

*The economy and society as a whole obviously benefit from the additional labour time families put into the market and the pursuit of equality for women depends upon it. But as over a decade of research has shown, the costs to women are high. Women's "double day" of paid work and unpaid domestic labour is now a well-documented fact of modern life. Neither men nor public policy have changed to accommodate this new reality.*⁴⁰

Though total average work loads are not substantially different, Canadian women still do about twice as much unpaid household work as men, despite an increase of more than 50% in women's paid labour force participation rate in the last 35 years.⁴¹ This has produced an overall decline in women's free time, both in absolute terms and relative to

³⁸ Douthitt, *op. cit.*, page 90.

³⁹ Waring, Marilyn, *Three Masquerades: Essays on Equality, Work and Human Rights*, Toronto: University of Toronto Press, 1997, page 86 citing Fast, Janet, and Brenda Munroe, "Towards Eliminating Gender Bias in Personal Injury Awards: Contributions from Family Economics," *Alberta Law Review*, 32, 1, 1994; see also *Toronto Star*, 9 May, 1993.

⁴⁰ Myles, John, "Women, the Welfare State and Care-Giving", *Canadian Journal of Aging*, vol. 10, no. 2, 1991, pages 82-85, cited in Frederick, *As Time Goes By*, page 7.

⁴¹ Statistics Canada, *Labour Force Annual Averages, 1981-1988*, March 1988, catalogue no. 71-529; Statistics Canada, *Charting Canadian Incomes, 1951-1981*, catalogue no. 13-581E; Statistics Canada, *Labour Force Historical Statistics*; Statistics Canada, *Women in Canada*, 3rd edition, catalogue no. 89-503E; Statistics Canada, *Women in the Workplace*, catalogue no. 71-534; Statistics Canada, *Households' Unpaid Work*. Total work aggregates, including paid and unpaid work will be presented in module 4 of the GPI, after consideration of paid work time use trends in module 3.

men, a fact that remains invisible in our current accounting system. Overcoming gender discrimination therefore also raises vital questions about a more equitable distribution of housework within families.

2.3.1 Poverty Rates of Single Mothers

Despite women's increased work load in the last 30 years, female and child poverty levels, particularly in households headed by single mothers, remain well above average. It can be argued that this policy outcome is supported by the lack of value assigned to household production, which is frequently the only viable means of survival for single mothers. Canadian lone parent families with pre-school-age children spend 12% of their income on child-care, compared to just 4.4% for two-parent families. And working single mothers spend only an hour and 10 minutes a day, or seven hours and 42 minutes a week, on average directly caring for their infants and toddlers, less than half the time available to their non-working counterparts.⁴²

It is not surprising then that paid work is not an option for many single mothers. Since single parents have only half the time of married couples to meet fixed household time costs, paid work can produce extreme time stress and neglect of basic household functions. Defining "time poverty" as time below the minimum necessary for basic household production, including food preparation and cleanup, house care and cleaning, laundry and shopping, Douthitt finds that when time and income are both considered, poverty rates of working single mothers in Canada are 70% higher than official estimates, approaching the poverty rates of their unemployed counterparts. When sleep deprivation is taken into account, working single mothers experience nearly twice the absolute time poverty rates of their non-employed or married counterparts.⁴³

For this reason, only 31% of single mothers with children under three and 47% of those with a child age 3 to 5 are employed. Despite the fact that non-employed single mothers average 7.1 hours a day seven days a week of productive household work (or 50 hours a week), 70% of Nova Scotian single mothers live below the official low income cut-off.⁴⁴ These 7.1 hours include 1.6 hours cooking, 1.9 hours housekeeping, 2.5 hours directly caring for their children, 42 minutes shopping and 25 minutes volunteer work per day averaged over a seven-day week, none of which is valued in the conventional economic accounts⁴⁵. If Douthitt's "time poverty" measure is included, the poverty rate for single mothers jumps to more than 80%.

The lack of recognition and support accorded this unpaid work directly affects our children. Children of single mothers are 13.7% of all children in Canada, but 41.5% of all children in low income families.⁴⁶ In Nova Scotia 17% of all families with children are

⁴² Statistics Canada, *Women in the Workplace*, pages 50 and 55.

⁴³ Douthitt, op. cit., pages 88 and 90.

⁴⁴ Statistics Canada, *Selected Statistics on Women in Nova Scotia*, catalogue no. 89-503.

⁴⁵ Judith Frederick, *As Time Goes By...Time Use of Canadians*, Statistics Canada, catalogue no. 89-544E, page 25.

⁴⁶ Statistics Canada, *Women in Canada*, 3rd edition, catalogue no. 89-503E, page 86.

headed by female lone parents.⁴⁷ And 27% of Nova Scotian children under the age of 12 live in families below the low income cut-off, the third highest rate in the country.⁴⁸ There are also many hidden costs of poverty borne disproportionately by single mothers and their children.

Current policy debates and prevailing attitudes on social welfare support rarely consider the long hours of productive household labour performed by welfare recipients, including the caring, nurturing and parenting work that is even more invisible than housework. By contrast, valuing the unpaid labour inputs into household production as bona fide work changes the view of such social support programs altogether. Supports for women dependent on household production, such as family resource centres, training programs, financial incentives, and women's health programs, are seen as essential social infrastructure for the household economy rather than as "welfare handouts," which are often the first targets of service cuts in fiscal restraint initiatives.

From the GPI perspective, this infrastructure is similar to the access to raw materials, labour and markets required for the business sector. When taxpayer dollars are used to grant subsidies to business for job creation programs; to give interest-free loans; to send leaders on overseas trade missions; or when business loans are forgiven, these policies are not classed as "welfare" payments to business. Similarly, the measurement and valuation of household work can change the biases and attitudes that have produced an "underclass" of welfare-dependent single mothers and others tied by necessity to an invisible, unrecognized household economy.

A 1985 United Nations report on the Decade for Women stated:

*The remunerated and, in particular, the unremunerated contributions of women to all aspects and sectors of development should be recognized, and appropriate efforts made to measure and reflect these contributions in national accounts and economic statistics and in the gross national product. Concrete steps should be taken to quantify the unremunerated contribution of women to agriculture, food production, reproduction and household activities.*⁴⁹

More recently, the United Nations World Summit on Social Development in Copenhagen and the 1995 U. N. Fourth World Conference on Women in Beijing renewed calls to count and measure unpaid work:

*Efforts are needed to acknowledge the social and economic importance and value of unremunerated work...and to accord social recognition for such work, including by developing methods for reflecting its value...in accounts that may be produced separately from, but consistent with, core national accounts.*⁵⁰

⁴⁷ Statistics Canada, *Selected Statistics on Women in Nova Scotia*, August 1995, catalogue no. 89-503.

⁴⁸ Statistics Canada, *Canadian Social Trends*, Spring, 1997, catalogue no. 11-008-XPE.

⁴⁹ United Nations, *The Nairobi Forward Looking Strategies for the Advancement of Women*, World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace, Nairobi, July 1985, cited in Statistics Canada, *Households' Unpaid Work*, page 3.

⁵⁰ United Nations, *World Summit for Social Development: Declaration and Programme of Action*, Copenhagen, March 1995, cited in Statistics Canada, *Households' Unpaid Work*, pages 3-4.

In sum, valuing and measuring unpaid housework and child-care is therefore essential to assess how the economy actually affects people's lives and to determine whether the new economic role of women is actually enhancing their freedom and improving their status.

Needless to say, nothing in this section, or those that follow, is intended to imply that unpaid housework and child-care is or should be primarily "women's work." The report simply acknowledges the reality that women historically have performed the vast majority of unpaid productive labour and still do so in Canada today. Recognizing this fact is a necessary prerequisite to producing policy initiatives, social supports, flexible workplace arrangements, and changes within the household itself to reduce the growing time stress of many women and overcome existing gender inequities.

2.4 Flexible Work Options and Other Policy Choices

The valuation of unpaid housework and parenting raises a number of important policy questions. The dramatic increase in dual-earner families has increased the "struggle to juggle" work and family responsibilities and produced increased levels of time stress pressures⁵¹. Experiments with flexible hours, job sharing and other "family-friendly" workplace options have already produced positive results both in allowing for more family time and parental attention to children, and in increased work productivity. The valuation of unpaid work can give these experiments greater impetus and bring them into the economic mainstream.

In considering these options, it is important to bear in mind the gender equity issues raised in the previous section. Flexible workplace arrangements should be examined for men as well as women, to ensure they are not used to undo hard-earned gains towards greater gender equity in the market economy and to send women "back into the home." The gender division of labour *within* the household economy is therefore the basic point of reference in considering workplace changes in the market economy, to ensure that reforms take place in both sectors simultaneously.

The valuation of unpaid housework and parenting can also reframe the policy debate on a number of other issues. Taxation credits for paid child-care are not matched by incentives for parenting, for example. Several European countries also have more generous parental leave provisions that might provide models for a shift in orientation.

Measuring unpaid work in the household economy can draw attention to important and subtle connections between gender discrimination in the labour market and changes over time in the gender division of labour in the home. For example, family leave is generally assumed to be a "women's issue" sometimes seen by employers as antithetical to market production needs. But a more equitable sharing of household responsibilities would likely

⁵¹ Frederick, Judith, *As Time Goes By...Time Use of Canadians*, Statistics Canada, catalogue no. 89-544E; see in particular chapter 2 on the 25-44 year age cohort, pages 19-32.

encourage more men to take family leave. Such shifts are necessary if women's quality of life is to keep pace with their labour force participation.⁵²

While the emphasis remains on market statistics alone and on increasing paid work hours and labour force participation, attention will necessarily be paid to the adequacy of child-care facilities which accommodate the business hours of offices and factories. This is not unimportant. But shining the spotlight on non-market statistics and on the economic value of the household sector will encourage establishing work hours that accommodate parents and enable them to spend more time with their children. The shift in emphasis is subtle but profound. The evidence to date indicates that when businesses accommodate human needs rather than the other way around, all sides benefit.⁵³

Recognizing the economic value of unpaid housework and parenting can also help ensure higher levels of support to the 70% of Nova Scotia single mothers and 27% of the province's children who live in poverty. From the GPI perspective, such policy initiatives are an investment in the province's human capital that will produce cost savings over time. The valuation of household production and parenting work can also effect legal outcomes, property awards and credit policies which women, in particular, have experienced as discriminatory.

2.5 Re-evaluating Consumption Habits

As the data below will demonstrate, the vast increase in household "labour-saving" devices in the last 80 years has produced very little change in the number of hours spent on housework. There is evidence that the focus on accumulating material possessions has actually increased the overall work and debt burden. More work hours are required to support higher levels of consumption; there are more rooms to clean in ever larger houses; smaller families have made household production more inefficient; and higher levels of household capital require more maintenance, repair and replacement.⁵⁴

Measuring and valuing unpaid housework and parenting can therefore raise important personal lifestyle questions. Since eating out and paying strangers to clean house and care for children make the GDP grow, these priority shifts have been regarded as signs of "progress." But longer work hours may be required to pay for these services. And it is not at all clear that less home cooking, which may be more nutritious than fast food, and less parental attention to children, necessarily improve the quality of life.⁵⁵ Some have argued

⁵² This insight is contributed by Stella Lord of the Nova Scotia Advisory Council on the Status of Women

⁵³ International Assoc. for Time Use Research, web-site: <http://www.stmarys.ca/partners/iatur/iatur2.htm> for studies on productivity gains from flexible workplace arrangements.

⁵⁴ See, for example, Linder, Staffan, *The Harried Leisure Class*, New York: Columbia University Press, 1970; see also *Demos Quarterly*, 5, 1995, issue devoted to "The Time Squeeze".

⁵⁵ See, for example, Hewlett, Sylvia Ann, *When the Bough Breaks: The Cost of Neglecting our Children*, New York: Basic Books, 1991; Robert Half International, "Family Time is More Important Than Rapid Career Advancement: Survey Shows Both Men and Women Support Parent Tracking". San Francisco, 28 June, 1989.

that a simpler, less materialist orientation may contribute more to well-being than an exclusive focus on accumulation and growth.⁵⁶

The multi-terrain vehicle (which will never see a dirt road) and matching furniture that come with two incomes mean nothing to children. It's the presence of their parents that they hunger for.

Yet, writes Deborah Maes,

Playgrounds, libraries, community pools and kinder-gym classes (are) almost surreally devoid of mothers....It is pitifully rare to see a little boy or girl hugged, kissed or tickled to delighted helplessness. Yes, they are taken to classes and pushed on swings. They are fed, and someone usually makes sure they aren't running out onto the expressway. But ultimately their "primary caregivers" (Orwell himself couldn't have come up with a better example of Newspeak) view them not as the apple of their eye, but as a job. These children have been robbed of their childhood.

Maes expresses her "astonishment at the way parents consign their offspring to strangers":

The act of raising children—like all important human relationships—is a profoundly intimate one. With young ones it is especially physical....These so-called "primary caregivers" (or underpaid servants) come into the child's life and then, when the child is old enough to be in school, they simply disappear. What does this teach the child about relationships?...Our behaviour can only leave (children) feeling that our ambitions and comforts always come ahead of their needs.⁵⁷

It is beyond the scope of this study to evaluate the psychological costs of the shift from parenting to paid child-care in recent decades, and certainly the basic argument applies here to both parents, not to mothers alone. Indeed, it would be a serious misinterpretation of this material to argue that women should return to the home after years of struggling to gain acceptance in the labour market. If there are costs to the shift from parenting to paid child-care, then the remedies must surely be sought in flexible workplace options, more equitable sharing of housework, and improved efficiencies in the household economy. Further studies are also needed to evaluate whether social costs engendered by the substitution of market for non-market activity may translate into longer-term economic costs from rising divorce rates, social welfare needs and productivity losses.

In the meantime, it is certain that measuring and valuing unpaid household production and parenting at least raises the profile of these issues in the public policy arena and can deepen public debate on the effects of alternative child-rearing methods.

⁵⁶ See, for example, Saltzman, Amy, *Downshifting: Reinventing Success on a Slower Track*, New York: HarperCollins, 1991. Also Wachtel, Paul, *The Poverty of Affluence: A Psychological Portrait of the American Way of Life*, Philadelphia: New Society Publishers, 1989, Schor, Juliet, *The Overworked American: The Unexpected Decline of Leisure*, New York, HarperCollins, 1991

⁵⁷ *The Globe and Mail*, July 9, 1998, page A26

Similarly, in the long term, the valuation of unpaid housework may also give rise to consideration of alternative housing options that increase efficiency and reduce housework. Single-family houses which each own a wide range of under-utilized appliances may represent a very inefficient use of resources.

“Co-housing” experiments in Denmark, Sweden and the Netherlands have been so successful in sharing household capital, reducing housework hours and time stress, improving child-care quality, strengthening communities, and increasing energy efficiency and economies of scale, that they have become mainstream real estate options for which credit is easily available.⁵⁸ Indeed such collaborative living arrangements are increasingly popular in North America, with a regular magazine, *Cohousing Quarterly*, linking emerging communities. In Canada, at least until the early 1990s, the cooperative housing program of the Canada Mortgage and Housing Corporation also addressed issues of sharing household capital with a view to increased efficiency.

A recent time use study in Sweden found that cooperative housing designed with shared spaces and facilities, such as common dining rooms, play areas, hobby and meeting rooms and other activity areas produced a far higher degree of social interaction, mutual support and neighbourly contact than conventional housing arrangements. Children spent a much greater proportion of their time in active play and visiting neighbours, and much less time watching television than children in conventional housing.⁵⁹

Cooperative options are not new. Exactly one hundred years ago, Charlotte Perkins Gilman proposed participation in communal services such as group cooking to ease the burden of housework.⁶⁰ Such experiments, in the form of collective kitchens, have aroused renewed interest in modern times.

Ultimately, these are personal choices. But an index of progress that goes beyond purely materialist measures, that recognizes the costs of time stress and the pressure to juggle household and job responsibilities, one that explicitly values active parenting, cannot help but raise questions about consumption habits that may have become counter-productive.

2.6 Raising the Profile of Housework and Parenting

It is definitely beyond the scope of the Genuine Progress Index to reach definitive conclusions about such vital and wide-ranging quality of life issues as described above.

⁵⁸ McCamant, Kathryn and Charles Durrett, *A Contemporary Approach to Housing Ourselves*, Habitat Press, Berkeley, 1988; Fromm, Dorit, *Collaborative Communities: Cohousing, Central Living and Other New Forms of Housing with Shared Facilities*, Van Nostrand Reinhold, New York, 1991, and the magazine *CoHousing Quarterly*. The latter references contain examples of such new communities in North America.

⁵⁹ Michelson, William, “Time Geography at the Micro Scale of Housing”, Centre for Urban and Community Studies, University of Toronto, paper presented to the *Annual Meeting of the American Association of Geographers*, April 22, 1990.

⁶⁰ Gilman, Charlotte Perkins, *Women and Economics*, Boston 1898, cited in Bose, Christine, Philip Bereano and Mary Malloy, “Household Technology and the Social Construction of Housework”, in *Technology and Culture*, January 1984, volume 25, no. 1, page 55.

Indeed, it is clear that there are many subtleties and ambiguities involved that can lead to very different conclusions.

For example, washing machines, dryers, dishwashers and microwaves have reduced the physical demands of housework and increased its flexibility, allowing several tasks to be accomplished at once, and thus helping to make increased female labour force participation possible.⁶¹ On the other hand, some of these potential gains in time savings may have been eroded by rising standards of cleanliness. We now expect to change our shirts and underwear every day compared to once a week in the 1920s before the electric washer was introduced, thus increasing the quantity and frequency of laundering.⁶²

Similarly, increased interest in child development and child psychology in the post-war period has led many women to devote more energy, time and effort to education and nurturing of fewer children. According to Schor, Margolis and others, this largely invisible work has actually led to the provision of a new range of child-care services in the home, from conscious toilet-training, scheduling, nutrition and education to “scientific nursing” of sick children. This “most labour-intensive mothering process in human history”, a relatively recent development, may be as fulfilling and enjoyable as it is demanding, but it has almost certainly expanded the scope of work in the household.⁶³

In many cases female labour force participation is seen as a financial necessity to prevent slippage into poverty.⁶⁴ But many women also value their paid employment to advance careers, provide intellectual stimulation, increase autonomy in financial decision making, reduce dependency in relationships, and provide financial security in the event of marital break up. Such perceived gains must be balanced against the costs of a double work load and loss of time with children described above.⁶⁵ Many other variables can influence the equation - the quality and stability of child-care, the quality of paid work, income levels, and the willingness of partners to share domestic responsibilities. There are clearly no uniform or simplistic answers to the challenges of balancing paid and unpaid work responsibilities.

But the valuation of unpaid housework and parenting will certainly raise these important questions and bring them into the policy arena. They have not been sufficiently debated largely because of the exclusive policy focus on market statistics and because unpaid work has been under-valued by being entirely omitted from our standard accounts.

⁶¹ Many of the insights in this section are contributed by Stella Lord of the Nova Scotia Advisory Council on the Status of Women. On the changing nature of housework, Ms. Lord refers to Meg Luxton, *More Than a Labour of Love*.

⁶² Cowan, *More Work for Mother*; Schor, op. cit., pages 88-94; Vanek, op. cit., page 119 cited by Schor; see also Strasser, Susan, *Never Done: A History of American Housework*, Pantheon, New York, 1982.

⁶³ Schor, op. cit., page 94; Margolis, Maxine, *Mothers and Such: Views of American Women and Why They Changed*, William Morrow, New York, 1984; Dally, Ann, *Inventing Motherhood: The Consequences of an Ideal*, Schocken Books, New York, 1983

⁶⁴ The National Council on Welfare has pointed out that the rate of low income amongst Canadian families would have increased much more dramatically if women had not joined the labour force in large numbers (Stella Lord, personal communication, August 31, 1998).

⁶⁵ Arlie Hochschild, *The Time Bind*, cited by Stella Lord.

Whatever conclusions are reached, Nova Scotians can only benefit from bringing these critical issues, which affect our daily lives, into the public eye.

In sum, failing to measure and value unpaid housework and parenting renders it invisible in the economic accounts from which policy makers take their cues and which guide the behaviour of governments, businesses and individuals. What is not counted and measured is insufficiently valued and given secondary priority in policy planning. By making the economic value of housework and parenting more explicit, the Genuine Progress Index can draw attention to hidden factors that directly impact our quality of life, our well-being and our prosperity.

The GPI can also make explicit critical linkages between the market economy and social and environmental factors, and thus reveal biases in the current growth estimates. As the economic dimensions of our social and environmental assets are quantified and measured, they necessarily will become more visible and valued, and thus incorporated more readily into the framework of policy discussions on the provincial economy.

3. Definitions and Methods of Valuation

3.1 Defining Unpaid Housework and Child-Care

The Genuine Progress Index follows Statistics Canada's fundamental criterion for classifying unpaid housework and child care as "productive activity," namely that the activity produces an output that conceivably can be an object of exchange. To make this criterion operational, Statistics Canada further specifies that it must be possible to delegate the activity to another person to be included in the definition. In other words, one could pay someone else to do the work.

Cleaning house, doing the laundry, taking care of the garden, food shopping, meal preparation, changing an infant's diapers, and supervising children are all economic services that can be purchased in the market and delegated to a paid employee. In fact, there has been a significant shift in that direction in the last 30 years, with rapid growth in the personal services and child-care industries. Some domestic services like laundry and transportation have shifted in the other direction – from the market to the household economy.

By contrast, getting a haircut, receiving medical treatment and similar activities are excluded under this definition because they cannot be delegated. For the same reason, and more significantly, child-bearing is excluded from the definition of unpaid household work, even though it is clearly productive activity.⁶⁶

⁶⁶ Waring, Marilyn, *Women, Work and Well-Being: A Global Perspective*, address delivered at King's College, Halifax, N.S., 30 April, 1998. Marilyn Waring points out that even though courts and insurance companies regularly assign monetary values to human life, valuations of unpaid work exclude reproduction which, she argues, should be classified as unpaid work. Similarly, Waring has argued persuasively that breast-feeding is frequently and erroneously described as "free," although it incurs both an energy cost and a nutritional cost to mothers. It is possible, she says, to measure the shadow price of breast milk:

One could ascertain the 'opportunity costs' in terms of both the time a woman takes for breast-feeding and the additional food required for the mother. This assumes, of course, a value on the mother's time. One could investigate the availability of alternative forms of milk for a child, its price and the distance to the outlet to obtain that alternative form. But this, as a value measurement, does not emphasize the fact that breast milk is better for an infant.

(Waring, *Three Masquerades*, pages 86-87, 157-160).

Work has in fact been done in Europe on quantifying and valuing the amount of breast-milk produced (Chris Jackson, personal communication, 14 September, 1998). GPI Atlantic's decision to follow Statistics Canada's exclusions here does not indicate a theoretical preference but simply follows the prevailing practice on the grounds that accepting existing methodologies provides a firmer initial ground for the new index. As measurements of household production become accepted and as new methods are developed for valuing services previously regarded as "free," these activities could be incorporated into the index at later stages.

The following are examples of unpaid household work included in this study:

- Meal preparation and cleanup
- Indoor and outdoor cleaning
- Laundry and ironing
- Mending, sewing and dressmaking
- Interior and exterior maintenance and repair
- Grounds maintenance, gardening and plant care
- Cutting and stacking firewood
- Household administration
- Shopping for groceries, durable goods, clothing, financial and repair services
- Vehicle maintenance and repair

Primary child-care is included, meaning time exclusively devoted to feeding; helping; teaching; giving medical care; changing diapers; and reading to, playing with and otherwise caring for children. For older children, primary child-care includes active listening; advising; assisting with and monitoring homework; arranging and transporting to lessons; and so on.

However, in order to eliminate double-counting, *secondary* child-care is excluded from the study, meaning time spent looking after children while performing other tasks. Statistics Canada's time diary method, on which the data in this study are based, automatically excludes double-counting which simple survey questionnaires would be unable to do.⁶⁷ For example, the time spent loading laundry into the machine is registered under "cleaning and laundry". But while the machine is washing, the parent may assist an older child with homework and feed an infant. This is classed as "primary child-care." The children may continue with these activities while the parent transfers clothes to the dryer, but since the parent is not relating directly with them, the time is classified again as "cleaning and laundry", not as child-care.

This awkwardness in the accounting methods is a function of valuing labour inputs into household production rather than outputs. Harvey points out that valuing inputs does not recognize the "jointness of production which exists in households":

Meal preparation, housekeeping and child-care are often co-occurring, and valuing time allocated to one or the other inadequately reflects total production.

⁶⁷ On the use of time diaries, see Harvey, Andrew and W. Stephen Macdonald, "Time Diaries and Time Data for Extension of Economic Accounts", *Social Indicators Research* 3, 1976, pages 21-35; Harvey, Andrew, *Time Use Module of the General Social Survey*, General Social Survey Working Paper #8, Statistics Canada, 1987; Harvey, Andrew, *Time Based Indicators*, prepared for the United Nations Statistical Office, September, 1989. On the different results obtained from using diaries and questionnaires, see 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.

*How the outputs are produced is not the issue, rather it is how much of what kind of output is produced.*⁶⁸

So long as labour inputs are the principal means of measuring household production, the primary child-care data will give a rather distorted picture of a parent's actual work day, with the measurements skewed towards the housework figures and away from the child-care ones. Starting with the 1992 General Social Survey, Statistics Canada did collect a second time use diary on child-care from parents, in addition to the general time use survey, so that total primary and secondary time spent looking after children is now available.

Personal and medical care of household adults, including the sick and elderly, is included in the aggregates for household work in this study. But care for relatives outside the immediate household is excluded, since it has already been counted in the previous data release on the value of voluntary work.⁶⁹ A limitation of this study is that there is no separate data presentation and analysis of trends in care for adults within the household. Given the expansion of home care in recent years, this is an important direction for the future and may merit a separate report on this subject.⁷⁰

It should be noted that some activities, like gardening and playing with children, are clearly on the border-line of work and leisure, and may be performed for pleasure as much as necessity. Other household activities are more likely associated with drudgery, as Simone de Beauvoir wrote in *The Second Sex*:

*Few tasks are more like the torture of Sisyphus than housework, with its endless repetition: the clean becomes soiled, the soiled is made clean, over and over, day after day.*⁷¹

The activities included in this study do not make the distinction but simply follow Statistics Canada's current practices in defining productive work as that which could be

⁶⁸ Harvey, Andrew, and Arun K. Mukhopadhyay, "The Role of Time Use Studies in Measuring Household Outputs", section 3B, "Accounting for Time", *Conference of the International Association for Research on Income and Wealth*, Lillhammer, Norway, August, 1996. Andrew Harvey has pointed out (personal communication, Sept. 16, 1998) that studies valuing household outputs rather than labour inputs circumvent the problem of losing the value of secondary child-care in the estimations, since the issue of overlapping activities does not affect the quantity of actual outputs. See discussion on output methods in section 4.3 below.

⁶⁹ GPI Atlantic, *The Economic Value of Civic and Voluntary Work in Nova Scotia*, Module One of *Measuring Sustainable Development: Application of the Genuine Progress Index to Nova Scotia*, Halifax, July, 1998.

⁷⁰ Dr. Carol Amaratunga, Executive Director, Maritime Centre of Excellence for Women's Health, recommends that the valuation of unpaid home-care be part of this study (personal communication, 8 September, 1998). While GPI Atlantic did not have the capability at this time to include this important component, the author recognizes that this is a necessary direction. Perhaps future updates to this component of the GPI might expand the current title to: *The Economic Value of Unpaid Housework, Child-Care and Home-Care*.

⁷¹ Cited in Waring, Marilyn, "The Invisibility of Women's Work", *Canadian Woman Studies*, vol. 17 (2), Spring, 1997, pages 31-38.

replaced for pay in the market economy.⁷² It has been noted that some market production is undoubtedly enjoyable, but is not excluded from market statistics on those grounds.⁷³

3.2 Measuring Time Spent on Unpaid Work and its Monetary Value

Statistics Canada's time use surveys, using time diaries and currently administered once every six years as part of the General Social Survey, are used in this report to estimate the time spent on unpaid housework and child-care.⁷⁴ This study also uses Statistics Canada's extrapolations of these values back to 1961, based on various regional studies, in order to estimate trends over time.

Average provincial hourly pay rates in the domestic and household services and child-care industries are then used to determine what it would cost to replace this unpaid production in the market economy. For Nova Scotia, the replacement cost (generalist) hourly rate is \$9.02 an hour in 1997 dollars, based on an average hourly pay rate of \$9.20 for domestic services and \$7.58 for child-care.⁷⁵

The replacement cost (generalist) method used in this study yields more conservative valuations than other methods. Higher values would be obtained using the replacement cost (specialist) method and the opportunity cost method. The specialist method calculates the value according to occupational pay rates for each unpaid activity performed (for example, gardeners, roof repairers, cooks) rather than at the pay scale of domestic servants.

The opportunity cost method assesses the value of unpaid household work at the normal pay scale of the person performing the unpaid work. In other words, what would we be earning in our normal occupations during the time we are cooking, washing dishes or

⁷² See for example, Chandler, William, *The Value of Household Work in Canada, 1992*, in *National Income and Expenditure Accounts, Fourth Quarter 1993*, catalogue no. 13-001, April 1994; and Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, catalogue no. 11-612, #30.

⁷³ There have been some important studies attempting to classify particular work and leisure activities according to the motivation of the actor. For example, activities objectively classified as "work" because they yield productive outputs may not be subjectively seen this way by the person performing the activity. See Harvey, Andrew, "Objective and Subjective Approaches to the Measurement of Work", in ISTAT, *Time Use Methodology: Toward Consensus*, Istituto Nazionale di Statistica, Roma, Italy, 1993; Shaw, Susan, *The Meaning of Leisure: How Men and Women Define Leisure*, paper presented to the Canadian Congress on Leisure Research (3rd), Edmonton, Alberta, 1981; Elchardus, Mark, and Ignace Glorieux, "Towards a Semantic Taxonomy Classifying Activities on the Basis of their Meaning", in ISTAT, *Time Use Methodology: Toward Consensus*, Roma, Italy, 1993.

⁷⁴ The next General Social Survey on time use data will be issued in 1999, based on the survey being conducted in 1998.

⁷⁵ Figures are derived by dividing the total replacement cost value of unpaid work for Nova Scotia in 1992, as given in Statistics Canada, *Households' Unpaid Work: Measurement and Valuation*, by the total number of household hours from the 1992 General Social Survey on Time Use (Tables B5 and B1, pages 76 and 72). The hourly rate is then adjusted upward to 1997 dollars using wage inflation rates in the personal services industry from Statistics Canada, *Employment, Earnings and Hours*, catalogue no. 72-002.

doing laundry?⁷⁶ The opportunity cost method yields the highest valuations of unpaid household work before taxes, and estimations very similar to the replacement cost (generalist) method after taxes.

3.3 Output Valuations of Household Production

Labour inputs, as currently used to value household and volunteer work, are actually only one of several factors of production. Other inputs include land and the buildings within which production takes place, capital equipment and machinery, entrepreneurial ability and skills, and resource and energy use. As Andrew Harvey and others have pointed out, measuring labour inputs alone fails to capture either the full process or the value of household production.⁷⁷

One alternative, discussed in more detail in chapter 5, is to add the value of capital inputs and building use to the value of labour inputs. This has been done by Duncan Ironmonger in Australia, and by Michael Thoen at Statistics Canada in an experimental study using input-output tables for household production in 1981 and 1986. The Statistics Canada study includes household expenditures on material inputs and service flows from consumer durables, in addition to the value of labour inputs.⁷⁸

However, the most theoretically sound method of measuring the value of household work, according to Statistics Canada, is the direct valuation of production outputs:

In principle, the appropriate measure of household production is the exchange value of the resulting economic output. This is consistent with the measure of market production and allows aggregation across the whole range of goods and services produced by households...through valuation at prices of similar market goods or services.... Moreover, the resulting estimate can be compared directly with Gross Domestic Product....However, in the absence of information on the outputs of households, as is currently the case, this method is impractical.⁷⁹

⁷⁶ For more details on these methods, see the previous data release on *The Economic Value of Civic and Voluntary Work in Nova Scotia*, GPI Atlantic, Halifax, July, 1998, section 7, pages 32-37, and Statistics Canada, *Households' Unpaid Work*, pages 23-28 for a comprehensive discussion of the issues.

⁷⁷ The following discussion is based on Harvey, Andrew, and Arun K. Mukhopadhyay, "The Role of Time Use Studies in Measuring Household Outputs", section 3B, "Accounting for Time", *Conference of the International Association for Research on Income and Wealth*, Lillhammer, Norway, August, 1996. At the same conference, similar critiques and case studies were presented by researchers from Finland, Norway, the Netherlands and Germany (Harvey, idem., bibliography: Vihavainen (1995), Aslaksen and Gravingsmyhr (1995), Rydenstam and Wadeskog (1995), and Schafer and Schwartz (1995).

⁷⁸ Ironmonger, Duncan, "Australian Households: A \$90 billion Industry", research discussion paper no. 10, Centre for Applied Research on the Future, University of Melbourne, Melbourne, and other references to Ironmonger's work in chapter 5 and in the bibliography. On the Canadian work and Statistics Canada's study, see Thoen, Michael, *The Value of Household Production in Canada, 1981-1986*, Statistics Canada, National Accounts and Environment Division, April 1993.

⁷⁹ Statistics Canada, *Households' Unpaid Work*, page 21. This source cites some small scale studies focussed on selected activities that have experimented with household output valuations: Fitzgerald, John, and John Wicks, "Measuring the Value of Household Output: A Comparison of Direct and Indirect Approaches," *Review of Income and Wealth*, Series 36, No. 2, June, 1990; Goldschmidt-Clermont, Luisella,

Important steps have been taken in recent years under the auspices of the United Nations International Research and Training Institute for the Advancement of Women (INSTRAW) to develop household output valuations that may allow more accurate comparisons with market statistics in the future. As part of this initiative, Harvey has produced household output valuations for Canada using Statistics Canada's 1992 time use study to estimate the quantity of household outputs per person per unit of time, and then establishing market prices for goods of similar quality. Taxes and subsidies are then subtracted from this valuation to determine the producer's price.

In order to determine the value added by households to production already measured in the GDP, Harvey then subtracts the cost of purchased inputs into production and other intermediate goods produced by households, as well as the cost of use of that portion of the dwelling dedicated to the particular output. These intermediate inputs are calculated from Statistics Canada's *Family Expenditure Surveys*. Finally, the outputs are aggregated over all items and households, producing results remarkably similar to those reached by adding the value of labour and capital inputs.

The value of basic household outputs are estimated as follows:

1) **Meal preparation and cleanup:**

The total quantity of meals consumed at home is estimated from the time use surveys and multiplied by the average per person expenditure per "eating occurrence" at restaurants and take-outs. Purchased groceries and garden-grown vegetables are subtracted as well as the imputed residential rent for kitchens and dining rooms (estimated at 25% of total living space).

2) **Housekeeping** (including cleaning, building and grounds maintenance and the purchase of supplies):

The output here is measured in nights of accommodation provided, using the average price of motel rooms and subtracting 45% of the imputed rental value of dwellings, based on an average of 2.7 bedrooms per 6-room residence. Purchased inputs like utilities, cleaning supplies, paper products, horticultural goods and transportation are also deducted.

3) **Clothing care:**

After deducting the portion of laundry related to housekeeping (sheets, towels, etc.), outputs are measured by the quantity of loads or kilograms of laundry with deductions for intermediate inputs like detergent, bleach and fabric softeners.

"Does Housework Pay? A Product-Related Micro-economic Approach", *Signs*, Vol. 9, no. 1, Autumn, 1983; and Bivens, Gordon, and Carol B. Volker, "A Value-Added Approach to Household Production: The Special Case of Meal Preparation," *Journal of Consumer Research*, vol. 13, no. 2, September, 1986.

4) **Child-care:**

This is estimated by the number of child-care hours provided per child with deductions for purchased inputs and imputed shelter costs based on actual costs of these items in the market economy.

Harvey acknowledges the difficulties and challenges in accurately measuring the economic outputs of household production, but concludes that output-based valuations “are possible and are necessary if researchers and national accountants are to fully grasp and measure the nature of household production.”⁸⁰ The valuation of household work according to labour inputs should therefore be seen as an interim step pending the further development of effective ways of measuring outputs. As these methods are refined, the Nova Scotia GPI can eventually move from the current labour input-based measurements of housework and child-care to more direct valuations of actual household outputs.

As an intermediate step, this study attempts to move in this direction by estimating capital inputs into household production in Chapter 5 and adding these to the standard replacement cost valuation of labour inputs in Table 6.4. Even though producer costs are not necessarily equivalent to market value, the inclusion of purchased and produced intermediate inputs and use of dwelling space in production costs, begins to approximate the results of output valuations.

⁸⁰ Harvey, idem. This paper is accessible on the website of the International Association for Time Use Research at <http://www.stmarys.ca/partners/iatur/iatur2.htm>

PART II

Housework & Child-Care in Nova Scotia: Detailed Results and Valuations

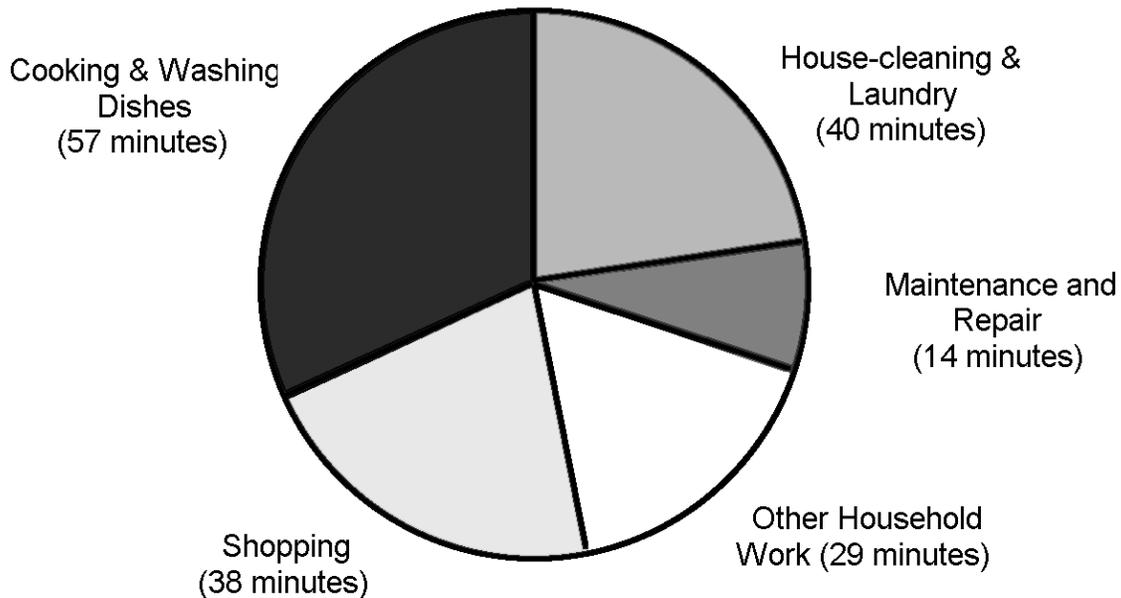
4. Labour Inputs into Household Production

4.1 Hours of Unpaid Housework and Primary Child-Care in Nova Scotia

Nova Scotians aged 15 years and older devote an average of 20 hours and 40 minutes a week, or 3 hours a day, to unpaid housework, mainly domestic chores. Of this, nearly an hour a day is spent cooking and washing dishes, 40 minutes is spent house cleaning and doing laundry and 38 minutes is spent shopping (Chart 4.1).⁸¹

When child-care hours are included and averaged over the whole adult population, Nova Scotians average 23 hours and 40 minutes a week in total unpaid household work. As we shall see in chapter 5, these hours are not evenly distributed over the whole population. Nova Scotian parents, for example, devote an average of two hours a day to primary child-care in addition to their housework duties, and mothers put in up to seven and a half hours a day of total unpaid household work.⁸²

Chart 4.1: Daily Domestic Chores in Nova Scotia
(average minutes per day per person 15 years and older)



⁸¹ Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, catalogue no. 11-612 #30, provincial tables: Table 1. All figures in this section are averaged over a seven-day week.

⁸² Please see section 4.1 above for definitions. In brief, primary child-care refers to time spent exclusively with children, including dressing, feeding, washing and giving direct physical and medical care to babies and children, teaching, reading to and playing with children, and transporting them. “Secondary” child-care, which means looking after children while performing other tasks, is not counted here.

Source: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, Table 1, catalogue no. 11-612, #30.

This means Nova Scotians each contribute an average 1,230 hours a year of unpaid household work to the economy, for a total of more than 940 million hours in 1997, the equivalent of 490,000 full-year full-time jobs. Given the actual mix of full-time and part-time jobs in the economy, household production would produce 567,000 jobs at an average of 34.6 hours a week, if it were replaced for pay in the private sector.⁸³

Altogether Nova Scotians work considerably more hours without pay in the household economy than they do for pay in the market economy. According to Statistics Canada's *Labour Force Survey*, Nova Scotians put in about 707 million hours for pay in 1997, one-quarter less than their total household work hours.⁸⁴ The ratio of unpaid to paid work in Nova Scotia is the second highest in the country after Newfoundland, and the Atlantic provinces have generally higher ratios than the rest of the country due to the relatively lower levels of employment in this region (Chart 4.2).⁸⁵

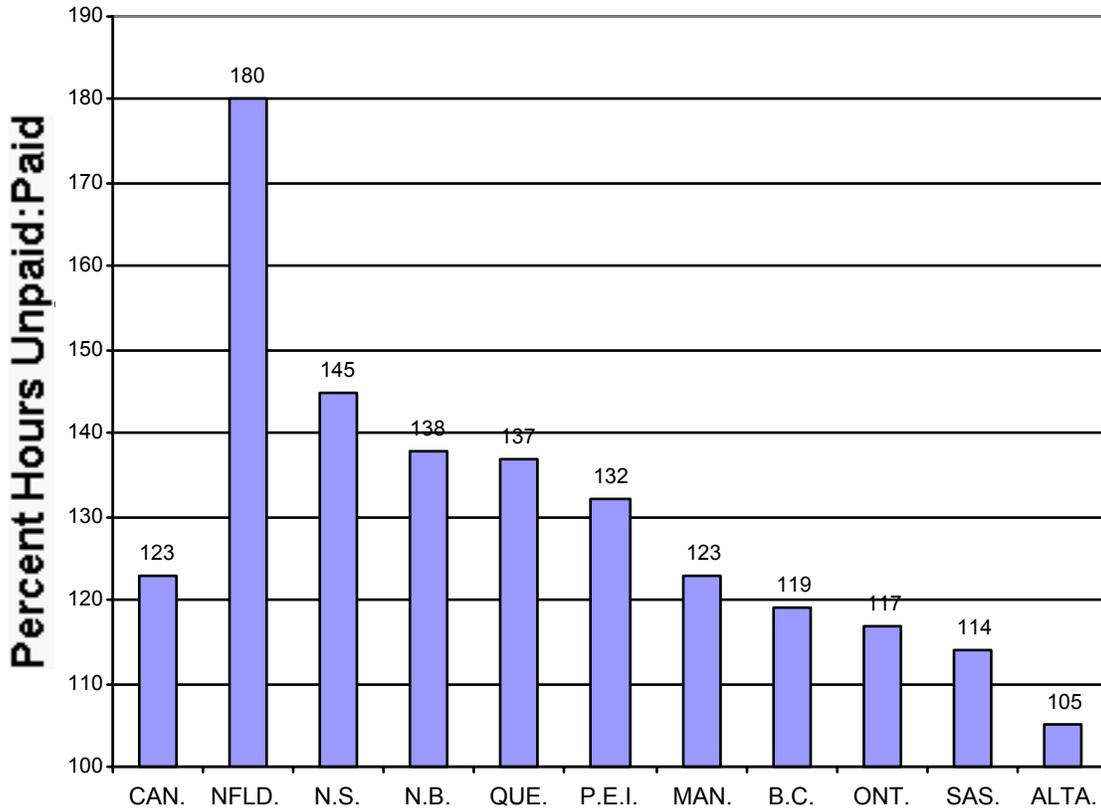
⁸³ 1997 population is from Statistics Canada, *Annual Demographic Statistics*. However, it should be noted that, as with the first GPI report on the value of voluntary work, time use data are based on the most recently available material from the 1992 *General Social Survey*. Time use data from the 1998 General Social Survey will be released in 1999. Statistics Canada currently conducts time use surveys every 6 years. Full-time jobs are assessed at 1,920 hours a year, based on a 48-week, 40-hour work week after vacations, holidays and leaves have been subtracted. Chris Jackson notes that in future estimates of full-time job equivalents, Statistics Canada intends to use average actual hours worked, which will yield more accurate estimates in line with System of National Accounts 1993 guidelines (personal communication, 14 September, 1998).

The 34.6 hour work week for full and part-time jobs, used in the first GPI data release on the value of voluntary work, is also used here in order to retain comparability within the Index, even though the actual percentage of part-time jobs in the domestic services and child-care industries is considerably higher than in the health and social services industry. The figure used here also corresponds closely with the average actual hours worked by Nova Scotians in all jobs and all industries in 1997: 34.7 hours a week (Statistics Canada, *Employment, Earnings and Hours*, catalogue no. 72-002; and Statistics Canada, *Labour Force Survey, 1997*, CD-ROM).

⁸⁴ Statistics Canada, *Labour Force Annual Averages, 1996*, catalogue no. 71-220-XPB, Table 19, page B-47, for average actual hours worked for all jobs. Statistics Canada, *Labour Force Survey, 1997*, CD-ROM, Table 15AN.IVT, for 1997 total employment figures.

⁸⁵ This comparison and that in Chart 5.9 refer to hours only. When the monetary value of labour inputs into household production are compared to GDP value, Prince Edward Island has the highest ratio (58%) followed by Nova Scotia with 42% and Newfoundland with 40%. For the monetary value of housework in Nova Scotia as a percentage of GDP, see section 5.6.4 below.

Chart 4.2 Ratio of Unpaid to Paid Hours, by Province
 Throughout Canada Unpaid Household Work Hours Exceed Paid Work Hours, with Generally Higher Ratios in Provinces with Lower Employment Rates

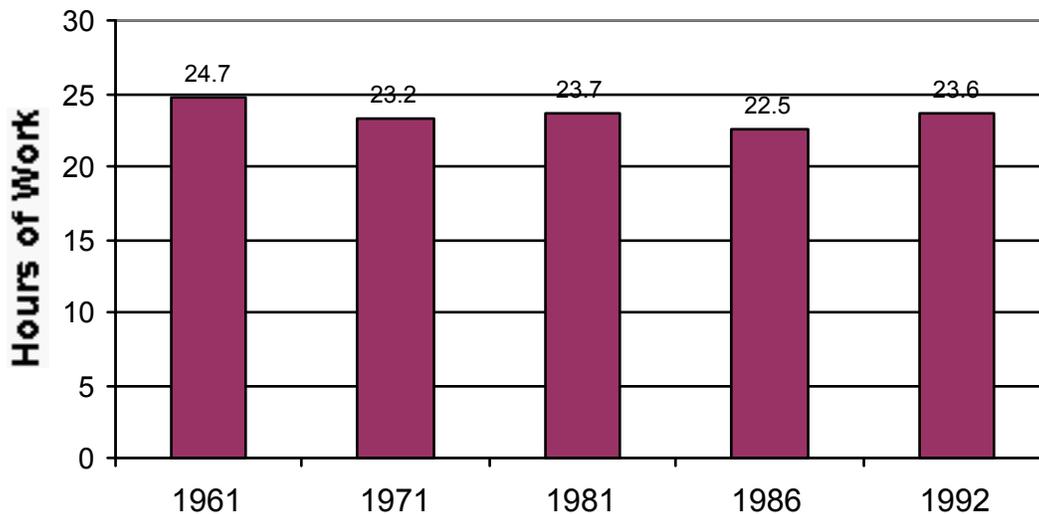


Source: Statistics Canada, *Households' Unpaid Work*, Table B.1, page 72

Nova Scotians are doing about the same amount of housework today as in 1981, one hour per week more than in 1986, and one hour per week less than in 1961. In other words, hours of production in the household economy have remained relatively constant over 40 years despite the dramatic increase in the number of paid work hours contributed by women in the same period (Chart 4.3).⁸⁶

⁸⁶ Statistics Canada, *Households' Unpaid Work*; see also chapter 5 for more details on women's share of household work, and the ratio of unpaid to paid work by gender.

Chart 4.3: Unpaid Housework and Child-Care, Nova Scotia, 1961-1992
Average Hours Per Person, Per Week, Population 15+



Sources: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use* for daily hours; Statistics Canada, *Households' Unpaid Work: Measurement and Valuation* for historical data.

NOTE: These figures, and all other aggregates, include primary child-care but are averaged out over the whole population, including those without young children. As noted below, the hours are considerably longer for parents.

4.2 Unpaid Household Work Hours by Activity

Broken down by activity, Nova Scotians worked 266 million unpaid hours on food preparation and cleanup in 1997, equal to nearly 140,000 full-time jobs. They put in more than 186 million hours cleaning house and doing laundry, which would produce nearly 100,000 full-time house-cleaning jobs in the market economy. And they spent 177 million hours shopping for groceries and other household goods and services, equal to more than 92,000 jobs.

If Nova Scotian parents contracted out all their remaining primary child-care duties, not counting the time spent looking after children while doing other tasks, it would produce 61,000 more full-time jobs in the child-care industry, amounting to 116.5 million hours a year.

As we shall see in the next chapter, the aggregates and averages for total household production in Nova Scotia mask important differences among population groups. However, the averages for total household work also conceal significant differences in trends over time in the various forms of production that make up the household economy. These trends reveal important shifts between the market and non-market sectors that must be tracked in order to estimate actual economic growth rates accurately.

Caution must be exercised in interpreting the following data, however, as the provincial figures here are imputed from national trends. However, sensitivity tests indicate that, although differing regional characteristics such as unemployment rates and income levels do produce marked differences among the provinces in per person hours of household work, provincial trends over time are not markedly different from national trends.⁸⁷

4.2.1 Trends in Domestic Chores

Nova Scotians spent the same amount of time on domestic chores in 1992 as they did in 1961 – just over 2 hours a day (Table 4.1). In fact as a percentage of total unpaid household work, domestic chores now occupy more relative space (Chart 4.4). The slight overall decline of about one hour per week in total household work hours is almost entirely attributable to two factors: the decrease in time spent on child-care and the tendency to spend a larger percentage of the household food budget on eating out.

Table 4.1: Trends in Unpaid Household Work, Nova Scotia

	DOMESTIC CHORES	COOKING/WASHING	HOUSE-CLEANING/LAUNDRY	SHOPPING/MANAGING	REPAIR	HELP & CARE	HOUSEHOLD TRANSPORT
HOURS PER WEEK							
1961	14.7	8.4	4.4	3.9	1.8	4.4	2.2
1971	14.4	8.0	4.3	4.0	1.8	4.1	2.3
1981	14.3	7.7	4.4	4.3	1.9	3.6	2.3
1986	13.3	6.7	4.8	4.7	1.5	2.8	2.2
1992	14.7	6.7	4.4	4.4	1.6	2.9	2.3
HOURS PER DAY							
1961	2.1	1.2	0.6	0.56	0.25	0.6	0.3
1971	2.1	1.1	0.6	0.57	0.25	0.6	0.3
1981	2.0	1.1	0.6	0.61	0.3	0.5	0.3
1986	1.9	1.0	0.7	0.67	0.2	0.4	0.3
1992	2.1	1.0	0.6	0.63	0.2	0.4	0.3

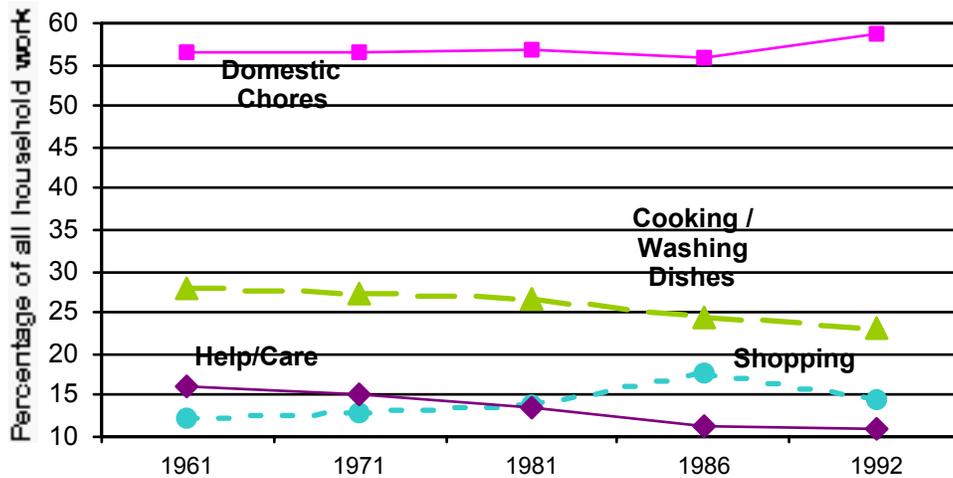
Sources: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, for 1992 Nova Scotia hours. Historical extrapolations for the province are from national trends in Statistics Canada, *Households' Unpaid Work*, Statistics Canada's 1986 General Social Survey on Time Use in Harvey, Andrew, et. al., *Where Does Time Go?* Catalogue 11-612E, #4, and from Jackson, Chris, "The Value of Household Work in Canada, 1986" in *National Income and Expenditure Accounts, First Quarter, 1992*, Statistics Canada, catalogue no. 13-001, which compares 1981 and 1986 statistics.

NOTE 1: The category "help and care" is mainly primary child-care, but also includes care of elderly, sick or disabled adults within the household. In the interpretations which follow, it is assumed that this care of household adults has remained unchanged, and that the trends reflect changes in primary child-care, the principal component in this category.

NOTE 2: The slightly higher shopping hours in 1986 may be due to the fact that the time use survey that year was conducted fairly close to Christmas. Although Statistics Canada made adjustments to the data to account for this fact, this probably only partially corrected the anomaly (Chris Jackson, Statistics Canada, personal communication, 14 September, 1998).

⁸⁷ 1992 figures in these tables are comparable to the data presented earlier. But the figures for earlier years are imputed from the national trends and should be used only for analyzing trends over time. They are not necessarily the actual hours worked by Nova Scotians in years prior to 1992.

Chart 4.4: Trends in Distribution of Household Work
 Selected Activities as a Percent of Total Unpaid Household Work
Although the total quantity of unpaid household work has hardly changed, we spend longer on some household activities and less time on others.



Sources: As in Table 4.1 above

The time spent **cleaning house and doing laundry** has remained unchanged over more than 30 years despite a dramatic increase in the number of Nova Scotian households with automatic washers and dryers. A gender breakdown shows that women’s share of house cleaning and laundry has actually increased since 1961, so that Nova Scotian women now spend 14% more time cleaning and doing laundry than they did in 1961.⁸⁸

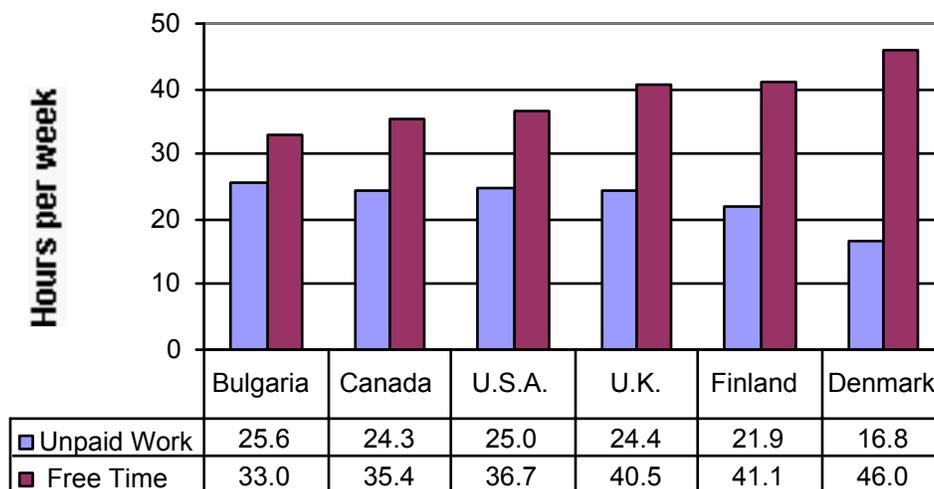
In chapter 6, it will be seen that smaller households and larger dwellings have produced diminishing economies of scale, with more rooms to clean and fewer household members to share the tasks. To some extent the increase in living space per person has prevented a reduction in housecleaning hours. In addition, meal preparation for additional household members may not take significantly longer than for smaller numbers. The declining productivity of household production may eventually spur a search for more efficient models of organization for the household economy.

Cross-national time use studies show that residents of some countries spend a lot less time on domestic chores than do Canadians. The Danes, for example, spend seven and a half hours less per week on housework than Canadians and therefore have more than an hour extra of free time per day (Chart 4.5).⁸⁹

⁸⁸ Statistics Canada, *Households’ Unpaid Work*, pages 48, 49.

⁸⁹ Harvey, Andrew, “Canadian Time-Use in a Cross-National Perspective”, *Statistics in Transition*, November 1995, vo. 2, no. 4, page 603.

Chart 4.5: Average Weekly Hours, Unpaid Household Work and Free Time: Population aged 20-59, Selected Countries



Source: Harvey, Andrew, “Canadian Time Use in a Cross-National Perspective”, *Statistics in Transition*, November, 1995, volume 2, no. 4, pages 595-610. See Table 3, page 603.

More and more Danes have opted for more efficient “co-housing” living arrangements, in which 15 or 20 families own or rent smaller dwellings, but share a “common house” with many facilities, in which they often eat meals together, provide child-care and socialize. Their own smaller residences are easier to clean, and the shared facilities reduce individual household capital expenses and produce greater economies of scale. Such models may be worth studying if we are to reduce the burden of domestic chores; break the cycle of overwork and time stress; increase free time; and enhance the quality of life and sense of community.⁹⁰

Shared and efficient use of household capital and housework time is also more likely in apartments, condominiums, cooperative housing, and townhouses designed with communal facilities, such as common laundries, gardens, playrooms and child-care facilities, and TV or exercise rooms, than in single-detached dwellings.⁹¹ 69% of Nova Scotians still live in single-detached dwellings, down somewhat from 77% in 1961, but still higher than the Canadian average of 56%.⁹²

⁹⁰ McCamant, Kathryn, *Cohousing: A Contemporary Approach to Housing Ourselves*, Habitat Press, Berkeley, 1988; Fromm, Dorit, *Collaborative Communities: Cohousing, Central Living, and other Forms of Housing with Shared Facilities*, Van Nostrand Reinhold, New York, 1991. McCamant reports on the Danish model, while Fromm includes several examples of such new communities in North America which restore economies of scale by sharing household capital while at the same time building community.

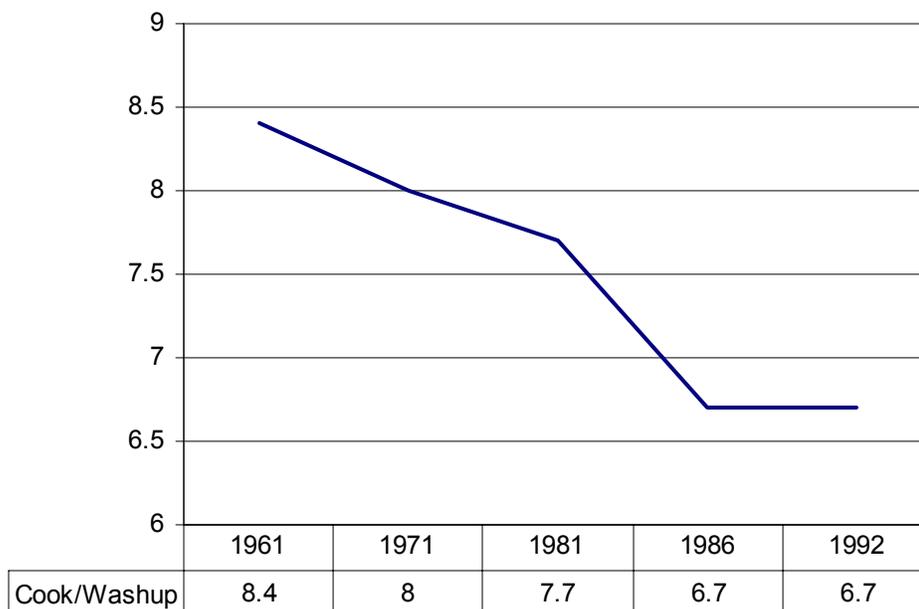
⁹¹ Until the early 1990s the cooperative housing program of the Canada Mortgage and Housing Corporation also addressed these issues of sharing household capital to save money and increase efficiency.

⁹² Dominion Bureau of Statistics, *1961 Census of Canada*, volume II, part 2: “Housing”; Statistics Canada, *Household Facilities by Income and Other Characteristics*, 1996, catalogue no. 13-218-XPB. Data were not obtained for this study on the proportion of non-single-detached dwellings that have communal laundries and other common facilities.

4.2.2 Food Service Shifts from Household to Market

As is clear from Table 4.1, there has been a steady decline in the amount of time Nova Scotians spend cooking and washing dishes. Nova Scotians now spend about an hour and 20 minutes less per week on meal preparation and cleanup than they did 30 years ago (Chart 4.6). But the evidence shows that this change is not due to labour-saving devices in the kitchen, but to eating more meals out (Chart 4.7). What Nova Scotians are not expending in unpaid labour time they are now paying for in cash. As noted, this shift is good for the GDP and is registered in the accounts as economic growth and progress.

Chart 4.6: Hours per week spent Cooking and Washing Dishes, Nova Scotia, 1961-1992



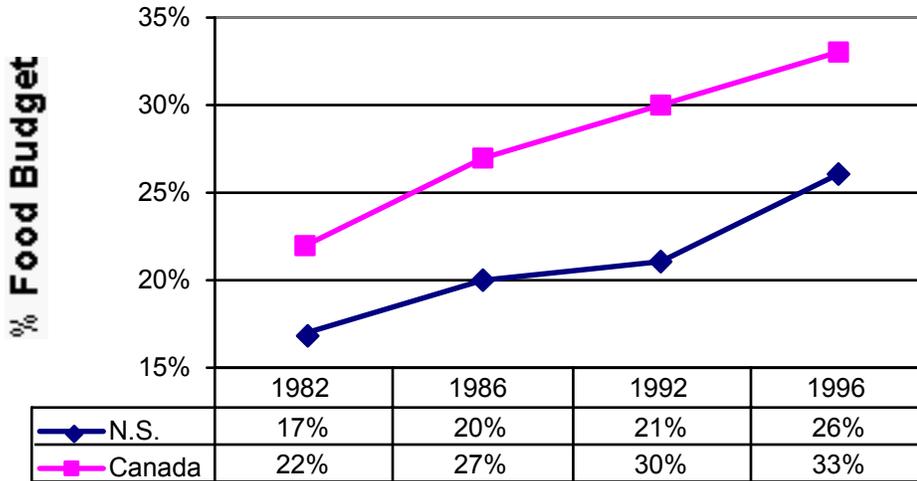
Sources: As in Table 4.1 above.

In recent years this long-term trend has continued at an accelerated pace. Nova Scotians today spend about \$28 a week, or \$1,500 a year, per household eating at restaurants and fast food take-outs. This is about a quarter of the total household food budget and 4% of total consumption expenditures in a year.

Although this percentage has been steadily increasing, Nova Scotians still eat out less than other Canadians, and spend about a third less of their food budget on restaurant food. The average Canadian household spends about \$40 per week or more than \$2,000 per year eating out, about a third of the household food budget and 5.5% of total household expenditures. It is the fourth largest expenditure item for Canadians.

After Newfoundland, Nova Scotians still have the second lowest rate of eating out in the country. Since cooking and washing dishes is the single most time-consuming household task, this helps explain why unpaid housework hours are longer in the Atlantic Canada than in the rest of the country.

Chart 4.7: Percentage of Household Food Budget Spent Eating Out at Restaurants and Take-Outs: Nova Scotia and Canada, 1982-1996



Sources: Statistics Canada, *Family Food Expenditure in Canada*, catalogue no. 62-554, and *Family Expenditure in Canada*, catalogue no. 62-555; extrapolation to 1996 based on Statistics Canada, *Restaurants, Caterers, Taverns Receipts*, no. M52, Nova Scotia.

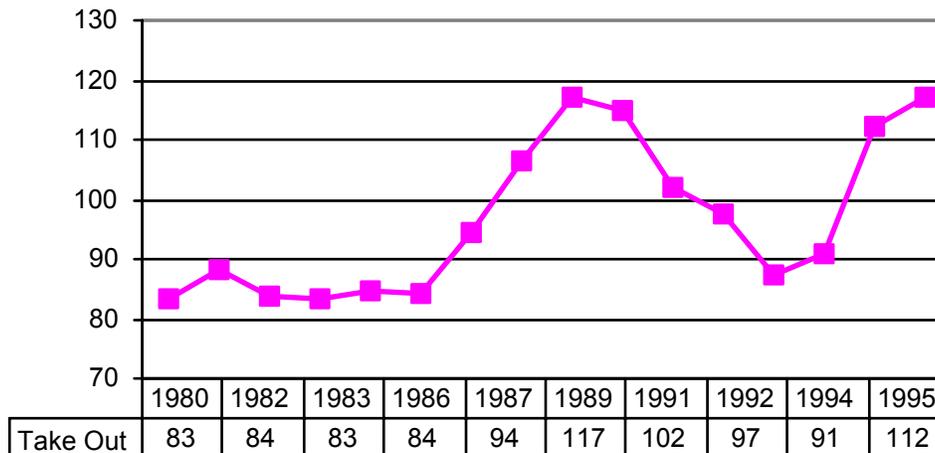
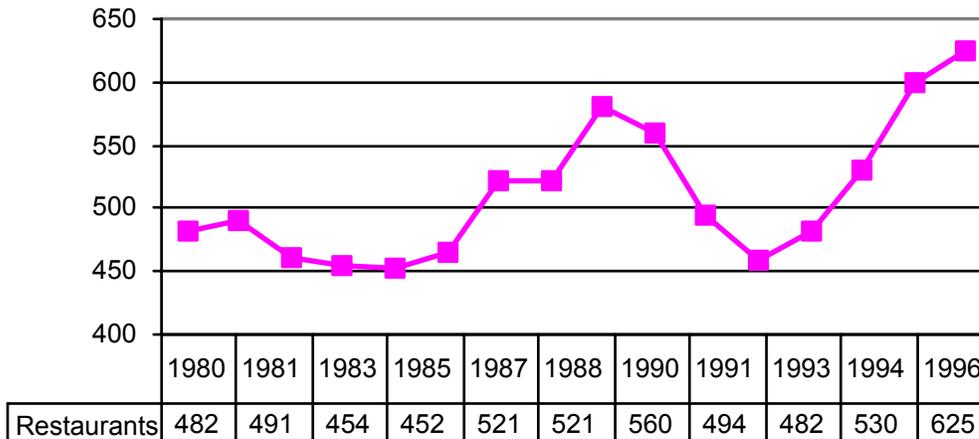
Eating at restaurants is a luxury, and this is why there is still less of it in this part of Canada. The richest 20% of Canadians spend nearly 40% of their food budget on restaurants, about twice the proportion of the poorest 20% of the population.

Because of this direct link to income, eating out is closely tied to the business cycle and relatively sensitive to prices.⁹³ As the charts below show, expenditures on restaurant and take-out food in Nova Scotia fell during the recessions of the early 1980s and 1990s (Chart 4.8). For this reason, too, as chart 4.6 above shows, the steady decline in household cooking and cleanup time leveled off during the early 1990s, as the household economy absorbed some of the impact of the recession.

Because of the counter-cyclical relationship between the household and market economies, the decline in production registered by the GDP during the recession probably was exaggerated, just as the growth spurt of the latter 1990s has been.

⁹³ Statistics Canada, *Canadian Economic Observer*, February, 1995, catalogue no. 11-010.

Chart 4.8: Restaurant and Take-Out Receipts, Nova Scotia, (1996\$ millions)



Sources: Statistics Canada, *Restaurants, Caterers, Taverns Receipts*, no. M52, Nova Scotia, annual reports, adjusted to constant 1996\$, using the Nova Scotia Consumer Price Index for “Food Purchased from Restaurants”, Statistics Canada, CANSIM database 7466, P 803032. Note: This source does not differentiate growth due to the tourist trade and other business expenditures from family consumption. Part of the growth, however, is clearly due to the increased proportion of the family food budget spent in restaurants, as described in Chart 4.7, which is based on the Family Expenditure Surveys. The charts in 4.8 are of interest primarily in indicating the sensitivity of restaurant food consumption to the business cycle.

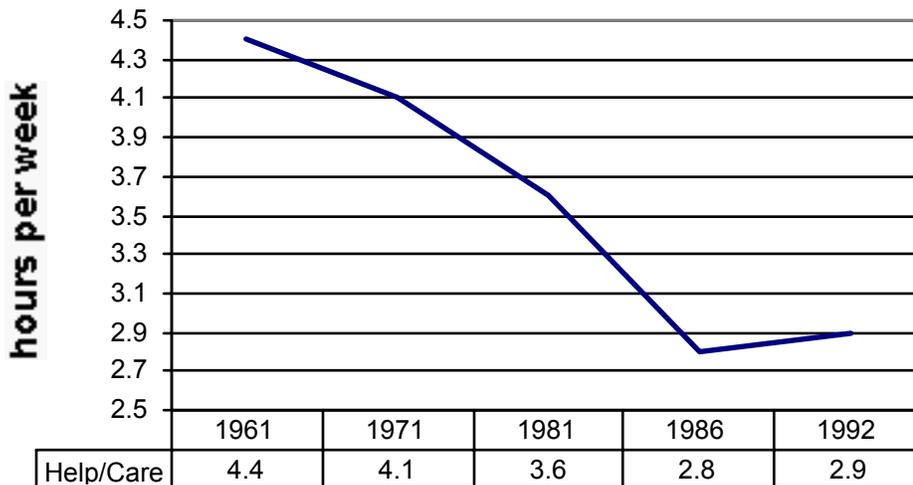
Every year since 1993, Nova Scotia has registered a more rapid increase in restaurant revenues than the rest of Canada. While this is partly attributable to the tourist trade, the particularly rapid recovery of the fast-food take-out industry in recent years indicates that Nova Scotians too are spending more money eating out. While the GDP registers this market expansion as growth, it is largely a shift in production from the household economy to the market sector rather than an actual expansion of productive output.

Harvey’s output analysis of the Canadian household economy indicates another possible reason for eating out more. It does not take twice as long to cook for six people as it does for three, so that declining household size has not produced a commensurate decrease in meal preparation time. The evidence suggests that “household meal production is an inefficient process relative to meal preparation in the market. Consequently, meal preparation consumes a volume of time incommensurate with the value it produces.”⁹⁴ Studies in Sweden and Denmark, as well as co-housing experiments in North America, show that cooperative kitchens and shared dining rooms are another way to produce greater efficiency in household food preparation.⁹⁵

4.2.3 Trends in Child-Care

The most dramatic change in the composition of household production is the 35% decline in time devoted to unpaid help and care (Table 4.1 and Chart 4.9). This category is mostly child-care, but also includes care of elderly, sick and disabled adults within households. The fall is largely due to lower birth rates, an absolute decline in the number of children per household, and a 26% drop in the number of women with children. As mentioned earlier, a full life cycle analysis would recognize that part of the decline is also due to the baby boom generation moving beyond its peak child-bearing years.

Chart 4.9: Weekly Hours of Household Help and Care*, Nova Scotia, 1961-1992



Sources: Statistics Canada, *Initial Data Release*, Table 1 for Nova Scotia hours; Statistics Canada, *Households’ Unpaid Work*, for provincial trend imputations from national trends.

* The definition “help and care” consists mainly of primary child-care, but it also includes help and care to elderly, sick or disabled adults within the household. The assumption here is that this latter category has remained constant and the trend reflects changes in primary child-care hours.

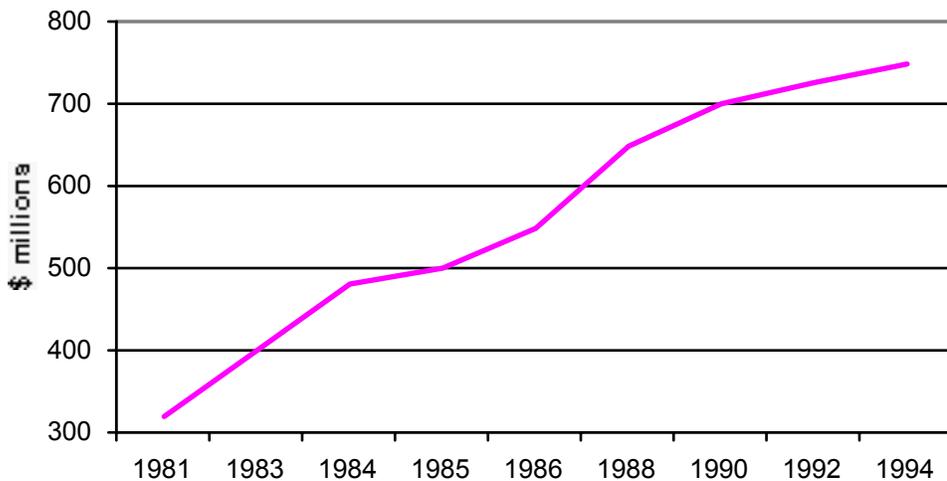
⁹⁴ Harvey, Andrew, and Arun K. Mukhopadhyay, “The Role of Time Use Studies in Measuring Household Outputs”, *Conference of the International Association for Research on Income and Wealth*, Lillhammer, Norway, August, 1996.

⁹⁵ See Chapter 6 below, and references to studies by McCamant (1988), Michaelson (1990), and Fromm (1991).

Census trends since 1961 indicate that about three-quarters of the 35% decline in household help and care are due to demographic changes, in particular to the 27% drop in the number of children in the Nova Scotia population.⁹⁶ However, the remaining 25% probably reflects a shift from unpaid parenting within the household economy to paid child-care in the market sector.

The child-care industry has been one of the fastest growing sectors of the Canadian economy, gaining an average of about 8% a year from 1981 to 1994 (Charts 4.10 and 4.11). In fact the only industries that have grown faster in Canada are computers; audio and visual electronics; and trucks and vans. Child-care spending appears totally unaffected by the business cycle, and accounts for about 1% of total personal spending in the country.⁹⁷

Chart 4.10: Child-Care is the Fourth Fastest Growing Industry in Canada

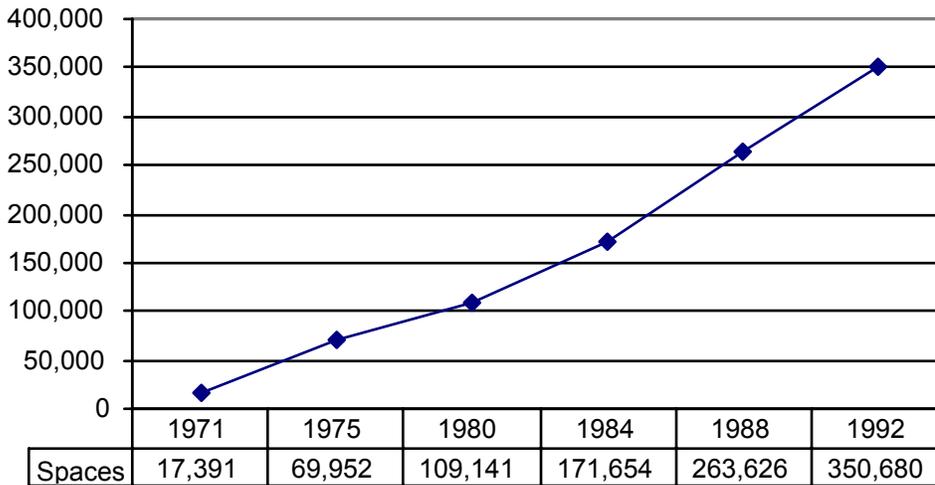


Source: Statistics Canada, *Canadian Economic Observer*, February 1995, catalogue 11-010.

⁹⁶ Statistics Canada, *Census of Canada, Annual Demographic Statistics*, and *CANSIM database*, on population of 0-4, 5-9, and 10-14 age cohorts in Nova Scotia.

⁹⁷ Statistics Canada, *Canadian Economic Observer*, February, 1995, catalogue no.11-010. Note that these figures, and those in chart 4.10, reflect direct spending on child-care and are not controlled for the declining birth rate. It would be very interesting to compare average child-care expenditures per female of child-bearing age over time, an estimation not undertaken in this study.

Chart 4.11: Licensed Day Care Spaces in Canada, 1971-1992



Source: Statistics Canada, *Women in Canada*, 3rd ed., catalogue no. 89-503E, from Health and Welfare Canada, *Status of Day Care in Canada*.

Families that actually use child-care spend about 4% of their income on it. Families with infants and toddlers age 5 and under spend more than 5% of their income on child-care; and single mothers with pre-school-age children spend 12%. According to Statistics Canada, children in families with high incomes are more likely to be left either at a day-care or with a sitter than are children with lower incomes, and for longer periods.⁹⁸

In the last 20 years Nova Scotians have doubled the amount of money they spend on paid child-care to more than \$100 million a year. Families that use child-care in the province spend an average of \$1,700 per year for day-care, sitters and other forms of child care.

It is significant that in both the industries that have seen a major shift from household production to the market economy – child-care and eating out – prices have increased about 10% faster than for most other goods and services. From 1986 to 1997, the overall consumer price index in the province rose by 35% and groceries by 33%, while the price of restaurant food increased by 44% and the cost of child-care by 48% (Chart 4.12).⁹⁹

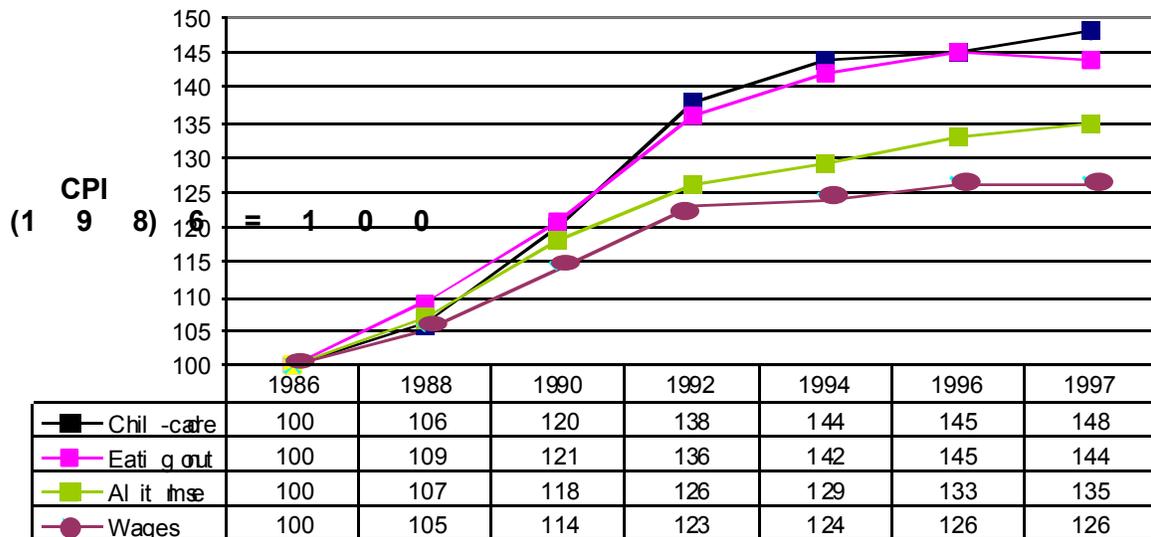
During the same period, wages rose only 26%, so that, when inflation is taken into account, real wages actually fell by 6.6% in Nova Scotia.¹⁰⁰ This means, in effect, that Nova Scotians have to work longer hours to pay for the services that have shifted out of the household economy than they did 10 years ago. Conversely, they can go deeper into debt.

⁹⁸ Statistics Canada, *Canadian Social Trends*, Autumn 1991, catalogue no. 11-008-XPE, page 14.

⁹⁹ Statistics Canada, *CANSIM Database*, tables 7443-P703000, and 7466-P803032 and P803050.

¹⁰⁰ Statistics Canada, *Employment, Earnings and Hours*, catalogue no. 72-002; CANSIM database 1453, D 703360; Statistics Canada, *The Consumer Price Index*, catalogue no. 62-001-XPB; Statistics Canada, *Consumer Prices and Price Indexes*, catalogue no. 62-010-XPB; and Statistics Canada, *Canadian Economic Observer*, catalogue no. 11-210-XPB, 1996/1997.

**Chart 4.12 Paying More for Shifts from Household to Market Economy:
Consumer Price Indices and Wage Inflation, Nova Scotia, 1986-1997**



Sources: Statistics Canada. *The Consumer Price Index*, catalogue no. 62-001-XPB; and CANSIM database, 7466, P803032, 803050, and 803000; and CANSIM 1453, D703360: Average Weekly Wages and Salaries, Nova Scotia: Industrial Composite.

Many workers are clearly trapped in a vicious circle here. The more time they spend selling their labour in the market place, the less time they have to cook and take care of their children, and the more dependent they are on substituting market services for activities previously carried on in the household. At the same time the prices of those market services are rising more rapidly than their income, so that they have to work longer hours to pay for these services, which in turn makes the workers even more dependent on restaurant and take-out food and paid child-care.

Ironically, the GDP counts all elements of this self-defeating circle as economic growth and “progress,” since additional work hours, more spending, and greater dependence on paid market services like fast food and day-care all add to the GDP and to economic output. In conventional terms, all this extra market activity makes our economy “stronger” and “more robust.” Conventional market statistics alone create the illusion that growth is “limitless,” since time, stress, efficient resource use, and quality of life are not factored into the equation.

Introducing even a single limiting factor like time use, with the inherent natural boundaries of a 24-hour day, cuts through this illusion and begins to show a way out of what Juliet Schor calls the “squirrel cage” of working and spending ever more.¹⁰¹ For this reason, a simple step like measuring and valuing unpaid household work places market-

¹⁰¹ Schor, Juliet, *The Overworked American: The Unexpected Decline of Leisure*, HarperCollins, USA, 1991, Chapters 5 and 6, in which she analyzes the pitfalls of the “work-and-spend cycle” and suggests ways of breaking the pattern.

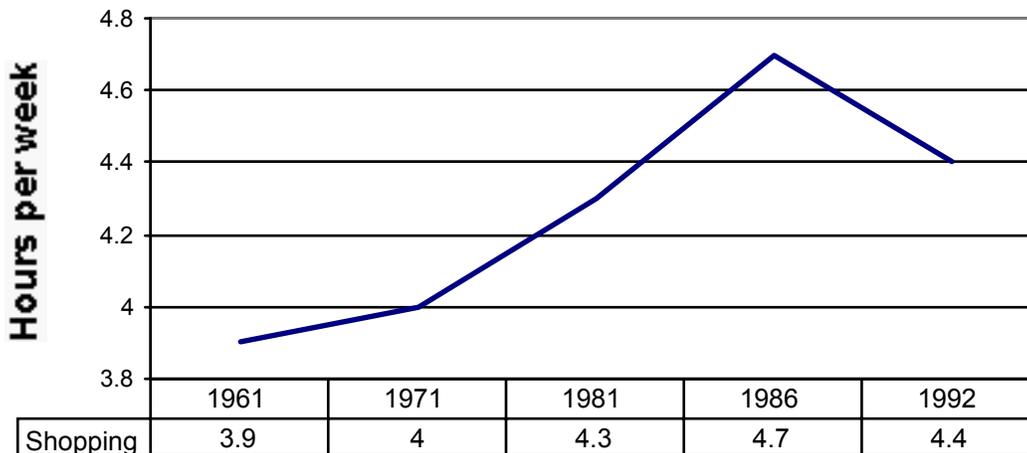
based economic activity in a much larger perspective and provides a more accurate description of the total economic world that begins to correspond to people’s actual experience of the economy.

4.2.4 Trends in Shopping

Of all activities within the household economy, the one that has seen the sharpest growth is shopping. Nova Scotians now spend about four and a half hours a week shopping for groceries and other goods and services, 25% more time than they spent 30 years ago (Table 4.1 and Chart 4.13).¹⁰² Nova Scotian women spend about 2 hours a week more than men shopping.

Despite this growth, Nova Scotians still shop about 50 minutes less per week than the average Canadian who shops for five and a quarter hours per week. The most avid shoppers in the country are British Columbians, who spend six hours a week shopping.¹⁰³ On an average day one in three Canadians goes into a store to buy food or clothing.

Chart 4.13: Time Spent Shopping in Nova Scotia, 1961-1992



Sources: As in Table 4.1 above.

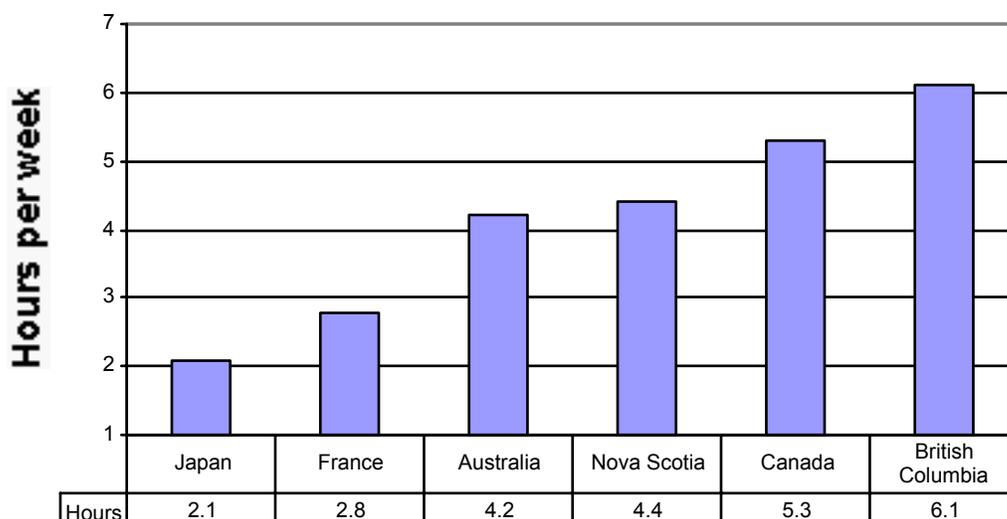
NOTE: The sharp rise in 1986 is probably due to the fact the 1986 time use survey was conducted fairly close to Christmas. Although Statistics Canada adjusted the data to take this into account, it probably only partially corrected the 1986 blip (Chris Jackson, Statistics Canada, personal communication, 14 September, 1998.) Without this anomaly the graph may show a more steady increase from 1961 to 1992. The recession of the early 1990s may also have had an effect on these trends.

¹⁰² Sources as in Table 4.1 above.

¹⁰³ Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, Table 1: Provincial Tables.

Canadians in general spend much more time shopping than residents of most other countries. Australians spend about an hour a week less shopping, the French and the Finns two and a half hours less, and the Japanese and Hungarians three hours less (Chart 4.14).¹⁰⁴

Chart 4.14: Hours per Week per Person Shopping, Selected Countries and Provinces



Sources: Statistics Canada, *Initial Data Release*, provincial tables; Andrew Harvey et. al., *Where Does Time Go?*, Statistics Canada, catalogue 11-612E, No. 4, page 56.

4.3 Unpaid Work Hours in the 1996 Census

For the first time the 1996 census long form asked specific questions about unpaid work in addition to the usual questions about employment and income. Although the data are not comparable with the time use data in Statistics Canada's General Social Surveys, partly because they do not distinguish primary from secondary child-care, they are useful in showing the very unequal distribution of unpaid housework and child-care.

56,500 Nova Scotians reported spending 60 or more hours a week on unpaid child-care and 45,660 (84% of whom are women) reported spending 60 or more hours on unpaid housework. 32,000 of these Nova Scotians were not in the labour force or were unemployed, but another 7,300 also worked 30 or more hours a week for pay, producing a work week in excess of 90 hours.

Another 96,400 Nova Scotians, of whom 76% are women, reported spending between 30 and 59 hours a week on unpaid housework. Of these, 58,700 or 61% were not in the labour force or were unemployed, but 23,350 also worked 30 or more hours a week for

¹⁰⁴ Harvey, Andrew, Katherine Marshall and Judith Frederick, *Where Does Time Go?*, Statistics Canada, General Social Survey Analysis Series, catalogue no.11-612E, page 56.

pay. The census data clearly show that there are significant numbers of Nova Scotians who are severely overworked and time-stressed.

4.4 Rural / Urban Differences

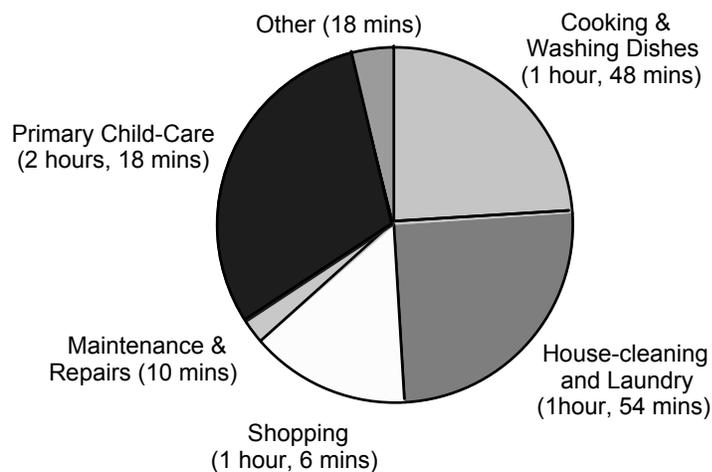
Statistics Canada's time use surveys indicate that there are no significant differences in the time spent on domestic chores and unpaid work between large cities with more than 100,000 people and towns with a population between 10,000 and 100,000. In both cases, individuals aged 15 and over perform an average of three hours a day of unpaid work. Residents of rural areas with a population of less than 10,000 do about 25 minutes more unpaid work per day than urban dwellers and spend correspondingly less time on paid work. There are no major differences in total work time for rural and urban dwellers.¹⁰⁵

¹⁰⁵ Harvey, Andrew, Katherine Marshall, Judith Frederick, *Where Does Time Go?*, Statistics Canada, catalogue no. 11-612E, no. 4, table 1, page 31, table 3, page 42, and table 6, page 54.

5. Women’s Share of Unpaid Household Work

Needless to say, the averages for total housework conceal major differences among population groups. As Chart 5.1 demonstrates, some groups work far in excess of the 3.4-hour daily average for unpaid household work. The heaviest household work burden is carried by non-employed mothers, 7.5 hours a day spread over a seven-day week, or 52 and a half hours per week, based on the 1992 General Social Survey. As noted earlier, this is almost identical to the 7 hours a day reported in the 1986 General Social Survey and has hardly changed since the beginning of the century.¹⁰⁶

Chart 5.1: Average Time Spent on Unpaid Household Work by Non-Employed Married Mothers, Canada: Seven and a Half Hours a Day



Source: Judith Frederick, *As Time Goes By...Time Use of Canadians*, catalogue no. 89-544E, Table 2.5, page 25 for married mothers age 25-44, based on the 1992 General Social Survey. Statistics Canada, *Women in the Workplace*, catalogue no. 71-534, page 55, gives the time division as 3.6 hours a day of domestic chores, 3 hours of primary child-care and 1.1 hours of shopping for goods and services for a total of 7.7 hours a day or 54 hours a week, based on the 1986 General Social Survey.

Compared with men, Nova Scotian women spend about twice as much time on total unpaid household work, three times as long cooking and washing dishes, and nearly seven times as much time cleaning house and doing laundry (Charts 5.2 and 5.3). The only area of housework where men consistently do more work than women is in maintenance and repair, to which men devote slightly more than three hours per week on average.¹⁰⁷

¹⁰⁶ 1992 data from Frederick, Judith, *As Time Goes By...*, page 25. 1986 data from Statistics Canada, *Women in the Workplace*, catalogue no. 71-534, page 55, which gives the breakdown as 3.6 hours domestic work, 3 hours primary child-care, and 1.1 hours shopping.

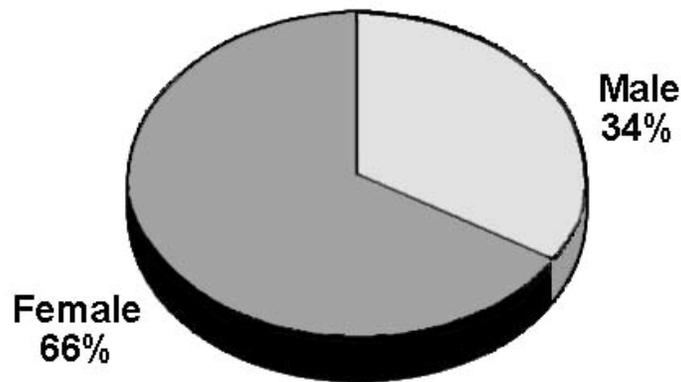
¹⁰⁷ Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, Table 1: Nova Scotia.

Chart 5.2: Female / Male Share of Domestic Chores, Nova Scotia, Average Hours and Minutes per Day



Source: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, Table 1; Statistics Canada, *Households Unpaid Work*, page 72.

Chart 5.3: Total Unpaid Household Work (including child care), Nova Scotia



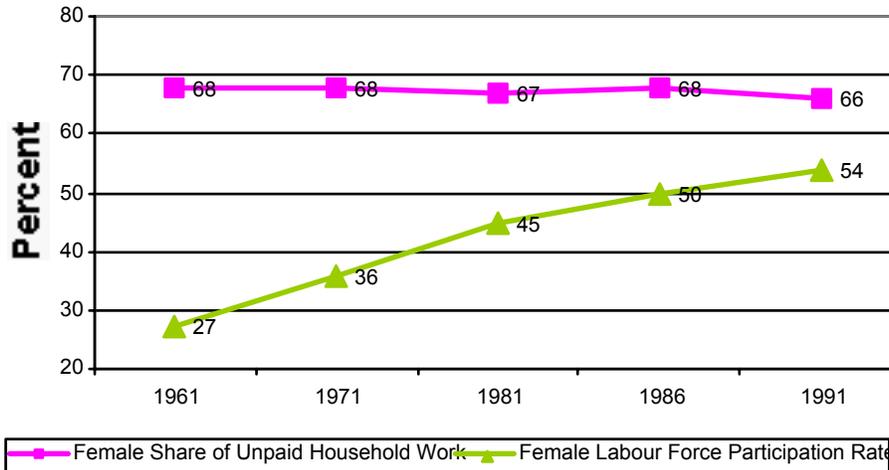
Source: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, Table 1; Statistics Canada, *Households Unpaid Work*, page 72.

Despite a doubling of the female labour force participation rate, women’s share of unpaid housework has hardly changed in nearly 40 years.¹⁰⁸ In 1961 Nova Scotian women were

¹⁰⁸ One minor factor that also contributes to keeping women’s share of hours up is that their share of the population aged 15 and over in Nova Scotia has increased from 50% in 1971 to 51.3% in 1997 (Chris Jackson, Statistics Canada, personal communication, 14 September, 1998).

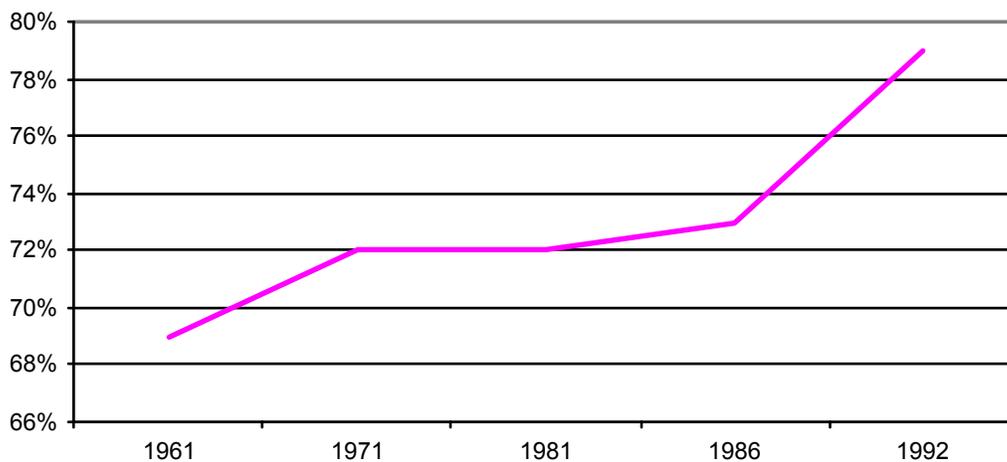
doing 67.6% of unpaid work, and this actually rose to 68.4% in 1986 before dropping slightly to 65.5% in 1992 (Chart 5.4). Women’s share of housecleaning has actually increased steadily since 1961 (Chart 5.5). The very slight decrease in women’s overall share of housework in recent years likely reflects the 5% decline in male labour force participation in Nova Scotia since 1989.¹⁰⁹

Chart 5.4: Women’s Share of Household Work in Nova Scotia Has Remained Almost Unchanged Despite Dramatic Increases in Paid Work



Sources: Statistics Canada, *Households’ Unpaid Work*; Statistics Canada, *Historical Labour Force Survey*; Statistics Canada, *CANSIM* database; Historical extrapolations, 1961-1975, from Statistics Canada, *Charting Canadian Incomes: 1951-1981*, catalogue no. 13-581E, pages 10-11; Statistics Canada, *Women in Canada*, 3rd edition, catalogue no. 89-503E, page 88; Statistics Canada, *Women in the Workplace*, 2nd edition, catalogue no. 71-543E, page 10.

Chart 5.5: Women’s Share of Housecleaning is Increasing in Canada



Source: Statistics Canada, *Households’ Unpaid Work*, page 49

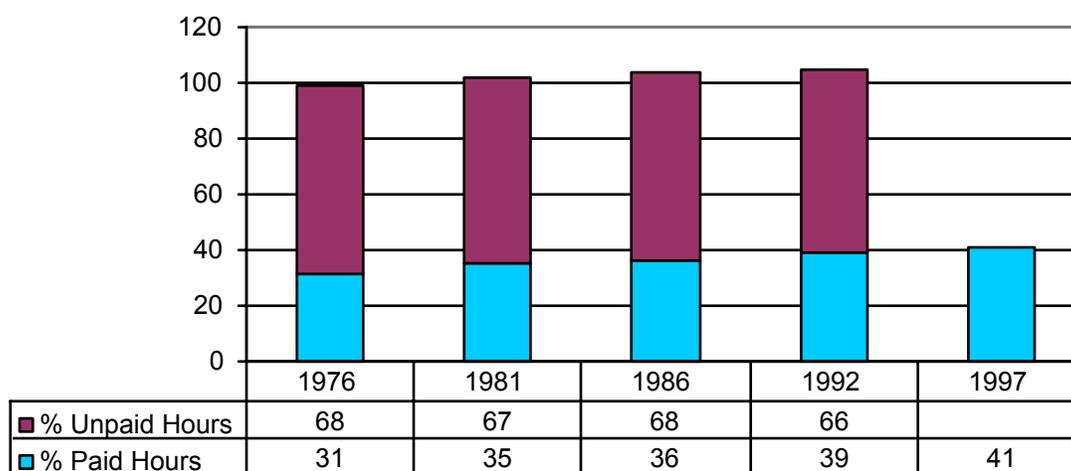
¹⁰⁹ Statistics Canada, *Households’ Unpaid Work*, pages 49 and 72.

On average, Nova Scotian women spend about 2 hours more per day than men performing unpaid household work. Within dual-earner families, full-time employed mothers spend more than an hour and a half more per day on unpaid household work, including primary child-care, than full-time employed fathers.¹¹⁰

Full-time hours can vary widely and may include overtime work. According to Statistics Canada’s *Labour Force Annual Averages*, usual full-time hours are 44.3 for men and 39.9 for women.¹¹¹ Averaged over a seven-day week, this means that full-time employed mothers still put in 47 minutes more total work time per day than full-time employed fathers, even when the housework figures are adjusted to account for the extra paid hours of fathers.

Overall, women’s share of paid work hours has been increasing at a much faster rate than their share of unpaid work hours has been declining (Chart 5.6). Paradoxically, while the dramatic increase in female labour force participation has often been welcomed as a sign of women’s growing freedom, the continuing inequitable distribution of housework means that women have experienced an absolute decline in their free time.¹¹²

Chart 5.6: Women’s Share of Paid and Unpaid Work Hours, Nova Scotia



Source: Statistics Canada, *Households’ Unpaid Work*; Statistics Canada, *Historical Labour Force Survey*.

NOTE: 1976 unpaid hours are based on 1971 hours; unpaid hours are not available for 1997, as Statistics Canada’s time use surveys are conducted once every six years and the results of the 1998 survey will be released in 1999.

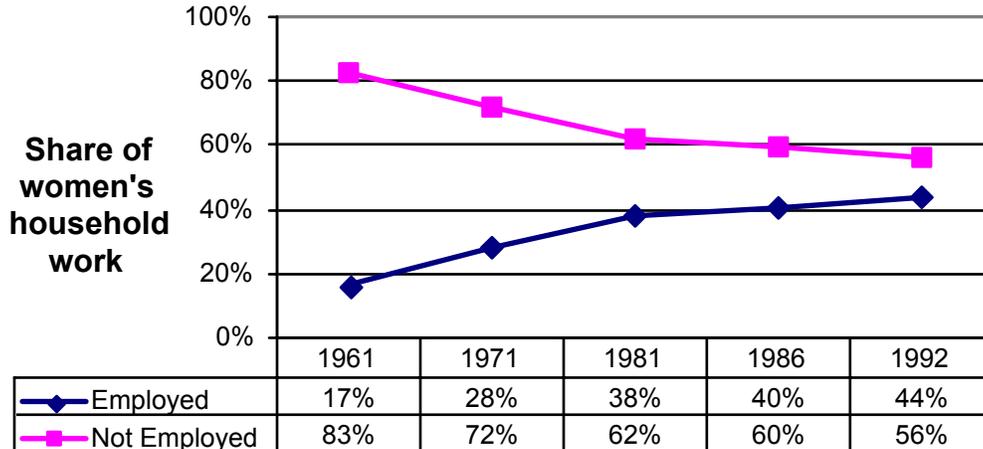
¹¹⁰ Judith Frederick, *As Time Goes By...Time Use of Canadians*, Statistics Canada, catalogue no. 89-544E, page 25, referring to parents aged 25-44. The 1986 General Social Survey also found that employed women spent an average of 3.2 hours per day on unpaid household work compared with 1.8 hours for employed men: Statistics Canada, *Women in the Workplace*, catalogue no. 71-534, page 53.

¹¹¹ Statistics Canada, *Labour Force Annual Averages, 1996*, table 22, page B-51, catalogue no. 71-220-XPB.

¹¹² Total work hours and the valuation of leisure time will be examined in module 4 of the Genuine Progress Index after consideration of trends in paid work hours in module 3.

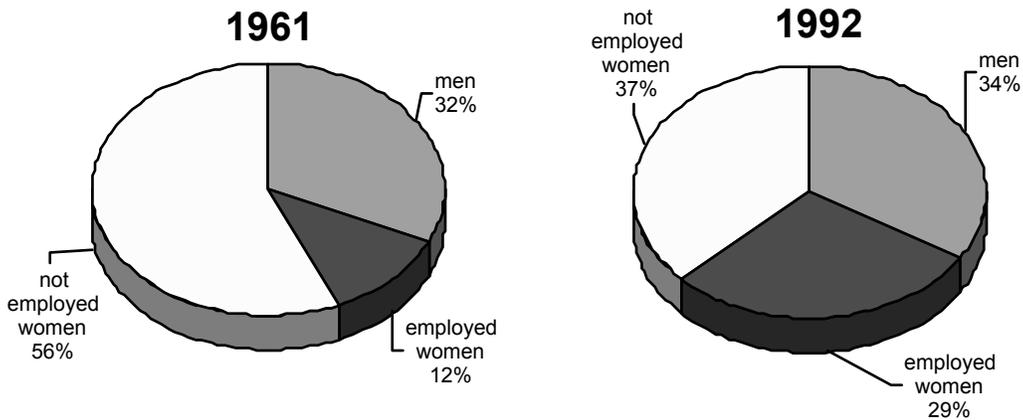
While non-employed women still bear most of the female household burden throughout the country, the share carried by employed women has been steadily growing (Charts 5.7 and 5.8).

Chart 5.7: Employed and Non-Employed Women’s Share of Female Household Work, Canada, 1961-1992



Source: Statistics Canada, *Households’ Unpaid Work*, Table C.1

Chart 5.8: Employed Women’s Growing Share of Total Household Work Canada, 1961 – 1992



Source: Statistics Canada, *Households’ Unpaid Work*, Table C.1

5.1 Child-Care and Housework Hours of Working Mothers

There are also major differences between working mothers and those not employed in the paid work force. Full-time employed mothers spend an average of three hours less a day, or 20 hours less a week, on unpaid household work than non-employed mothers (Table 5.1).

Table 5.1: Average Time Spent on Unpaid Household Work by Parents aged 25-44, Canada

Hours Per Day	MARRIED				SINGLE	
	Fathers Employed Full-Time	Mothers Employed Full-Time	Mothers Not Employed	Mothers Employed Part-Time	Mothers Employed Full-Time	Mothers Not Employed
Cooking	0.4	1.2	1.8	1.7	0.8	1.6
Housekeeping	0.2	1.0	1.9	1.6	0.7	1.9
Repairs	0.4	-	0.1	0.1	0.2	0.0
Other	0.5	0.3	0.3	0.3	0.3	0.3
Shopping	0.6	0.8	1.1	0.9	1.0	0.7
Child Care	0.9	1.3	2.3	2.0	1.0	2.5
Total	2.9	4.6	7.5	6.6	4.1	7.1

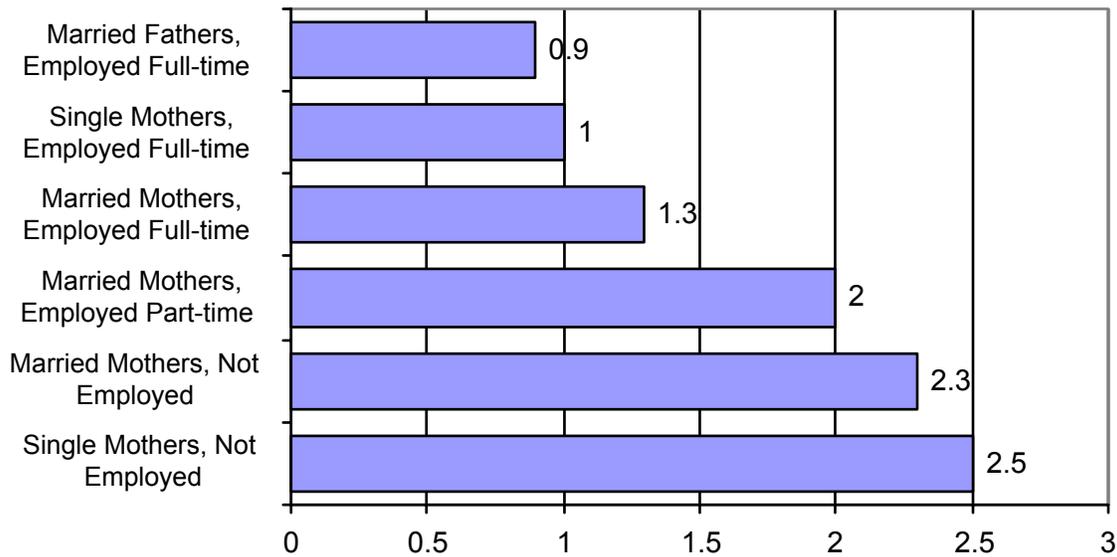
Source: Judith Frederick, *As Time Goes By...Time Use of Canadians*, catalogue no. 89-544E, page 25.

In particular, married mothers spend a full hour less per day directly relating to their children if they are working full-time. Employed married mothers with children under age 5 spend an average of one hour and 24 minutes less per day caring for their infants and toddlers than those who are not employed. Averaged over a seven day week, employed mothers have only an hour and 36 minutes per day on average directly engaged with their under-5s compared to three hours per day for those not employed.

Lone-parent mothers working full-time also spend an hour and a half less per day caring for their children than those who are not employed. In fact, full-time employed lone parent mothers spend only an hour a day total, or 7 hours a week, on primary child-care (Chart 5.9).¹¹³

¹¹³ Data from the 1992 and 1986 General Social Survey time use surveys: Frederick, op. cit., page 25; Statistics Canada, *Women in the Workplace*, page 55

Chart 5.9: Primary Child Care Time by Employed and Not Employed Parents



Source: Judith Frederick, *As Time Goes By...*, Statistics Canada, catalogue no. 89-544E, page 25
 Note: As explained in section 4 above, “direct parenting” refers to “primary child-care” time in which parents are feeding, dressing or washing children, teaching, reading to or playing with children, providing medical and physical care, and otherwise exclusively engaged with children. It does not include time spent looking after children while performing other activities.

Throughout Canada there has been a very rapid growth in the employment of women with children. In 1991, 63% of mothers were employed for pay compared with 50% 10 years earlier. And there has been a particularly dramatic growth in the employment of women with pre-school-aged children. 54% of mothers with children aged less than 3, 60% of those with children aged 3-5, and 69% of those with children 6 and over are employed.¹¹⁴ Labour force participation rates, which include mothers actively looking for work, are higher (Charts 5.10 and 5.11).

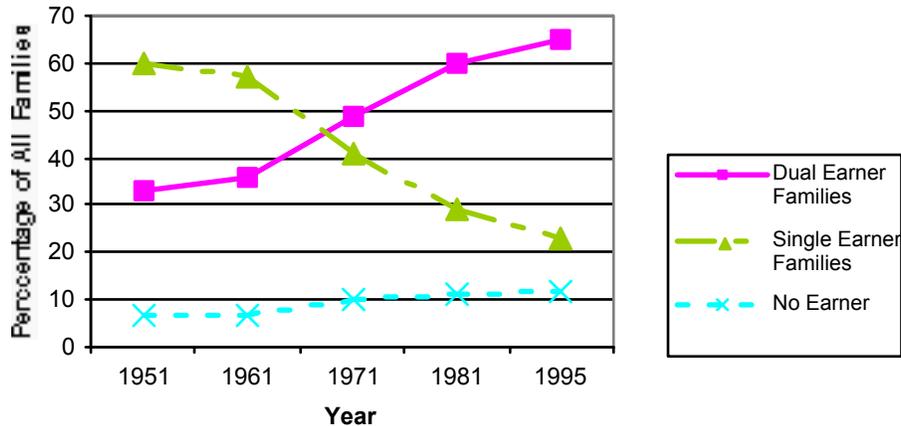
Real wages in Nova Scotia have been on a downward slide for 20 years, and personal disposable income per capita has been declining steadily in the province since 1988, even while household spending has continued to rise.¹¹⁵ This helps explain the perceived need for two incomes per household and for both spouses to be employed, in order to maintain household income at steady levels. Higher rates of female labour force participation have certainly helped to challenge the traditional gender division of labour in the market economy, but they are also clearly a function of increased household spending and perceived economic necessity.

¹¹⁴ Statistics Canada, *Women in the Workplace*, page 11.

¹¹⁵ See Chapter 6 for details, particularly charts 6.2 and 6.3

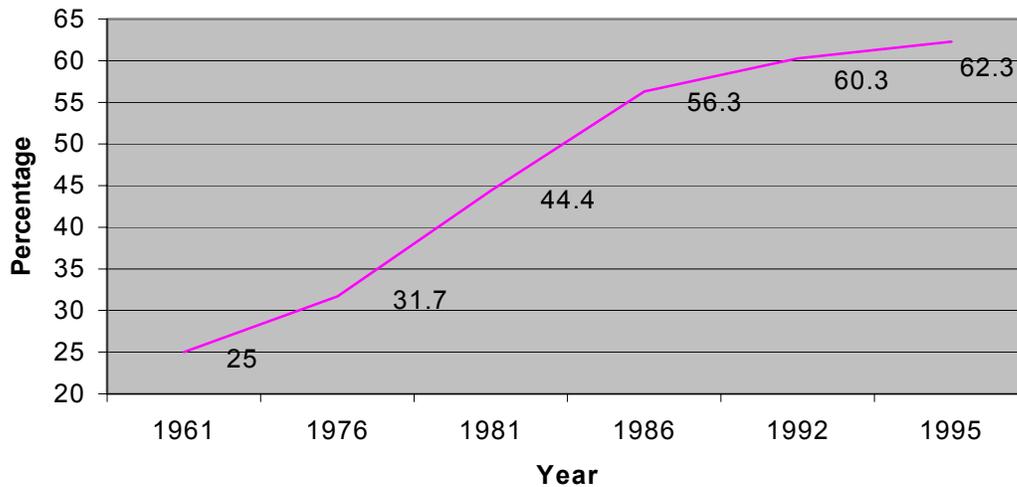
Working Mothers in Canada

Chart 5.10: Dual-Earner Families as Percent of All Families in Canada



Sources: Statistics Canada, *Characteristics of Dual-Earner Families*, catalogue no. 13-215-XPB; Statistics Canada, *Charting Canadian Incomes: 1951-1981*, catalogue no. 13-581E; Statistics Canada, *Women in Canada*, 3rd edition, catalogue no. 89-503E

Chart 5.11: Labour Force Participation Rate of Mothers with Infants Aged 0-2, Canada, 1961-1995



Source: Statistics Canada, *Canadian National Child-Care Study*, catalogues no.89-A-90, volume II, 89-527E, 89-529E and 89-536-XPE; Statistics Canada, *Labour Force Annual Averages*, catalogue 71-220; historical extrapolations for 1961-1975 from Statistics Canada, *Charting Canadian Incomes: 1951-1981*, on married women in the labour force and dual-earner families, and Statistics Canada, *Caring Communities: Proceedings of the Symposium on Social Supports*, catalogue no. 89-514E, page 113.

The numbers clearly have a human and psychological side. On the one hand, a mother's work can affect her children positively and reduce the frustration and stress of being house-bound and confined to domestic chores. On the other hand, a recent *Mail-Star* story about working mothers quotes a 28-year-old Moncton mother whose 4-year-old son sometimes pleads for her to stay home when she leaves for work in the morning. Her heart breaks as she tells him: "Mommy has to go to work to bring home the cookies." When she has to work late, she confesses feeling guilty about spending more time away from her 2 and 4-year-old children.¹¹⁶ The question the story does not ask is whether the children would prefer their mother to the cookies.

Again, it is important not to misuse the evidence to imply that child-care is a mother's sole responsibility. The child's feelings may be completely assuaged by a father's care. Alternatively, increased per capita spending on child-care and more generous employer commitments to family leave for both men and women, as is the case in Scandinavia and other European countries, may improve the quality of child-care and the ability to balance home and work responsibilities.

The issue, then, is not a choice between paid and unpaid work, but finding the appropriate balance between the two, the sharing of male and female responsibilities, and the search for flexible work arrangements for both sexes that can reduce the extreme time stress that many employed parents experience today.

Mothers in this country are clearly making a significant sacrifice both of personal time and parenting time in joining the paid work force. All these extra work hours add to the GDP and count as economic progress, as do their purchases of cookies, child-care services and household appliances.

But when they come home from work, their work day is far from over. They still do most of the housework, producing a total work day that has increased substantially in quantity over the years. That extra unpaid labour time is not registered by the GDP or in any of the other conventional accounts, nor is there any accounting of the social, psychological, health or time costs of all these extra work hours, either on parents or on children.

Full-time employed married mothers effectively put in an extra week of unpaid work averaging 33 hours and 36 minutes a week, or nearly 5 extra unpaid work hours a day seven days a week, in addition to their regular jobs. Not surprisingly, a Statistics Canada study reports that "one out of three full-time employed, married mothers suffered from extreme levels of time stress" and fully 70% "felt rushed on a daily basis".¹¹⁷

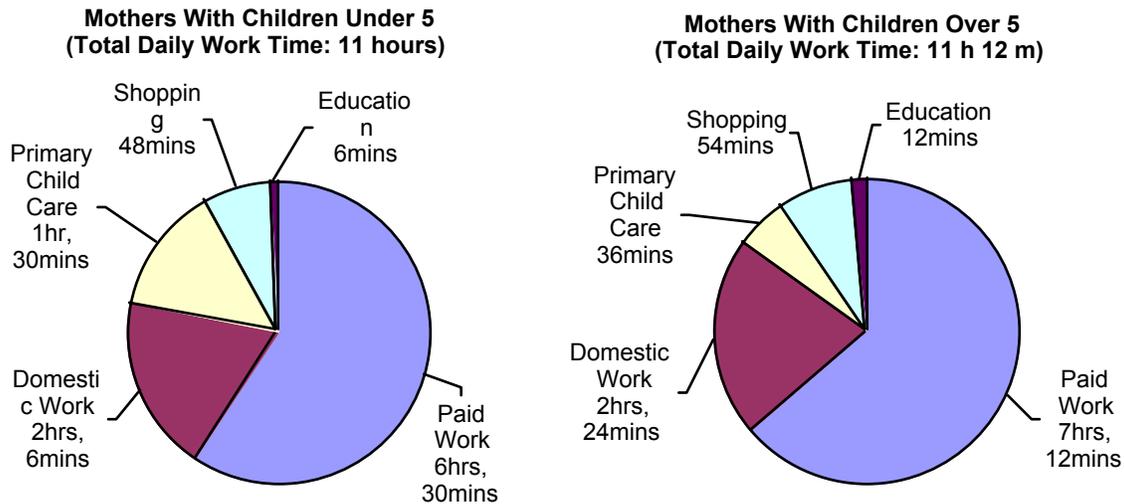
Employed mothers with young children are actively working more than 11 hours a day on weekdays (Chart 5.12). For these mothers, even weekends provide little respite. They put in an average of 7¹/₂ hours a day work on Saturdays and Sundays, including more than three hours of domestic chores, 1³/₄ hours of primary child care, plus a major Saturday

¹¹⁶ *The Mail-Star*, Halifax, Thursday, August 6, 1998, page A2

¹¹⁷ Judith Frederick, *As Time Goes By*, Statistics Canada, pages 28-31.

shopping trip. Mothers with children 5 and over spend an average of 3 hours every weekend shopping.¹¹⁸

Chart 5.12: A Day in the Life of a Working Mother
Average Weekday Work Hours, Employed Mothers, Canada



Source: Harvey, Andrew, et. al., *Where Does Time Go?*, General Social Survey Analysis Series, Statistics Canada, catalogue no. 11-612E, #4, table 19, page 117, data from 1986 GSS Time Use Survey. Note: Though these figures are daily averages, the data show that mothers actually shop an average of once every three days for 2½ hours each time.

Again, it must be emphasized that nothing in this report implies that mothers should not be working for pay, or that the “woman’s place is in the home.” That argument would be a serious misuse of this data, particularly in light of the increasingly high educational qualifications of working women. The evidence argues for a more efficient and equitable distribution of time, resources and housework responsibilities, and for adequate social supports for those working long hours without pay in the household economy.

The data also clearly point to the need for flexible workplace innovations for both men and women, job-sharing and other methods of balancing work and family responsibilities more effectively to ease the intense time pressures on working mothers and to enhance their quality of life.

In the long-term, alternative housing options, like the Danish co-housing model, which effectively ease the total time burden of housework by increasing economies of scale while at the same time strengthening community, are worthy of consideration. Such models, which are now being adopted more widely in North America, also offer efficient community child-care arrangements without separating children from the home and

¹¹⁸ Harvey, Andrew, et. al., *Where Does Time Go?*, Statistics Canada, catalogue no. 11-612E, #4, table 19, page 117.

family or de-personalizing vital child-adult relationships at early stages of development. In fact, these models, developed in Europe, may provide a modern community equivalent of the extended family that enhances rather than constrains the ability of women to pursue professional careers.¹¹⁹

What the data do indicate clearly is that our exclusive emphasis on market statistics has focussed attention on the transition to a new era of growing equality for working women, while the invisibility of unpaid household production has left unresolved the inequities of the previous era. The resulting contradictions include wage and subtle gender discrimination in the economy, costly investments in “labour-saving” household devices that have not actually saved time, inaccurate estimates of real growth, and longer working hours for women.

These contradictions have a direct impact on daily quality of life in the form of high levels of poverty for single mothers, children and unattached elderly women, rising levels of time stress, and declining levels of parental care time for young children. Robin Douthitt, for example, has demonstrated convincingly that time use considerations have a direct impact on actual poverty levels in Canada and that they should be taken into account in assessing poverty thresholds.¹²⁰

Regularly measuring and valuing unpaid production in the household economy would be an important first step in focussing attention on these vital issues, and in tracking the critical shifts between market and non-market production. This in turn more likely would produce the policy initiatives and changes in consumption patterns and workplace arrangements necessary to maintain and improve the daily quality of life in the province.

For too long, quality of life has been measured solely in terms of material acquisition. Annual time use surveys can help restore the balance by providing essential information on other more subtle elements of the quality of life which affect our actual daily experience of the economy and have a major impact on overall well-being and prosperity.

¹¹⁹ McCamant, op. cit., *Cohousing*, 1988; Fromm, op. cit., *Collaborative Communities*, 1991. For North American examples, see also the quarterly U.S. magazine *CoHousing Quarterly*. In recent years there have been lead articles in *The Globe and Mail*, *The Boston Globe*, and other newspapers on these models. Until the early 1990s, the Canada Mortgage and Housing Corporation also had a cooperative housing program.

¹²⁰ See discussion of Douthitt’s argument in chapter 2. Douthitt, Robin, “The Inclusion of Time Availability in Canadian Poverty Measures”, ISTAT, *Time Use Methodology: Toward Consensus*, Istituto Nazionale di Statistica, Roma, Italy, 1993.

6. Household Capital

6.1 Do “Labour-Saving” Devices Save Labour?

Household production, like all other production, depends on capital inputs as well as labour. But, unlike market-based production, increased capital inputs over time have not produced a commensurate increase in savings in labour time.¹²¹ Although household output measures are still in their early stages of development¹²², it is likely that productivity increases in the household sector have been negligible.

What this means, in layman’s language, is that increased quantities of household equipment have produced very little, if any, overall time saving in household work since the beginning of the century. Changes in the distribution of household work hours in the last 80 years are almost entirely attributable to the decrease in average family size and shifts to the market economy rather than to any actual saving of labour by “labour-saving” devices.¹²³ For dual-earner families, the reduction in unpaid labour has been more than offset by the increase in women’s paid work load.

If household size and labour force status are held constant, there has been **no fundamental change in housework hours in the last 100 years**, despite the introduction of indoor plumbing, electricity and gas, as well as automatic washing machines, dryers, vacuum cleaners, refrigerators, freezers, dishwashers, microwaves and other equipment. (See Chart 6.1).¹²⁴

According to Maxine Margolis, the amount of capital in American households increased more than seven-fold between 1920 and 1950.¹²⁵ By 1950 Americans were putting as much new equipment into their households as they were putting into the business

¹²¹ Dr. Andrew Harvey refers to the work of Caroline Roy, who demonstrates that household capital investments in “labour-saving” devices used primarily by men (for maintenance and repair work, for example) have indeed saved time, while those used primarily by women, with the exception of microwave ovens, have not produced a commensurate time saving. (Personal communication, September 15, 1998). See section 6.3 below for a more detailed discussion of efficiency in the household economy.

¹²² See discussion of household output methodology in chapter 3.3. Much of the work in developing output measures for the household economy has been undertaken under the auspices of the United Nations International Training and Research Institute for the Advancement of Women (INSTRAW).

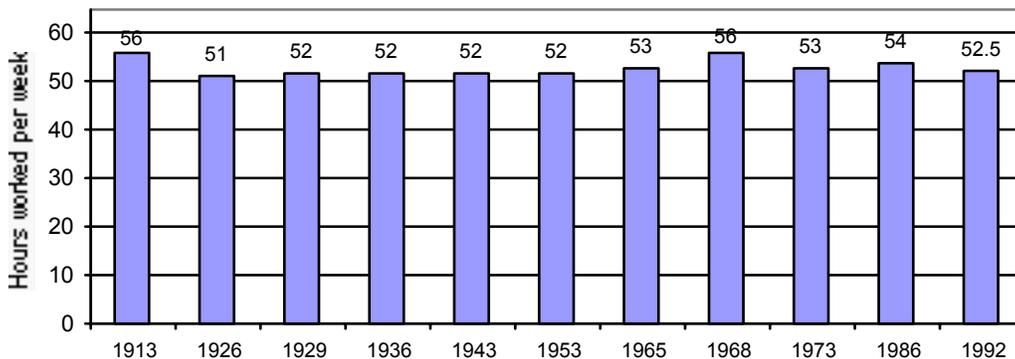
¹²³ Note that an “overall” or absolute decrease in housework hours does not necessarily signify a decrease in hours “per unit” or per household member. Declining economies of scale have meant a loss of efficiency in the household economy not only in the use of capital equipment, but also because there are fewer older children to help with housework and child-care. (See section 6.3 below).

¹²⁴ The new equipment has, of course, brought significant qualitative changes in the *nature* of housework.

¹²⁵ Margolis, Maxine, *Mothers and Such: Views of American Women and Why They Changed*, University of California Press: Berkeley, 1984, cited in Schor, Juliet, *The Overworked American: The Unexpected Decline of Leisure*, HarperCollins: USA, 1991, footnote 8, page 200.

sector.¹²⁶ From the 1950s on, household expenditures on market services in cleaning, laundry, entertainment, delivery services, and public transit fell significantly, but the fall was offset by a dramatic rise in household expenditures on kitchen and laundry appliances), as well as home entertainment and private transportation.¹²⁷

Chart 6.1: The Constancy of Housewives' Unpaid Work: 1913-1992
A Survey of American and Canadian Studies



Sources: Juliet Schor, *The Overworked American*; page 87, Clifford Cobb et al., *The Genuine Progress Indicator* page 14; Statistics Canada General Social Surveys in Andrew Harvey et al., *Where Does Time Go?*; and Judith Frederick, *As Time Goes By*. See footnote for more details.¹²⁸

NOTE: All data refer to full-time housewives.

¹²⁶ 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.

¹²⁷ Waring, *Three Masquerades*, page 100

¹²⁸ Historical studies cited by Schor (see footnotes 5 and 6, page 200) are for 1912-1953, and 1967-68:

1912-14: John Leeds, Columbia University, surveyed 60 middle-class families with employed husbands, full-time homemakers and an average of 2.75 children (Schor, p. 86), study described in Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*, Basic Books: New York, 1983, pages 154-160;

1926-27: Kneeland, Hildegaard, "Women's Economic Contribution in the Home", *The Annals of the American Academy of Political and Social Science*, 143, 232, May 1929, pages 34, 38;

1929, 1936, 1943, 1953: Surveys of the U.S. Bureau of Home Economics, compiled by Vanek, Joann, "Time Spent in Housework," *Scientific American*, 231, 5, November 1974, pages 116-120;

1965-66: Cobb et. al., *The Genuine Progress Indicator*, page 14, citing Cowan, op. cit., 1983, pages 63-64, 159;

1967-68: Large survey in Syracuse, New York, cited by Schor, page 86;

1973: Data from the University of Michigan Time-Use study of 1975-76 and the Current Population Survey: estimates by Schor based on household work of a married middle-class housewife with three children;

Early 1980s: Cobb, op. cit., page 14, citing Berk, Sarah Fenstermaker, *The Gender Factory*, Plenum: New York, 1985. This study found that women devoted 35-43 weekday hours to housework, depending on their employment, suggesting that average weekly hours are still 50-55. This estimate is not included in the chart above;

1986: Data from Statistics Canada, *General Social Survey on Time Use*, compiled from Harvey, Andrew, et. al., *Where Does Time Go?*, Statistics Canada, 1991, catalogue no. 11-612E, no. 4, for non-employed women; Statistics Canada, *Women in the Workplace*, catalogue no. 71-534, page 55, gives the break-down as 3.6 hours a day domestic work, 3 hours primary child-care, and 1.1 hours shopping for goods and services, for a total of 7.7 hours a day or 53.9 hours a week.

1992: Data from Statistics Canada, General Social Survey on Time Use, for non-employed married mothers age 25-44, reported in Frederick, Judith, *As Time Goes By*, Statistics Canada, 1995, catalogue no. 89-544E, page 25.

While increased capital investments in household production have not reduced the total time spent on household work, they clearly have brought significant changes in the nature of housework. Economist Tom Pinfeld points out that unlike trends in the market economy, changes in the capital/labour ratio in the household economy have produced shifts to some goods and services with a higher labour content. For example, the time saved by a dishwasher may be reallocated to more elaborate time-intensive meal preparation than was usual 80 years ago. Overall kitchen time might have remained constant, therefore, despite major changes in the quantity and quality of goods and services produced.¹²⁹

Household capital has also reduced the arduous physical work associated with some household tasks like laundry, and increased the range of options available. While time use is a significant factor in assessing economic welfare, such changes in the nature of housework must also be taken into account. If full social costs are considered, then the costs of increased resource and energy use required for higher output levels in the household economy should be added to the assessment.

6.2 Earning Less and Spending More

Although real income declined in the 1990s, household spending has continued to rise along with debt levels and declining rates of saving.¹³⁰ Year after year, Statistics Canada's annual *Household Facilities by Income* has reported in this vein:

Despite seeing real incomes shrink 7% since peaking in 1989, households have continued to acquire leisure and time-saving items....In general, increasing ownership of household items occurred across all income classes.¹³¹

Whether these "time-saving items" actually do save time is rarely questioned.

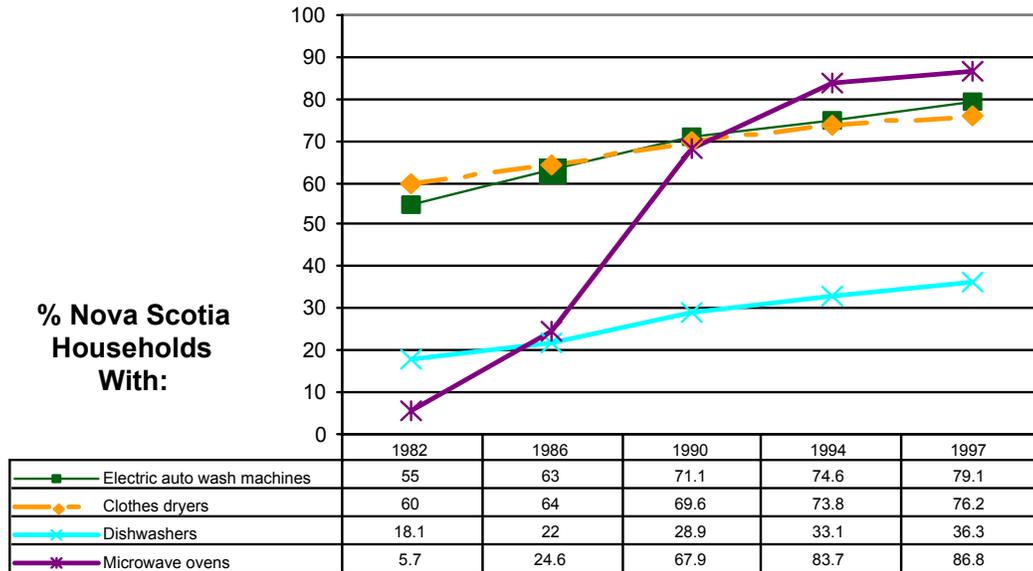
Between 1969 and 1986, household expenditures in constant dollars rose by 31%, and between 1986 and 1992 by another 29%, despite the decline in Nova Scotians' personal disposable income per capita since 1988 (Charts 6.2 and 6.3).

¹²⁹ Tom Pinfeld, Vice-President, Gardner Pinfeld Consulting Economists, personal communication, 12 September, 1998.

¹³⁰ As they accumulate more possessions, the assets and "net worth" of Canadians are also increasing along with debt levels.

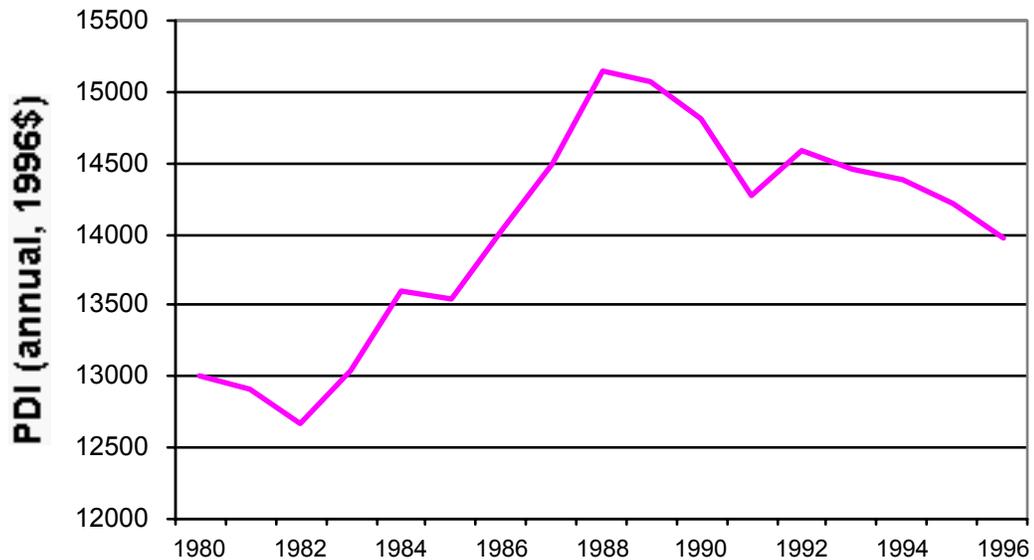
¹³¹ Statistics Canada, *Household Facilities by Income and Other Characteristics, 1994*, catalogue no. 13-218, page 10. Similar statements are repeated for other years.

Chart 6.2: Household Capital Continues to Expand in Nova Scotia...



Source: Statistics Canada, *Household Facilities by Income and Other Characteristics*, years 1982 through 1997; catalogue no. 13-218-XPB

Chart 6.3....Despite the 8% Decline in Personal Disposable Income per Capita in Nova Scotia since 1988, (annual income, 1996\$)



Sources: Personal Disposable Income from CANSIM database 5091, D43232; Consumer Price Index from CANSIM 7466, P803116, and Statistics Canada, *Canadian Economic Observer*, catalogue 11-210-XPB, 1996/1997

Part of the increase in household expenditures may be accounted for by demographic variables, reflecting the peak spending years of the baby boom generation. When lifetime spending patterns are taken into account and averaged over the entire population, the increase may be less dramatic than the figures indicate.¹³²

But rising household expenditures may also reflect a lack of adjustment to the first sustained fall in real incomes since the Second World War. “Reduced household income failed to hamper consumers,” reported Statistics Canada, noting an “increasing ownership of household items across all income classes.”¹³³ “Leisure and time-saving items (are) more popular for all households regardless of income,” say the agency’s reports, noting that consumer debt has been growing and savings rates steadily declining. The 1992 *Family Expenditure Survey* also noted that the cost of shelter in that year reached the highest recorded proportion of household expenses ever, 22% of the total.¹³⁴

Many Canadians appear caught in a cycle of earning less, spending more, going deeper into debt, and working harder to pay for their increased expenses¹³⁵. Current accounting systems offer no way out of this cycle, since increased spending and increased work all add to the GDP and are interpreted as signs of economic progress. In fact, the emerging pattern of increased spending despite declining real wages helps explain the perceived “necessity” for two incomes. Married women’s wages constitute a steadily growing portion of family income.

Has the rapid increase in household capital saved labour time in the home? A 12-country study, in which conditions ranged from a lack of indoor plumbing and appliances to the most modern, suggests the opposite: technical sophistication may increase the amount of time spent on household work. Studies of U.S. women have also found that those with more durable equipment in their homes work no fewer hours than those with less.¹³⁶

Servicing, maintenance and repair of appliances; the need to work extra hours to pay for new equipment; and reduced efficiency in the household economy due to smaller

¹³² Andrew Maw, assistant director, Statistics Canada Regional Office, Halifax, personal communication, September 7, 1998.

¹³³ Statistics Canada, *Family Expenditure Survey*, catalogue no. 62-655, 1982, 1986 and 1992; Statistics Canada, *Household Facilities by Income*, 1994, 1995, 1996.

¹³⁴ Idem.

¹³⁵ Details on trends in paid work hours, including overtime and under-employment rates, are the subject of Module 3 of the Genuine Progress Index, to be released later this year. Total work time and trends in the availability of leisure time are the subject of Module 4. The argument in this paragraph will therefore be explored more fully in these upcoming reports. On this issue, see also Juliet Schor’s recent book, *The Overspent American: Upscaling, Downshifting, and the New Consumer*, New York, Basic Books, 1998.

¹³⁶ Schor, *The Overworked American*, page 88 and footnote 9, page 201, citing Szalai, Alexander, *The Use of Time: Daily Activities of Urban and Suburban Populations in Twelve Countries*, Mouton: The Hague, 1972, page 125; Robinson, John, “Household Technology and Household Work”, in Sarah Fenstermaker Berk, *Women and Household Labor*, Sage Publications: Berkeley, 1980, pages 62-64 and table 3. See also footnote 108 above on Andrew Harvey’s reference to the work of Caroline Roy, showing that labour saving devices have produced time savings for men rather than for women.

households and increased dwelling size are some of the factors that seem to undercut the ability of the new devices to save time and improve the quality of life.¹³⁷

Needless to say, there are qualitative issues not captured by these measurements as noted above, such as a decrease in hard physical work and increase in flexibility afforded by household machinery, as well as the individual preferences of home-makers. For example, many may consider eating out more enjoyable. In addition, time certainly has been saved on some specific tasks even if it has been taken up by new household tasks. The costs of natural resource consumption and embodied energy usage in increased household expenditures are also not considered in this study. The evidence presented in this study therefore reflects only overall time use and time efficiency factors.¹³⁸

Future studies might expand the range of variables considered in assessing household quality of life. In the meantime, the consideration of time use factors constitutes a powerful challenge to the implicit GDP assumption that increased expenditures necessarily denote an unqualified improvement in welfare and quality of life.

Christine Bose and others, for example, challenge popular beliefs that household technology has made housework easier and cheaper, saved time, and redistributed work between the sexes. The authors find that time and effort saved by some appliances is offset by assembling, using, cleaning, maintaining and repairing the equipment and by the additional household expectations and tasks created by the technology itself. “Labor-saving devices may actually create new forms of labor and increase job fatigue,” they conclude.¹³⁹

While utilities eased some major physical burdens of housework, they actually created the means for a new range of household tasks. Bose finds that far from saving time, there is actually a positive correlation between number of appliances and household work time. “Apparently either appliances create more work or women use the time saved elsewhere to keep with rising standards of housekeeping.”¹⁴⁰ She also finds that the vast expansion in the range of choices in meal preparation has increased the time spent in meal planning, shopping and household management.

The study also finds that household technology has done little to ease the monotony, isolation, lack of stimulation and repetition of menial tasks that characterize much

¹³⁷ Linder, Staffan, *The Harried Leisure Class*, Columbia University Press: New York, 1970. Given the paucity of solid evidence on the effect of technological changes on the nature of housework, these postulated causes must be regarded as inferences and hypotheses to be tested.

¹³⁸ Chris Jackson, Statistics Canada, points out that time use surveys shed no real light on these qualitative issues or on subtle, incremental technological shifts within and among different types of kitchen tasks, for example. He points out that the role of technology and its effects on qualitative changes in the nature of housework are further complicated by changes in dwelling types, family size and composition, norms and quality standards, and the distribution of household equipment among different household members, none of which are adequately addressed by the time use data (personal communication, 14 September, 1998).

¹³⁹ Bose, Christine, Philip Bereano, and Mary Malloy, “Household Technology and the Social Construction of Housework”, *Technology and Culture*, volume 25, no. 1, January, 1984, pages 53-82.

¹⁴⁰ Bose, op. cit., page 74.

household work. And it notes that “appliances in the home often extend women’s role therein... (so that) ownership of increasing numbers of home appliances is likely to be positively correlated with gender-stereotyped specialization of labor within the household.”¹⁴¹

After reviewing the evidence from a wide range of studies, Juliet Schor concludes:

*In terms of reducing time spent on domestic work, all this expensive labour-saving technology was an abject failure.*¹⁴²

This evidence is significant for the Genuine Progress Index because it signifies a fundamental difference in the approach towards measuring progress from that employed by current conventional measures.

For the GDP, every such increase in household expenditures contributes to growth and stimulates output and economic activity, and may indeed produce gains in the quantity, quality and diversity of goods and services available. If consumers have to work longer hours to pay for their increased consumption, this also stimulates the economy and contributes further to growth, which in turn is characterized as economic progress. Every transfer of services from the household to the market economy, such as increased dependence on take-out food and paid child-care, is similarly interpreted as economic growth and progress. Indeed, increased “consumer confidence” (meaning more spending) is linked to a “strong” and “robust” economy.

Because it explicitly measures and values unpaid household production, the Genuine Progress Index, by contrast, regards these household expenditures not simply as “consumption” but as capital investment in the household economy. As such, it evaluates the efficiency of these investments in the same way as investments in the business sector.

From the point of view of productivity and profitability, the issues are whether the capital has been efficiently invested and utilized and whether it produces a sufficient rate of return to justify its cost. If capacity is under-utilized, then costs may exceed returns and productivity may decline.

In the household economy, capital investment consists of three main components¹⁴³:

- 1) The house itself is the space within which production occurs, and thus corresponds to the rental or ownership expenses of an office, factory building or fishing boat.
- 2) Household equipment, such as microwaves, dishwashers and washing machines, are the actual means of production, equivalent to computers in the office, machinery in the factory and fishing gear. They are the equipment used to produce goods and

¹⁴¹ Bose, op. cit., page 79

¹⁴² Schor, *The Overworked American*, page 88.

¹⁴³ As Chris Jackson, Statistics Canada, points out (personal communication, 14 September, 1998), all three components listed here are found in the Canadian System of National Accounts: residential housing is treated as fixed capital formation; service flows are captured by the market rents and the imputed rents on owner-occupied dwellings; and consumer durables are treated as fixed assets in the Balance Sheet Accounts, although as current consumption elsewhere.

services for consumption. In the case of household capital, this is the same equipment used by market workers to deliver domestic services when housework is contracted out. When the use of leisure time is considered in the fourth module of the GPI, it will be seen that home entertainment centres constitute a similar capital investment in productive equipment.

- 3) Finally, to the extent that household vehicles are used for work, shopping, transporting children to school and other productive activities, they correspond to business transportation and marketing costs and also constitute an investment in production capacity.

From this perspective, as in any business accounting, the question is not simply how much “consumers” are buying, but how efficiently resources are used, and what the rate of productive return on the investment is. The efficient or inefficient use of capital in the household economy like the use of capital in any other sector, directly affects productivity. In the household economy, steadily declining economies of scale have led to increased inefficiencies in the use of time as residential space capacity has expanded.

The current development of methods to measure household production in terms of actual outputs will gradually allow more accurate assessments of returns on household investments.¹⁴⁴ In the meantime, proxy measures demonstrating trends in household size and space are possible (Section 6.3 following).

If household facility expenditures are not saving households labour time, as the evidence seems to indicate; if declining birth rates, smaller households and fewer residents in larger dwellings have reduced efficiency in the household economy; if workers are putting in longer hours and going deeper into debt to pay for these expenditures, then there is reason to believe that the resources are not being used efficiently. None of these apparent inefficiencies shows up as a cost in the current income accounting approach of the GDP.

As in any other industry, if equipment remains idle and unproductive, then growing investments in household capital may increase rather than ease the burden of families by pushing them further into debt without a commensurate gain in output. A shrinking household size means that more labour is expended for less output. The table and graphs in the following section indicate how steadily declining household size likely has produced such growing inefficiencies, over-investment in household capital, and declining productivity in the household economy.

From the GPI perspective, reduced investments in household capital; more efficient housing options in which equipment is shared and thus more frequently utilized; a reduction in labour time; and an increase in free time, would probably signify a greater return on investment than a continuing increase in purchases of new equipment. In this

¹⁴⁴ See Chapter 3.3, and Andrew Harvey’s estimation of output measures for Canadian households in “The Role of Time Use Studies in Measuring Household Outputs” (1996).

way, measuring and valuing the household economy necessarily raises challenging questions that go to the heart of current accounting, work and consumption patterns.

6.3 Declining Household Size and Inefficiencies in the Household Economy

It does not take twice as long to prepare food or vacuum the house in a household of six as it does in a household of three. In fact, the time use surveys indicate clearly that *per person* housework time declines as household size increases. The same is true in taking care of children. After the second child, parenting time *per child* drops dramatically, since parents are almost always looking after more than one child at a time.

The diminishing size of households coupled with the gradual increase in dwelling size also means that there are now more rooms per person to clean and fewer household members to share the tasks. There are also fewer older children to help mind younger children, placing an increasing time burden per child on parents. Time costs in household work must, of course, be balanced against perceived gains such as increased living space per person and the satisfaction that potentially can derive from paid work.

The inefficiencies of production in the household economy due to declining household size are even more apparent in the use of equipment and in household expenditures per person. Additional household members do not require additional investments in more washing machines, microwaves, refrigerators and dishwashers. Equipment used for household production can serve larger numbers of people without much extra investment, and is likely to provide more actual usage over its lifetime.

Thirty years ago, the economist Gary Becker noted that consuming itself takes time. As people get richer and own more consumer goods, there is less and less time to spend with each item. Use of the Walkman, the VCR, the CD player, the camcorder, video games, TV and a variety of other entertainment options get crammed into the space once occupied by the single record player. Actual usage per item and per dollar of expenditure declines.¹⁴⁵ The same is true of kitchen appliances and other equipment used in household production.

In 1970 Steffan Linder argued that affluence actually would make life more hectic as people switched to activities than can be done quickly and tried to keep up with the use of a growing mountain of possessions.¹⁴⁶ Possessions demand user time not only in consumption activities, but in shopping, maintenance, repair and cleaning time. From a household production perspective, actual outputs in terms of food service, cleanliness and quality parenting are likely to decline *per unit* of expenditure as the amount of household equipment and “labour-saving” and “time-saving” devices increases.

¹⁴⁵ Becker, Gary, “A Theory of the Allocation of Time”, *Economic Journal* 75, 1965, pages 493-517, cited in Schor, *The Overworked American*, page 23.

¹⁴⁶ Linder, Staffan, *The Harried Leisure Class*, Columbia University Press, New York, 1970, cited in Schor, *The Overworked American*, page 23.

Again it must be noted that this study focuses primarily on time use and efficiency variables that are hidden in our current accounting system. But the costs described here must be balanced against perceived gains in living space per person, in quantity, quality and diversity of household output, in the convenience and scheduling flexibility offered by the new household machinery and in the less physically arduous nature of housework. There are also additional costs not considered here, such as the additional resource and energy consumption produced by higher levels of household output and expenditure. What is certain is that the higher capital intensity of households has led to more “throughput” within the household economy and dramatically increased the perceived range of choices.

For example, shirts that may have been worn for a week 60 years ago are now washed after a single day and we have a lot more of them. We therefore produce larger quantities of laundry even while the physical burden of laundry day has been replaced by the ability to accomplish other tasks while the machine runs. An enormous melange of foods has replaced more limited selections, and we spend time preparing more elaborate and diverse meals using more appliances in the process. Similarly, shopping has expanded in proportion to the increased variety of foods, clothing and other goods and services available. Decreased household size has also reduced barriers to women entering the paid work force.

But while many of the material gains resulting from the vast variety and quantity of goods and services now available are already reflected in the standard economic accounts in the form of increased expenditures and industrial output, the associated time and resource costs have remained hidden.

Statistics Canada’s “multi-factor productivity” measures include costs of both labour and capital inputs. Applied to the household, therefore, we see that labour inputs in cooking, cleaning, shopping and repairs do not increase in direct proportion to the size of households, and that similar capital inputs are required for smaller and larger households. In other words, in both time and money, it does not cost much more to support six household members than to support three or four.

While more refined qualitative household output measures would be required to confirm this hypothesis¹⁴⁷, historical trends provide strong circumstantial evidence that efficiency in the household economy declines as household size diminishes. The caveat here is that the quality, quantity and diversity of the outputs themselves have changed dramatically over time.

Table 6.1 and Chart 6.4 demonstrate the demographic shift that has contributed to the dramatic decline in household size (Chart 6.6). The declining number of young people

¹⁴⁷ For example, Harvey’s output measures for the Canadian economy count the number of meals and nights of accommodation produced, but current output methods cannot assess and compare the content, quality and type of these meals nor the standard of amenities provided (Harvey, *op. cit.*, 1996).

(under 15) also indicates that there are now fewer teenagers to contribute to housework and to help ease the housework burden traditionally placed on women. At the same time dwelling size has been increasing gradually (Chart 6.5), providing more living space per person, but also more rooms per person to clean (Chart 6.7) with fewer household members to share housework tasks.

Since many basic household maintenance and management tasks, such as repairs, shopping, vacuuming, child care and food preparation tasks are relatively fixed in terms of time and do not increase in direct proportion to the number of beneficiaries, smaller households likely have reduced the efficiency of the household economy.

**Table 6.1: Fewer Children Means Smaller Households:
Population by Selected Age Cohorts, Nova Scotia, 1961-1996**

	Age 0-4	Age 5-9	Age 10-14	Age 0-14
1961	91,239	84,760	80,329	256,328
1966	85,521	87,433	81,600	254,554
1971	69,675	85,215	85,875	240,765
1976	65,680	71,775	86,285	223,740
1981	60,525	66,035	71,930	198,490
1986	60,135	61,030	66,200	187,365
1991	61,713	62,458	62,237	186,408
1996	55,921	63,115	63,715	182,751

Sources: Statistics Canada, *Annual Demographic Statistics*, catalogue no. 91-213-XPB, 1997, pages 59-62; CANSIM database 6433 and 6370, tables C893240, C893258 and C893276.

**Chart 6.4: Declining Number of Young People:
Population aged 0-14, Nova Scotia, 1961-1996**

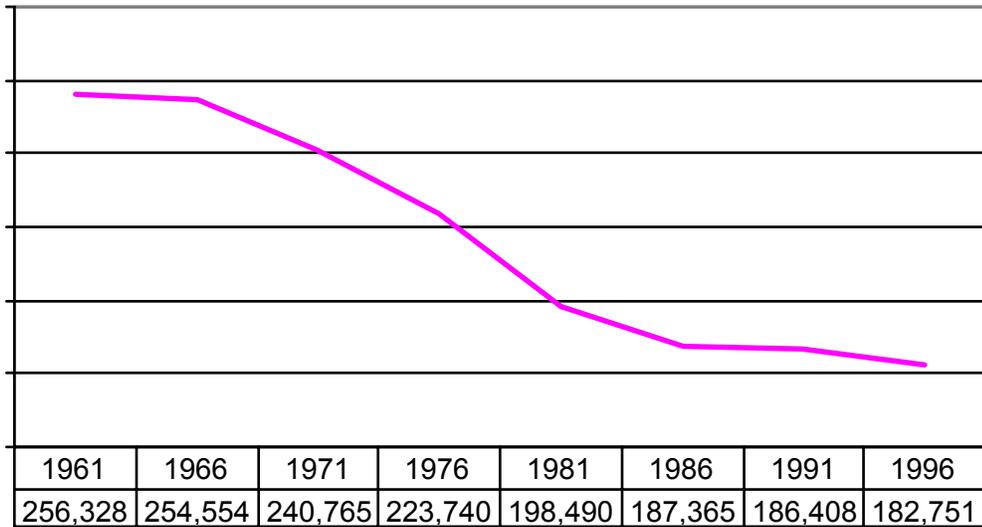


Chart 6.5: Average Number of Rooms Per Dwelling, Nova Scotia, 1961-1997

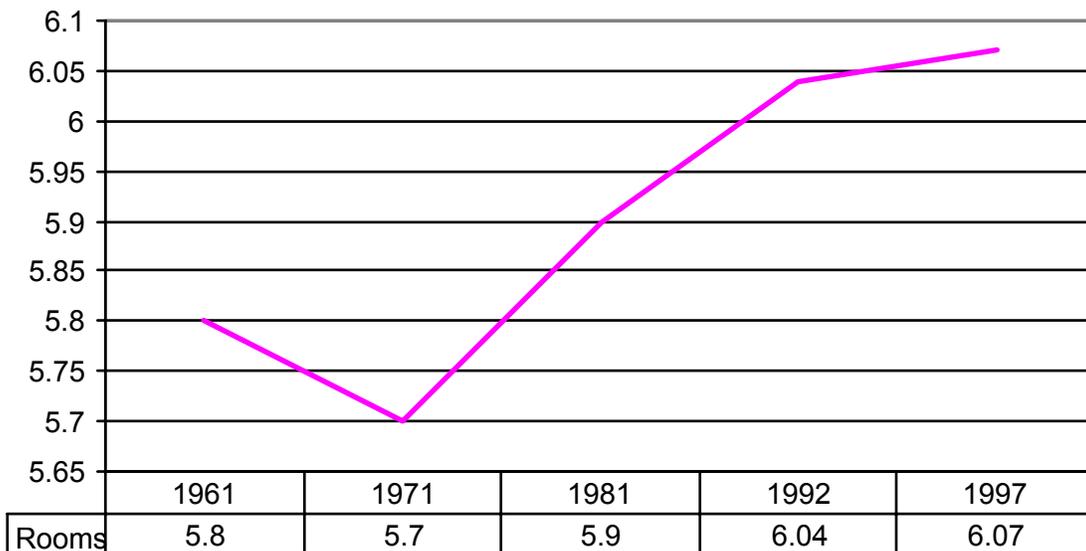


Chart 6.6: Persons Per Household, Nova Scotia, 1881-1997

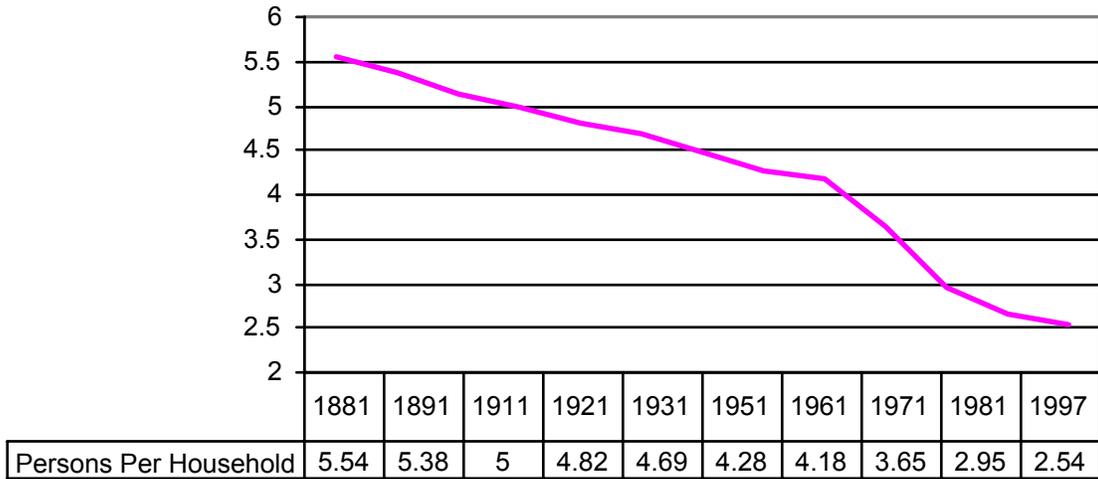
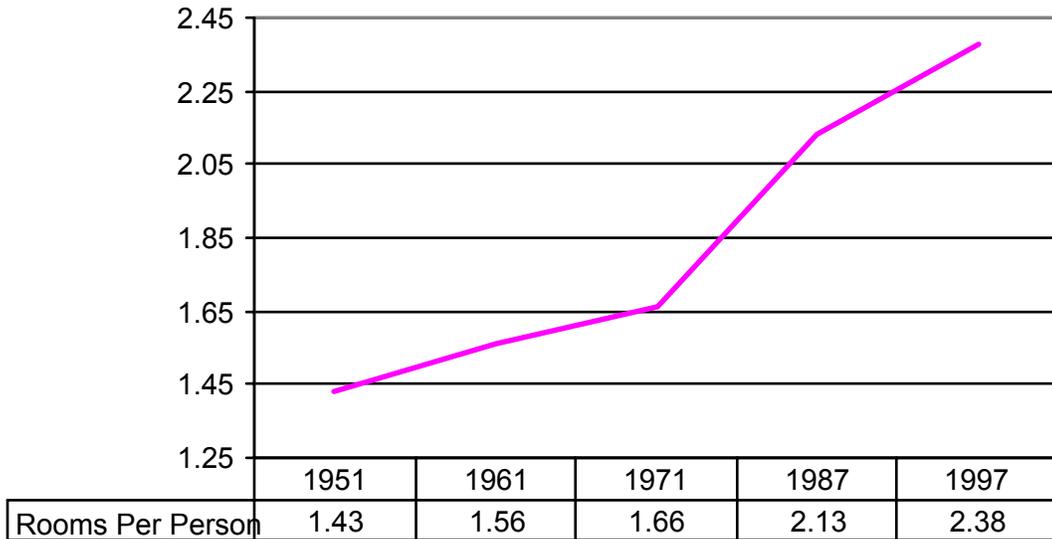


Chart 6.7: Rooms Per Person, Nova Scotia, 1951-1997
...More Rooms Per Person Means Fewer People to Clean More Space



Sources for Charts 6.4, 6.5, 6.6 and 6.7:

Dominion Bureau of Statistics, Canada, *Ninth Census of Canada: 1951*, volume III: "Housing and Families", page 1-1 for 1881-1951 data; Dominion Bureau of Statistics, Canada, *1961 Census of Canada*, volume II (part 2), pages xxiv and 21-1; Statistics Canada, *1971 Census of Canada*, volume II, part 3: "Housing", March 1973: "Rooms per Dwelling", April 1973: "Number of Persons per Room"; Statistics Canada, *1981 Census of Canada*, "Population, occupied private dwellings, private households and census and economic families in private households", catalogue no. 95-945, volume 3; Statistics Canada, *1991 Census*, "Occupied Private Dwellings", catalogue no. 93-314; Statistics Canada, *Household Facilities by Income and Other Characteristics*, years 1982 through 1997, catalogue no. 13-218-XPB; Statistics Canada, *Family Expenditure in Canada*, years 1982, 1986 and 1992, catalogue no. 62-555.

6.4 Estimation of Total Household Capital in Nova Scotia

The value of capital inputs into household production is based on estimates of the annual flow of services produced by household capital. From a 1993 input-output study by Michael Thoen at Statistics Canada, we can estimate that in 1997 household capital in Nova Scotia contributed about \$530 million or \$1,400 per household to household production in equipment and vehicles.¹⁴⁸ Another \$716 million in capital inputs, or nearly \$2,000 per household, can be estimated to derive from the use of owner-occupied housing for household production purposes.¹⁴⁹ The latter figure is the equivalent of the use of office or factory space for market production.

¹⁴⁸ Statistics Canada, *The Value of Household Production in Canada, 1981, 1986*, National Accounts and Environment Division, Discussion Paper, April, 1993, prepared by Michael Thoen. This study integrates estimates on the value of household work with personal expenditure data and estimates of the flow of services from “consumer durables” used for household production from Statistics Canada, *A Study of the Flow of Consumption Services from the Stock of Consumer Goods*, National Accounts and Environment Division, Technical Series, no. 18, April 1992, prepared by Kulbir Johal.

Thoen includes the opportunity cost of funds tied up in household durables as well as the depreciation rate and operating expenses of equipment used for household production in estimating service flows. He includes equipment and vehicles used for food preparation, cleaning, clothing care, repairs and maintenance, gardening and pet care, child-care and shopping.

Estimates for this study are from Thoen, Table 1a, appendix B for Canada in 1986, after deducting inputs into transportation to and from work, since these are not included in the GPI report. The replacement cost (specialist) valuation of labour inputs used by Thoen is also adjusted to the generalist rate used in this study. Extrapolations to 1997 for Nova Scotia are made on the assumption of a constant capital to labour ratio over time and across provinces. Statistics Canada’s 1997 *Household Facilities by Income and Other Characteristics*, catalogue 13-218, confirms comparable levels of household equipment for Nova Scotia and Canada.

Chris Jackson, Statistics Canada, notes that alternative approaches to the measurement of capital inputs into household production are emerging. Duncan Ironmonger favours the service flow approach, while a Finnish proposal to Eurostat (the European Union statistical agency), *Developing a Satellite Account System of Household Production*, March, 1998, recommends including only the depreciation on household capital goods, in line with guidelines suggested in the 1993 System of National Accounts (Chris Jackson, personal communications, 14 and 29 September, 1998).

¹⁴⁹ The ratio of service flows deriving from capital equipment to use of dwelling space for household production is from Duncan Ironmonger’s estimates for Australia, which also provided the model for Thoen’s work at Statistics Canada. See 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; Waring, Marilyn, *Three Masquerades: Essays on Equality, Work and Human Rights*, Auckland University Press, New Zealand, 1996, page 100.

See also 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 Hamilton, Clive, *The Genuine Progress Indicator: A New Index of Changes in Well-Being in Australia*, The Australia Institute, October 1997; which also gives the Australian population figures (page 19), and Ironmonger, Duncan, “Modelling the Household Economy”, in M. Dutta (ed.), *Economics, Econometrics and the LINK: Essays in Honour of Lawrence R. Klein*, Elsevier Science Publishers: North Holland, 1995.

The question arises as to what percentage of the imputed rent from owner-occupied housing should be attributed to household production, as opposed to other uses such as leisure or personal care. In his output

Footnote continued on bottom of next page.

Regular assessments of the contribution of household capital to unpaid household production would produce a more complete portrait of the household economy than is now possible. Michael Thoen's pioneering work in this field is a significant departure from the normal practice of viewing all household expenditures as consumption rather than investment.

Statistics Canada's *Household Facilities by Income*, for example, makes no qualitative distinction between household equipment used for production purposes and items used for leisure. VCRs and CD players are in the same category as dishwashers and vacuum cleaners. Since Statistics Canada's Time Use Surveys do make a clear definitional distinction between productive activity in the household, classified as "unpaid work," and leisure activities, it is reasonable to make the same distinction in classifying purchases of household capital equipment.

Because output measures and assessments of capital inputs are not currently used in Statistics Canada's official valuations of unpaid work in Canada, the value of household capital is also not yet included in the valuation of unpaid household production in the Genuine Progress Index. The GPI relies solely on the value of labour inputs, as described in Chapter 4, and thus understates the total production value of the household economy. Future work on service flows from capital inputs and on effective household output measures gradually will allow better assessments of productivity and efficiency levels within the household economy.

Continued from previous page:

analysis, Andrew Harvey attributes 25% of that rent to the production of food (based on 1.5 rooms out of 6), and 45% to the provision of accommodation or housekeeping (based on an average of 2.7 bedrooms per 6-room dwelling). He also cites a U.S. study which estimates that 6.22% of child-care costs in the market economy are attributable to use of building space to attribute the same proportion of home dwelling space to child-care needs. (Helburn, S. et. al., "Cost, Quality and Child Outcomes in Child Care Centers: Key Findings and Recommendations", *Uncover*, volume 50, no. 4, May 1995, pages 40-44). See Harvey (1995). It was decided not to use these estimates in this study in order not to mix data appropriate to output analysis with the input data used here.

7. Monetary Value of Unpaid Housework and Child-Care¹⁵⁰

As discussed earlier, the best way of comparing the economic value of unpaid household production with goods and services that are exchanged for money is to assess the equivalent market price that would likely be paid for household outputs. Since these output methods are still being developed¹⁵¹ and have not yet been officially adopted in Canada, the value of the factors of production is taken as a proxy measure for economic value within the household economy.

As with all production, both capital and labour inputs into the household economy must be valued. Because Statistics Canada measurements are currently based on the value of labour inputs only, the Nova Scotia GPI presently follows the same practice. However, extrapolating from Ironmonger's Australian data, we can estimate that the total economic value of household production would be about 35% higher than the GPI valuation if capital inputs are added. These include the services flowing from equipment and vehicles used for household production as well as imputed rent from the use of dwelling space.

Labour inputs into the household economy are valued here at the replacement cost (generalist) method, which yields lower, and therefore more conservative, estimates of value than other methods.¹⁵² The replacement cost (generalist) method assesses what it would cost to replace unpaid household production in the market at the average hourly rate paid for domestic help and child-care. Factoring in wage inflation, this amounts to an overall rate of \$9.02 cents an hour for Nova Scotia in 1997 dollars. This is based on an average hourly rate of \$9.20 for housework, including meal preparation and cleanup, house cleaning, laundry, repair and maintenance, and all other domestic chores, and \$7.58 cents an hour for child-care.¹⁵³

The generalist method is adopted in this study because the productivity of general domestic service employees is considered more likely to correspond to that of household members performing the same tasks than the work of market specialists like cooks, launderers, gardeners or repairmen, who would realize significant productivity gains through a substantial division of labour, specialized skills, economies of scale, and more capital intensive production.¹⁵⁴

¹⁵⁰ See chapter 3.2 for a brief description of the valuation methods used in this section. For more details on these methods, see the previous GPI data release, *The Economic Value of Civic and Voluntary Work in Nova Scotia*, GPI Atlantic Halifax, July, 1998, section 7, pages 34-37, and Statistics Canada, *Households' Unpaid Work*, page 23-28. Page 25 of that publication, in particular, discusses criticisms and difficulties in applying the replacement cost method.

¹⁵¹ Harvey, op. cit., 1996, and the work of INSTRAW: See section 3.3 for more details.

¹⁵² See section 3.2 above for a description of the alternative valuation methods used by Statistics Canada for labour inputs into household production.

¹⁵³ Statistics Canada, *Households' Unpaid Work: Measurement and Valuation*, catalogue no. 13-603E

¹⁵⁴ Statistics Canada, op. cit., page 25. See also the description of the replacement cost (specialist) method and the measurement and valuation differences between the methods, in section 7.2 below.

Using this method, **the unpaid household work of Nova Scotians is worth \$8.5 billion a year, or \$11,084 per adult 15 years and older.** This is the value for unpaid household work used in the Genuine Progress Index. Based on Michael Thoen's estimates of service flows from household capital¹⁵⁵, we can estimate that this value would be about \$1.2 billion higher if capital inputs are included, for a total of **\$9.7 billion.**

7.1 Replicating the Value of Household 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 household work in all provinces and in Canada as a whole. Statistics Canada has already done pioneering work in this field and has available in published form all the data necessary to track the value of household work from 1961 to 1992. Since time use surveys are administered as part of the General Social Survey only once every six years, the next data release on time use will be available in 1999, based on the 1998 survey.

Table 7.1, following, assesses the value of household work, including primary child-care, for Canada and all provinces, using the following data sources:

- **Line 1:** The replacement cost (generalist) hourly wage rate for each province is from Statistics Canada, *Households' Unpaid Work*, derived by dividing the total replacement cost value by total provincial hours in tables B5 and B1.
- **Lines 2 and 3:** Total household hours are from Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, Table 1, provincial tables, by multiplying daily minutes by 365 and dividing by 60 for annual hours.
- **Lines 2-7:** Provincial populations aged 15 and over are from Statistics Canada, *Annual Demographic Statistics*. The population actually covered in the time use surveys excludes persons living in collective dwellings and institutions, which is about 5% of the population.¹⁵⁶
- **Lines 1 and 4-7:** 1997 dollar values are derived from wage inflation rates in Statistics Canada, *Employment, Earnings and Hours*.
- **Line 6:** Estimations of household capital inputs, as the annual value of services produced by household capital, are derived from Statistics Canada, *The Value of Household Production in Canada, 1981, 1986*, by Michael Thoen, assuming a constant capital to labour ratio across provinces; and from Duncan Ironmonger's calculations for Australia, assuming that the ratio of service flows deriving from capital equipment to use of dwelling space for household production is the same in both countries.

¹⁵⁵ See section 6.4 above.

¹⁵⁶ Chris Jackson, Statistics Canada, personal communication, 14 September, 1998.

Table 7.1:

Table 7.1: Replacement Cost (Generalist) Value of Unpaid Household Work, Canada and Provinces, 1997\$

	Canada	Nova Scotia	Nfld.	P.E.I.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Replacement cost (gen.) ⁹⁷ per hr	9.57	9.02	6.85	11.40	7.24	9.08	10.23	9.08	7.42	9.42	10.53
Hours per person per year	1,168	1,229	1,375	1,296	1,308	1,101	1,186	1,089	1,180	1,119	1,247
Total annual hours (millions)	28,375	941	628	139	808	6,655	10,840	980	936	2,483	3,964
Total labour value (\$billions)	271.6	8.5	4.3	1.6	5.8	60.4	110.9	8.9	6.9	23.4	41.8
Value per person 15+ per yr (1997\$)	11,178	11,086	9,418	14,767	9,466	9,998	12,138	9,887	8,762	10,542	13,134
Household capital inputs (\$billions)	40.2	1.2	0.6	0.2	0.9	8.8	16.2	1.3	1.0	3.4	6.1
Total capital + labour inputs (\$billions)	311.8	9.7	4.9	1.8	6.7	69.2	127.1	10.2	7.9	26.8	47.9

NOTE: Total labour value is given in bold type as this is the economic value of household work used in the Genuine Progress Index. Sources listed on previous page

7.2 Alternative Valuation Methods

Considerably higher values would be attained using the replacement cost (specialist) method and the opportunity cost method for valuing labour inputs.

The replacement cost (specialist) method assesses what it would cost to replace each separate function within the household economy with a professional in that field. For example, instead of assessing the value of unpaid repair and maintenance work in the home at the rate of domestic employees (\$9.02 an hour), it would be calculated at the average wage of roofers, electricians, plumbers, etc (\$15 an hour in Nova Scotia). Laundry and ironing is assessed at \$7.48 an hour, clothes repair at \$9.32 an hour, grounds maintenance at \$10.54 an hour, and so on. Within the child-care category, similarly, physical care is valued at only \$6 an hour, the going rate in the province, but time spent directly educating children at home is valued at \$21.48 an hour, since that particular function would likely be replaced by a tutor rather than a babysitter.¹⁵⁷

The replacement cost (specialist) valuation would assess the economic value of household production about 20% higher than the generalist method, or \$10.1 billion a year rather than \$8.5 billion (Chart 7.1, method 2).¹⁵⁸

The opportunity cost method calculates what the unpaid household worker would earn in his normal line of work if he or she were not doing housework. In other words, what is the same hour of time worth in the market to the housekeeper or parent if she chooses to hire someone to take her place in the household. Based on current average wages in Nova Scotia, the pre-tax opportunity cost of an hour of housework for women is \$12.39 an hour, and for men \$17.23 an hour. After taxes this drops to \$7.75 an hour for women and \$10.78 an hour for men.¹⁵⁹

The pre-tax opportunity cost method would assess the economic value of household production about 56% higher than the replacement cost (generalist) method, or \$13.2 billion rather than \$8.5 billion. The after-tax opportunity cost method yields an estimate very similar to that of the replacement cost (generalist) method, or \$8.3 billion rather than \$8.5 billion (Chart 7.1, methods 3 and 4).¹⁶⁰

¹⁵⁷ Statistics Canada, *Households' Unpaid Work*, Table A4, pages 70-71: Imputed Costs by Method, Canada, Provinces and Territories.

¹⁵⁸ Statistics Canada, *Households' Unpaid Work*, Ratio is based on Tables B4 and B5, pages 75-76.

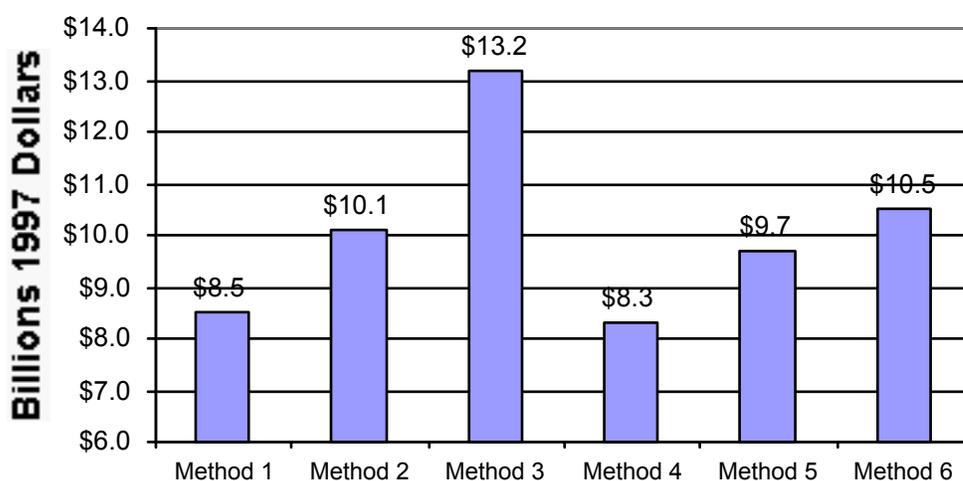
¹⁵⁹ Ibid., page 70.

¹⁶⁰ Ibid., pages 73, 74 and 76. As explained in Statistics Canada, *Households' Unpaid Work*, page 37, the opportunity cost method uses average hourly earnings based on the employment income of persons 15 years and over who were employed at the time of the census and had worked the previous year. This includes employed and self-employed people in all industries and occupations, managerial and non-managerial, working full- and part-time and full- and part-year. The “pre-tax” method is based on gross pay before taxes and deductions are subtracted; the “after-tax” method is equivalent to take-home pay and is also net of the marginal income tax.

Adding the value of capital inputs, in the form of the annual flow of services produced by household capital, to the replacement cost (generalist) value adds \$1.2 billion, or 14%, to the valuation (Chart 7.1, method 5).

Valuing household outputs according to Dr. Harvey’s methods yields an estimate about 23% higher than the replacement cost (generalist) method, or \$10.5 billion in total (Chart 7.1, method 6).¹⁶¹ It should be noted, however, that this figure already includes the value of capital inputs, and should therefore be compared to the figure of \$9.7 billion for Nova Scotia in line 7 of table 7.1 and in method 5 below, rather than to the \$8.5 billion worth of labour inputs in line 4 of Table 7.1 and method 1.

Chart 7.1: Value of Unpaid Household Work, Nova Scotia, by Valuation Method



Method 1: Replacement Cost (Generalist)

Method 2: Replacement Cost (Specialist)

Method 3: Pre-Tax Opportunity Cost

Method 4: After Tax Opportunity Cost

(Methods 1-4 value only labour inputs)

Method 5: Labour plus Capital Inputs

Method 6: Value of Household Outputs

(includes labour and capital inputs)

7.3 Economic Value by Activity

Although the replacement cost (specialist) method is probably more appropriate for this section, the generalist method will be used in assessing value in order to retain consistency with the overall valuation that appears in the Genuine Progress Index.¹⁶² In estimating the economic value of particular activities within the household economy, therefore, it makes conceptual sense to value household food preparation and cleanup at

¹⁶¹ Harvey, Andrew, and Arun K. Mukhopadhyay, “The Role of Time Use Studies in Measuring Household Outputs”, section 3B of “Accounting for Time”, report on work carried out for the United Nations Institute for Research and Training for the Advancement of Women (INSTRAW), *Conference of the International Association for Research on Income and Wealth*, Lillhammer, Norway, August 18-24, 1996.

¹⁶² See section 3.2 and 5.6 above on the alternative methods.

the \$8.34 per hour rate prevailing in the food service industry in Nova Scotia, to value housecleaning at the \$10.19 per hour average rate in that industry, home repair work at the \$15 an hour going rate, and so on.

As we have seen in section 7.2 above, this would yield an overall estimate about 20% higher than that obtained using the replacement cost (generalist) method. To align the values of the separate household sectors with the \$8.5 billion total estimate used in the GPI and to ensure that the sectoral valuations add up to this total, a \$9.20 an hour value is used here for all forms of housework and domestic chores, and \$7.58 an hour is used for child-care (See Table 7.2). In this way the estimations are consistent with the overall value of \$9.02 an hour used in calculating the value of household production in Nova Scotia as a whole.

7.4 Value of Household Work Compared to GDP and Payrolls.

As a whole, the value of labour inputs into household production in Nova Scotia amounts to **42% of GDP value** at market prices, and **51% of GDP value** at factor cost, the second highest ratios in the country after Prince Edward Island.¹⁶³ Even without adding capital inputs, the three largest industries in the Nova Scotia economy are food service within the household economy, house cleaning and laundry within the household economy, and servicing household production through shopping for goods and services (Table 7.2).

Labour inputs into household production are worth more than twice the total GDP value at factor cost of all goods producing industries in the province, and more than two-thirds the value of all service producing industries. They are equal in value to the manufacturing, construction, transportation, total retail and wholesale trade, finance, insurance, real estate and health services industries combined (Charts 7.2 and 7.3).¹⁶⁴

¹⁶³ Statistics Canada, *Provincial Gross Domestic Product by Industry, 1984-1997*, catalogue no. 15-203-XPB; Statistics Canada, *Canadian Economic Observer*, June 1998, Table 39: Provincial Accounts; CANSIM database D31572; Statistics Canada, *Households' Unpaid Work*, Table B5 for provincial comparisons.

GDP at factor cost reflects the costs to industry of the intermediate inputs into production. GDP at market prices reflects the final sale price of all produced goods and services.

The official Statistics Canada definitions are as follows:

“Valuation at factor cost represents the costs of the factors of production. The valuation is expressed in terms of the expense of the producer, rather than of the purchaser. It excludes all indirect taxes, such as sales and excise taxes, customs duties and property taxes”.

“Valuation at market prices is expressed in terms of the prices actually paid by the purchaser. It includes all indirect taxes, customs duties and property taxes, and also reflects the impact of subsidy payments.”

Statistics Canada, *Guide to the Income and Expenditure Accounts, Income and Expenditure Accounts: Sources and Methods Series*, catalogue no. 13-603E, #1, pages 136 and 139.

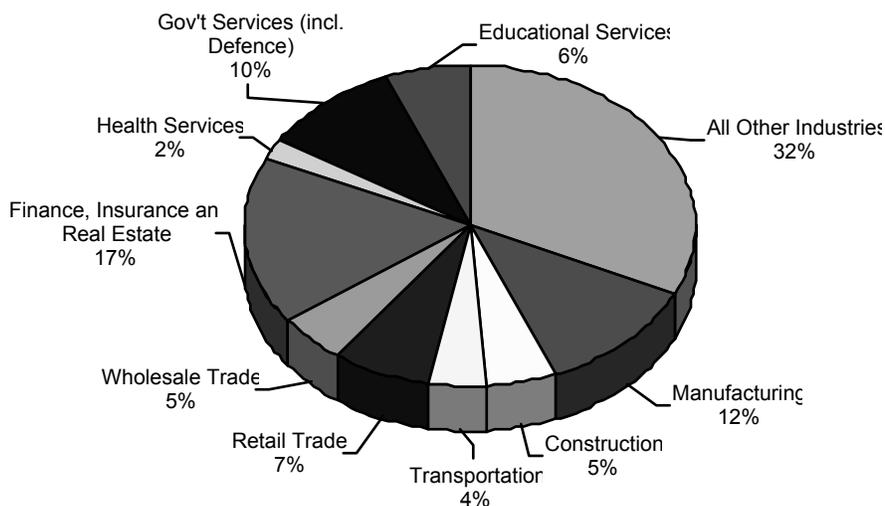
¹⁶⁴ Statistics Canada, *Provincial GDP by Industry*.

Table 7.2: Economic Value of Labour Inputs into Unpaid Work by Activity, Nova Scotia, 1997, Compared to GDP at Factor Cost.

	Mins / Day	Hrs / Year	% Household Work	\$ per Hour	\$ per person / yr	Total 97\$ (millions)	% GDP value
Cooking / Washing up	57	347	29%	\$9.20	\$3,190	\$2,444	15%
Cleaning / Laundry	40	243	20%	\$9.20	\$2,239	\$1,715	10%
Shopping	38	231	19%	\$9.20	\$2,127	\$1,629	10%
Maintenance / Repair	14	85	7%	\$9.20	\$784	\$600	4%
Other Housework	29	176	15%	\$9.20	\$1,623	\$1,243	8%
Primary Child Care	25	152	10%	\$7.58	\$1,153	\$883	5%
Total Household	202	1229	100%	\$9.02	\$11,084	\$8,490	51%
Voluntary Work	29	176		\$13.02	\$2,292	\$1,755	9%
Total Unpaid Work	231	1405			\$13,376	\$10,245	60%

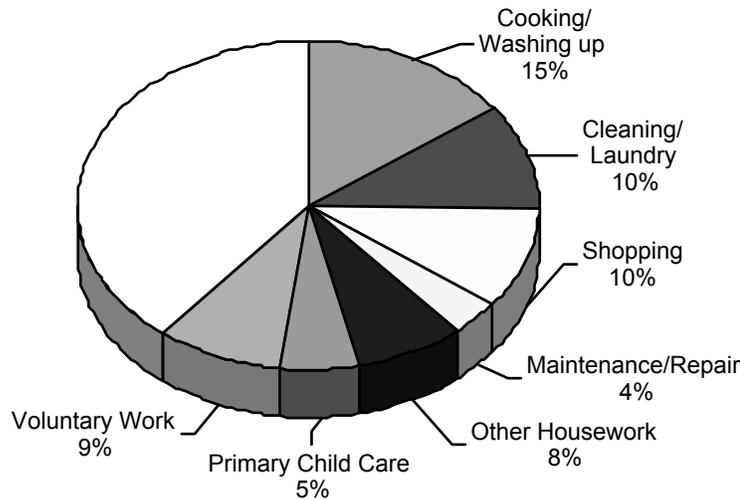
Sources: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*; Statistics Canada, *Households' Unpaid Work*; Statistics Canada, *Provincial Gross Domestic Product by Industry*, catalogue no. 15-203-XPB.

Chart 7.2: GDP at Factor Cost by Industry, Nova Scotia, 1997



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

**Chart 7.3: Economic Value of Labour Inputs into Unpaid Work:
Household Production and Voluntary Work in Relation to GDP
at Factor Cost, Nova Scotia, 1997**



NOTE: In this chart, the entire pie represents the size of the Nova Scotia GDP at factor cost. By comparison, household work represents 51% of the value of GDP; total unpaid work, including voluntary work, represents 60% of the value of GDP.

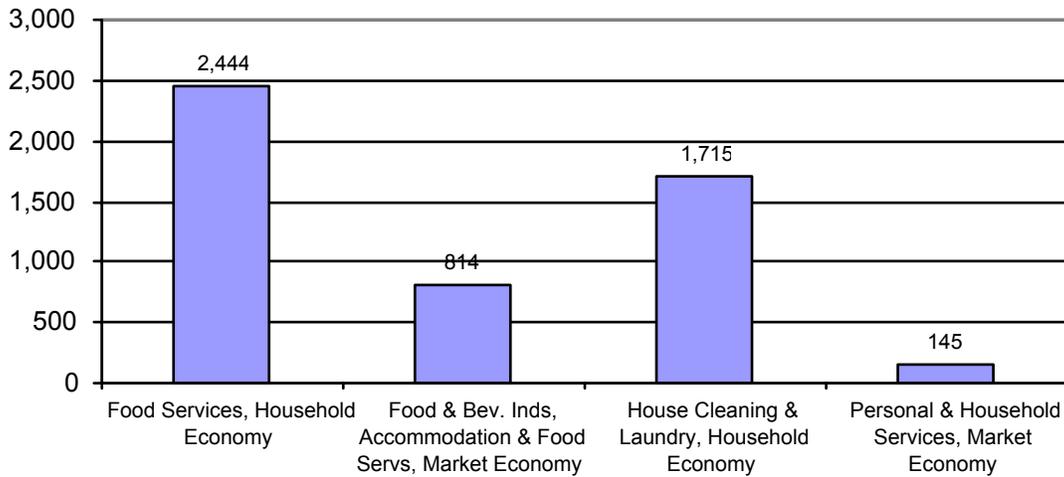
Sources: As in Table 7.2 above.

The market-based food and beverage industries plus the accommodation and food services industries in the province together contribute about \$814 million a year to the provincial GDP, or about 4.3% of GDP value. By contrast, food services within the household economy add about \$2.4 billion to the economy in labour hours alone, which is 12.7% of current GDP value (Chart 7.4).

The entire personal and household services industry in the market economy adds \$145 million a year, or 0.8%, to the provincial GDP. By contrast, cleaning house and doing laundry within the household economy add \$1.7 billion a year in labour value to the economy, equivalent to 8.8% of the GDP (Chart 7.4).

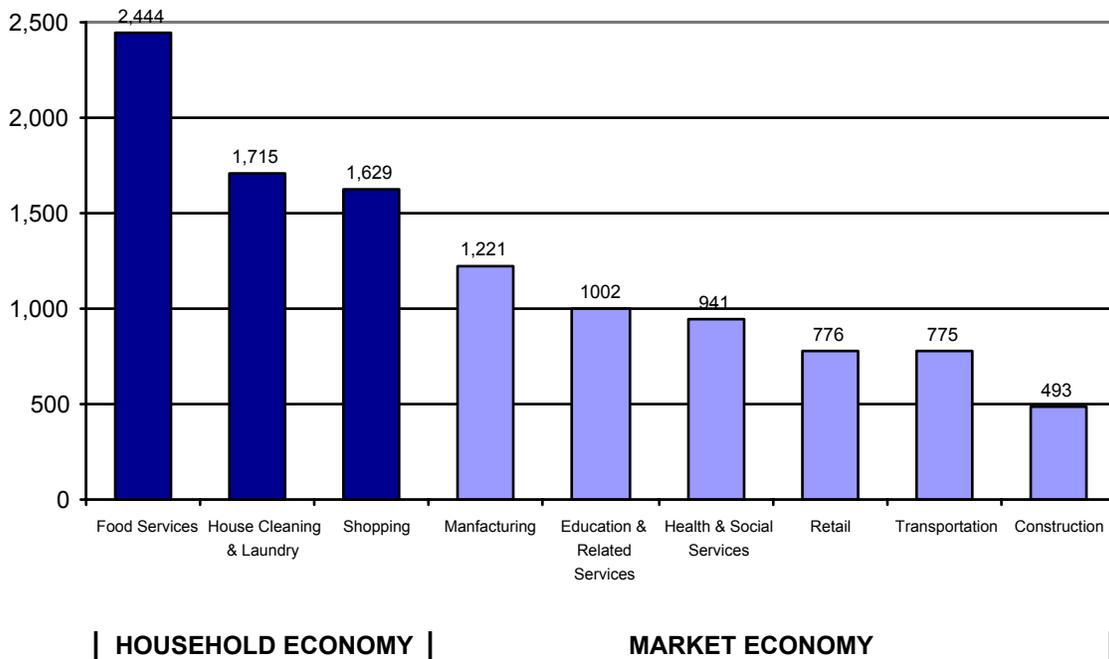
If wages were paid to household workers at the same rate that people currently hire domestic help and child-care to perform these functions, the payroll in each of the major sectors of the household economy would exceed that of any other industry in the province (Chart 7.5).

Chart 7.4: Value of Labour Inputs to Food Service and Housecleaning Industries in Household Economy Compared to GDP at Factor Cost of Similar Industries in Market Economy (1997\$ millions)



Source: As in Table 7.2 above.

Chart 7.5: Value of Labour Inputs in Household Economy Compared to Annual Payrolls, Selected Industries, Nova Scotia, (1997\$ millions)



Sources: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*; Statistics Canada, *Households' Unpaid Work*; Statistics Canada, *Employment, Earnings and Hours, 1997*.

8. Conclusion, Data Recommendations and Policy Implications

*The welfare of a nation can scarcely be inferred from a measurement of national income as defined (by the GDP)....Goals for 'more' growth should specify of what and for what.*¹⁶⁵

Simon Kuznets, original architect of the GDP.

8.1 GPI and GDP Revisited.

This study illustrates quite graphically the difference between the assumptions underlying the Genuine Progress Index and those that misuse the GDP as an overall measure of societal well-being and progress. Conventional economic analysis, based on market statistics alone, assumes that the production of ever more goods and services resulting in economic growth necessarily produces social benefit. Increased expenditures on goods and services make the GDP go up whether or not resources are efficiently used. More spending, called “consumer confidence,” is taken as a sign of a robust, healthy and strong economy.

In fact, it might even be said that increased inefficiencies are good for the GDP and for economic “progress”. The more rapidly consumer durables have to be replaced, the more production is stimulated, the more output is produced, and the more rapidly the GDP rises. If longer work hours are necessary to finance higher levels of consumption, this is registered as an additional gain in the GDP and thus “benefits” the economy twice over by stimulating output from both the production and consumption sides.

As the study of non-market household production demonstrates, “more” may not necessarily be “better” from the perspective of “genuine progress”. As we have seen, the GPI views household spending not just as consumption of goods and services, which is the conventional economic viewpoint, but as investment in household production. As such an efficient use of capital leads to increased productivity while inefficiencies in resource use lead to declining productivity.

From the GPI perspective, smaller investments and reduced household spending may well be more efficient when the household is seen as an economic unit. If over-investment in household capital engenders increased debt and necessitates longer work hours to pay for new equipment, then a reduction in household spending may be a more rational response than heightened “consumer confidence”.

¹⁶⁵ Kuznets, Simon, *The New Republic*, Oct. 20, 1962

In each case the benefits of increased production must be weighed against the costs. Benefits include the value of goods and services currently measured in the GDP, as well as the value of unpaid household and voluntary work that is not counted in the GDP. It also includes increased living space and qualitative improvements in outputs. Costs include limitations like time use and natural resource and energy consumption. While this study falls far short of a full benefit-cost accounting of household production, since it excludes qualitative factors on both sides of the equation, the consideration of time use and household capital variables alone may be seen as a small step in this direction.

For example, shifts from the household economy to market-based production may produce benefits in increased income, convenience and variety, but may also potentially produce inefficiencies that outweigh the gains of higher income. If the prices of market substitutes rise faster than incomes; if more work time is necessary to pay for these market substitutes; and if indirect costs result from increased market dependence; then the costs of the shift may well exceed the benefits. Costs may also be borne in changes in the quality of life, such as reduced parental time with children.

Unlike the GDP, therefore, the Genuine Progress Index does not count the shift from unpaid household production to the market as an unqualified good. Instead, it seeks to evaluate benefits and costs to determine whether a particular investment pays off or not. As methods for measuring household outputs continue to evolve, it eventually should be possible to determine the actual rate of return on household capital investments.

In the meantime, by including the value of labour inputs into household production, and, in module four, the value of free time, the GPI takes a small step towards a more complete, multifaceted view of economic activity than market statistics alone possibly can. It is an approach that corresponds more closely with people's actual *experience* of the economy, which includes non-market factors like time use, stress levels and the struggle to balance work and family responsibilities.

While these outcomes are directly felt, there may be less awareness of contributory causes such as over-investment in household capital, subtle gender inequities, and the indirect costs of certain shifts between the household and market economies. It is a goal of the GPI to make such possible cause and effect relationships more visible so that remedial action can be considered. For example, the high poverty rates of single mothers are well known, but these are rarely traced to the failure to assign value to household production. When this relationship is understood, it will be easier to overcome the problem.

Indeed, the GPI attempts to integrate such quality of life variables into the system of economic accounts to provide a more comprehensive picture of actual societal well being and progress. In particular, measuring unpaid housework and parenting is critical in monitoring the gender division of labour in the household and gender equality as a whole.

From this larger perspective, a reduction in household spending and housework, and an increase in free time, may signify more genuine progress than ever increased spending that produces greater debt and work loads.¹⁶⁶ One of the greatest obstacles to such progress is the reliance on housing options that require ever deeper financial commitments and that produce declining economies of scale and inefficiencies in resource use. In the long term, the Danish and Swedish models discussed in this study as well as collaborative and cooperative housing options in North America, may be worth investigating in this country.¹⁶⁷

8.2 Rediscovering “Economy”

The original Greek derivation of economics, *oikonomikos*, is from *oikonomia* (“management of the household”), from *oike* (house, farm, community), and thus *oikos*, *oikia* (household) and *nomos* (rule, norm). In its original meaning, therefore, economics is related to domestic rather than social production. Modern dictionaries define “economy” more broadly in terms of the management of human welfare:

1, avoidance of or freedom from waste in expenditure or management; thrift.

2, a system of management of resources, esp. pecuniary¹⁶⁸

The term “economy,” in both its original meaning and its correct modern usage, is not simply the total quantity of market goods and services, as reliance on the GDP implies and as the term “Canadian economy” is used popularly. Instead a sound economy refers to the efficient *management* of resources. In this sense the GPI attempts to rediscover the original meaning and correct modern usage of the word. The index is basically an investment-oriented management approach that relies on benefit-cost analysis and a balance sheet rather than current income analysis of progress. It is based on “economy” in the sense of discovering the right *balance* between benefits and costs and the point of most efficient limit. Where is the point of most efficient investment, where the greatest rate of return will flow from the lowest cost?

In this sense the GPI applies basic business principles to the provincial accounting framework. Because its unit of analysis is the whole society, it differs from conventional business practices only in substituting a more multifaceted approach that includes social

¹⁶⁶ This issue will be explored in more detail in module 4 of the GPI on the valuation of free time. Needless to say, free time per se does not necessarily contribute to well-being and progress. The time use data in module 4 attempts to approach this issue by distinguishing between passive and active free time. Some studies have attempted to classify work and leisure activities and to refine their definitions by balancing the subjective perceptions of actors against the objective outputs of particular activities: See References: Harvey, “Objective and Subjective Approaches” (1993), Shaw, “The Meaning of Leisure” (1981); Elchardus, “Towards a Semantic Taxonomy” (1993).

¹⁶⁷ McCamant, op. cit., *CoHousing*; Fromm, op. cit., *Collaborative Communities*; and the cooperative housing program of the CMHC in the 1980s, mentioned earlier.

¹⁶⁸ *Oxford English Dictionary*; *Webster Dictionary*, (eds. Albert and Loy Morehead), New American Library, Chicago. Martin, Thomas, *Overview of Archaic and Classical Greek History*, at Tufts University website: <http://hydra.perseus.tufts.edu>

and environmental benefits and costs for a uni-dimensional view which considers only the increased quantity of market production.¹⁶⁹

To that end, the GPI balances market income and consumption on the one hand against other constraints, in this particular case efficiency in time and household capital use. Future studies of household production may find ways of including and measuring qualitative variables and resource consumption not yet considered in this analysis. While this study focuses on the relationship between market and non-market variables, later GPI reports will apply the same approach to environmental constraints, including resource availability and the capacity of the environment to absorb waste. Though these factors directly determine whether or not we are making genuine progress, none of them are currently considered in our conventional “economic” accounting methods.

The original meaning of “economy” then refers to the most efficient use of resources, whether of time, natural capital, human potential, or money. This efficiency, according to the fundamental assumptions of the GPI, translates into enhanced quality of life. If quantitative growth in market output occurs at the *expense* of free time, environmental quality, social harmony or increased security, then it may be synonymous with a declining quality of life rather than genuine progress.

In this study on the household economy, as with all future components of the GPI, the only proof of accuracy, ultimately, is whether the analysis accords with people’s actual *experience* of the economy. Too frequently, the pronouncements of experts that we should be feeling good because our economy is growing, have not been in accord with people’s experience.

From the perspective of the GPI, then, true “prosperity” in objective terms is inseparable from the subjective sense of “well-being” that citizens actually experience. The GPI attempts to create this linkage by quantifying critical non-market factors omitted from the conventional accounts. In this particular case, the critical factors are time use; the quantity, type and value of unpaid production within the household economy; and the gender division of labour and gender equality, none of which factors are currently considered in the GDP or in other market statistics.

When these non-market characteristics, which have a direct impact on well-being and prosperity, are considered in *relation* to conventional market statistics, two crucial things happen. First, a range of important issues, otherwise hidden or invisible in the public policy arena, is brought to the surface. As this report demonstrates, none of these issues

¹⁶⁹ It is most important here to recall that monetization in the GPI is not an end in itself, but only a temporary measure designed to communicate with the world of conventional economics so long as market statistics dominate the policy arena. See section 4 of the forward, and pages 31-32 of the previous data release on the value of voluntary work, for a discussion of the drawbacks of monetization. If the assignment of monetary values were the primary goal of the GPI, then it would still be a uni-dimensional view based on money. For this reason, the time valuations are always presented first in these reports, and the assignment of monetary values is a secondary and dependent step. Similarly, in the environmental reports that are to follow, physical accounts will always precede monetary accounts.

are esoteric or insignificant. They are the bread and butter of what might be called “the economics of daily life.”

Secondly, as soon as we balance one set of variables, namely market growth, against others, such as time use, resource availability, and the value of unpaid household production, the question of limits necessarily arises. This is particularly clear in balancing time use variables with market indicators because, unlike industrial output, time is clearly finite. We all have 24 hours in a day and no more. How effectively we use that time is a measure of genuine progress.

Market statistics create the illusion of limitless growth. According to the GDP, the more goods and services the market produces, the stronger and more robust experts describe the economy as being. Introducing a limiting factor like time use, with inherent natural boundaries, in itself invites a weighing of benefits and costs, just as later modules on natural resource capacity will necessarily raise the same question. This is the fundamental reason that measuring household production based on time use surveys can be a powerful analytical tool for more accurate appraisals of economic progress.

None of this implies that market growth and increased consumption are never advisable. As Simon Kuznets, original architect of the GDP noted, “goals of ‘more’ growth should specify of what and for what”. In some cases, like the 70% of Nova Scotia single mothers living below the low income cut-off, some growth in income certainly will enhance well-being and prosperity. In other cases, like over-investment in household capital or fishing capacity, increased spending and market output may produce waste; under-utilization of capacity; increased debt; and longer working hours, all of which may detract from well-being, the quality of life, and ultimately from social prosperity.

This recognition of limitations and constraints on market production, which is inherent in the GPI approach, is a return to the original meaning of the word “economy”. The following recommendations, which flow from the data in section 5, are small steps that can be taken towards the more efficient management of resources, the basic goal of economics in the true sense. They are steps which can produce genuine progress in enhancing the quality of life and well-being of Nova Scotians.

8.3 Data Recommendations

- 1) The most basic recommendation is to track the value of household production regularly. This is not difficult to do. If only a tiny portion of the resources currently devoted to keeping track of market statistics were dedicated to an annual time use survey, it would provide invaluable information at a very low cost, both on the health of the household economic sector and on the value of voluntary work.

The most accurate time use survey method is through time diaries. We are fortunate to have here in Nova Scotia one of the world’s foremost pioneers in developing time use surveys for Statistics Canada, for the European Community and for international

organizations throughout the world. Dr. Andrew Harvey, of Saint Mary's University's Economics Department, is Director of the Time Use Program at the university and President of the International Association for Time Use Research. Drawing on Dr. Harvey's expertise and that of other pioneers at Statistics Canada, a simple, annual time diary survey could be designed to provide the fundamental information needed to track trends in the household economy, to update the Genuine Progress Index, and to set an example nation-wide.¹⁷⁰

Time use surveys were first administered nationwide in Canada in 1986, and there have so far been only three. The results of the third one will be released next year. These are still administered only once every six years. With increasing recognition of the importance of tracking shifts between the household and market economies, the time is ripe for annual surveys. These need not be as complex and comprehensive as the six-yearly Statistics Canada surveys in order for them to provide information of vital importance to the decision-making process.

- 2) At the federal level, Statistics Canada can estimate the value of household capital regularly, by distinguishing expenditures on investments in household production from those that are purely consumptive. This has been done once on an experimental basis, as described in section 6.4 above, by integrating service flows from the stock of consumer durables with the value of household work to estimate the annual contribution of household equipment and vehicles to production in the household economy. Including such measurements of household capital in the valuations of household production will encourage analysis of efficiencies and inefficiencies within the household sector with a view to developing alternatives that can enhance the quality of life and increase free time.
- 3) Statistics Canada can also continue to support efforts to develop output measures for the household economy, which will eventually allow more accurate estimations of the rate of return on capital investments in the sector.
- 4) At both the federal and provincial levels, governments can revise GDP growth estimates to account for shifts between household production and market-based production. All of these steps will focus attention on vital non-market variables that directly affect the daily quality of life of citizens and bring previously hidden issues into the policy arena.

¹⁷⁰ One suggestion currently under consideration is a detailed time use survey every five years for benchmark data and then an annual, scaled-down version aimed at getting the minimal data needed to interpolate and extrapolate the benchmarks (Chris Jackson, Statistics Canada, personal communication, 14 September, 1998). This annual version would allow the GPI time use modules to be regularly updated.

8.4 Policy Issues

Of the following policy issues, the first concerns government, the second business, and the remainder households directly. While government can provide leadership and example, the shifts in consciousness proposed in this report can only take root when they manifest in household management itself. As with the conclusion above, it should be noted here that all viewpoints are those of the author. They are not intended to be prescriptive but rather to provoke discussion and debate.

- 1) Policy analysts can focus particular attention on social supports for those dependent on household production, such as single mothers unable to seek full-time employment while still fulfilling their responsibilities to their children. The dilemmas of full-time employed mothers, who have the heaviest total work burden and most severe time crunch as they struggle to balance job and family responsibilities, must also become a focus for policy attention if we are to enhance the quality of life at the household level.

Consideration of productive work in the household economy ultimately should penetrate every sector of policy-making, including taxation credits, pension benefits, supports for unattached elderly women, pay equity, child care and many other issues.¹⁷¹ As a prerequisite for this change, it is necessary to recognize labour inputs into household production as bona fide work, and thus to see social supports for those dependent on this production as essential social infrastructure for the household economy, rather than as “welfare handouts”.

In particular, it is crucial to track the gender division of labour in the household and to measure this in connection with related gender equality indicators such as income differentials, property ownership and access to credit. These connections will emerge naturally when unpaid work, mostly done by women, becomes more visible and recognized.

Specific policy outcomes and targets, therefore, should include a decline in child poverty levels and in low income status for single mothers and unattached elderly women; a narrowing of gender pay inequities; improved access to credit for women; and a reduction in the gender inequities described in section 3.3 above.

¹⁷¹ There are hopeful signs that policy makers increasingly will have at their disposal the data necessary to make informed decisions that incorporate time use and household production data into social policy. The work of Leroy Stone at Statistics Canada is especially focussed on making such information available and accessible. See for example, Stone, Leroy and Marie-Therese Chicha, *The Statistics Canada Total Work Accounts System*, Statistics Canada, catalogue 89-549-XPE. Chris Jackson, Statistics Canada, writes that “a new project is just underway here at Statistics Canada to incorporate time use data into a model that simulates individual life-paths and has the capacity to evaluate the impacts of various policy scenarios” along the lines described in this recommendation (personal communication, 14 September, 1998).

It may be helpful, for the purposes of illustration, to give one specific example from the time use literature of a concrete social policy application. The valuation of household production can provide the ground for the Canadian government and parliament to meet their commitment to eliminate child poverty by the year 2000. In Chapter 2 we noted the intimate connection between child poverty in Nova Scotia and the fact that more than 70% of single mothers in the province live below the low-income cut-off.

In her seminal work on time use measures in the setting of Canadian poverty thresholds Robin Douthitt provides strong evidence that poverty thresholds based on money alone make it extremely difficult for single mothers to change their status. 86% of those who do not work due to home and family responsibilities fall below the poverty line.

Most of those who do work pay a substantial portion of their income on child-care, and cannot find the minimum required household production time to meet the basic food, cleaning, laundry and child-care needs of their family and home. According to official government income standards, 42% of employed single mothers are poor, but that poverty rate climbs to 71% when both time and income are considered. In other words, getting a job does not significantly improve a single mother's ability to climb out of poverty.

Douthitt concludes that

*recognition of the economic value of home production activities in developing social welfare programs is long overdue....Public assistance programs aimed primarily at poor mothers neglect to account for the fact that as time spent in the paid labor force increases, so do the economic demands faced by the family as less time is available...to prepare foods from scratch and care and maintain a home.*¹⁷²

She recommends that welfare reform efforts explicitly recognize time poverty and its relationship to money poverty, and that public assistance payments increase when program recipients enter paid employment. She notes that, at a replacement cost rate of \$5 an hour, time adjusted poverty thresholds for families with children would be about 50% higher than current official levels.¹⁷³

Adjusting the low-income measure to account for essential home production activities would therefore significantly reduce child poverty levels. Since poverty is also positively correlated with poor health, nutrition and educational attainment,

¹⁷² Douthitt, Robin, "The Inclusion of Time Availability in Canadian Poverty Measures", in ISTAT, *Time Use Methodology: Toward Consensus*, Istituto Nazionale di Statistica, Roma, Italy, 1993, pages 90-91. See section 3.3.1 above for discussion of time poverty, defined as time less than the minimum necessary for essential basic household production, including food preparation and cleanup, home care and cleaning, laundry and shopping.

¹⁷³ Idem., pages 85-87.

eliminating child poverty would constitute a substantial investment in human capital and sustainable development.

- 2) Businesses and unions can consider the needs of the household economy in discussing flexible workplace arrangements for both men and women that accommodate family needs. Job-sharing, flexible hours, working from home, and other family-friendly work options have been shown to increase actual productivity while easing the stress of juggling household and paid work duties.

A provincial conference on flexible work arrangements, including representatives of businesses, workers, women's groups and government, would be a sound first step to reducing time stress, particularly for employed mothers, without turning back the clock on hard-earned gains towards gender equality in the market economy. The conference target could be a joint statement of "best practices" for Nova Scotia employees, to provide a standard towards which employers can strive and by which they can work.

- 3) At the most basic level, households need to review their investments in household capital to determine whether they are producing an adequate rate of return. In some cases they simply need to stop spending in order to protect their time and reduce their debt levels. The "work-and-spend cycle", as described by Juliet Schor,¹⁷⁴ is a deeply ingrained habit in the modern world that is closely related to the purely materialist accounting methods on which we have relied for so long.

While the measure of well-being and prosperity is material accumulation, little progress can be made in overcoming the inefficiencies of household production described in this study. Only when household members look deeply at the goals and values of household production, can vital non-market variables (such as quality time with children) be balanced against the income and consumption magnets of the market economy. While this study stops short of a full qualitative benefit – cost analysis of household production, even the introduction of one limiting factor like time use begins to question the habitual and dominant reliance on materialist measures of progress alone.

According to Schor, the only way to overcome the work and spend cycle is to see through the pitfalls of consumerism, and to recognize that a sense of richness, well-being and plenty can be attained independently of material goods, by adopting a simpler life style and by reducing desires.

Stepping off the consumer treadmill (writes Schor) requires altering a way of life and a way of thinking....The consumerism that took root in the 1920s was premised on the idea of dissatisfaction. As much as one has, it is never enough....Today's luxuries become tomorrow's necessities, no longer appreciated....If more is better, discontent will not be far behind. Discontent is

¹⁷⁴ Schor, op. cit., *The Overworked American*, Chapters 5 and 6; also Schor, *The Overspent American: Upscaling, Downshifting, and the New Consumer*, New York, Basic Books, 1998.

*relieved, over and over again, by acquiring more. Where desires are infinite, the process of acquisition will become infinite itself.*¹⁷⁵

Examining the household economy and its implications for quality of life therefore raises profound philosophical questions. Recommendations in this area clearly go well beyond making demands of government and business. Time use data necessarily provoke households and individuals to examine their own behaviours, values and assumptions. Since investments in household capital are tied directly to output goals, changes in spending patterns will be linked directly to changes in household life style.

There are no simple answers or formulae for how to reduce household capital expenses without increasing labour time. This needs exploration, as suggested in section 7 (c) below. It will likely require a very practical productivity evaluation for each appliance, to determine frequency of usage; quantity and quality of output produced; time saved or added in production, maintenance and cleaning; and the costs and benefits of alternative methods of production, just as any business person evaluates the need for a new piece of machinery or any other capital investment. The real challenge is to *see* household expenditures on appliances as capital investments in productive output rather than as simple consumption.

It is paradoxical that while businesses have been restructuring and downsizing in order to cut costs, household expenditures have continued to rise despite lower incomes. This study suggests that a fundamental reason for this paradox lies in the false dichotomy between firms as producers and households as consumers that pervades classical textbook analyses of the economy. Seeing households as producers of goods and services with direct economic value can encourage cost cutting strategies in the household that evaluate the returns on investment just as businesses do.

- 4) Households can also begin to evaluate the benefits and costs of shifts between the household and market economies. Simple budgeting procedures to evaluate the percentage of the household food budget spent on restaurant and take-out food can help households evaluate comparative costs on a monthly basis. Nutritional comparisons can take the process further. Households can evaluate how many additional work hours are required to pay for child-care expenses, and what the trade offs are between direct parenting in the home and external child-care. Simple home diaries can determine the amount of direct child-care time available in a given week.

Needless to say, there are many other factors that households can evaluate in this equation, depending on their own needs, values and preferences. The critical issue raised in this study is the need to give full weight to the value of household production rather than assuming its subordination to the requirements of the market economy. The long-term historical shift from the former to the latter has appeared so inexorable for so long that it is time to redress the balance by recognizing the vital contribution still made by the household economy.

¹⁷⁵ Schor, *The Overworked American.*, pages 157, 122, 137

- 5) Households can consider reapportioning household duties in accordance with total work loads to ensure greater gender equity in the household division of labour as well as in the market economy.
- 6) In the long-term, households can benefit from investigation of methods of sharing household capital, including more efficient community-based housing options that increase economies of scale; share household capital costs; reduce housework time; provide solutions to child care dilemmas; and enhance the building of local communities. The Danish co-housing model has already been suggested, and there are many innovative examples of collaborative and cooperative communities springing up in North America as well as Europe that merit investigation.¹⁷⁶

Even short of such major long-term infrastructure shifts, simple neighbourhood exchanges can point towards more efficient use of household capital investments. For example, how many snow-blowers does one suburban block need? Can car-pooling options be expanded for household production needs, including shopping and transportation of children? The 1996 census questions on car-pooling to work indicate that Nova Scotians are more likely to share transportation than most other Canadians. Such cooperative attitudes are an asset of this region that can form the basis for more shared and efficient use of household capital.

- 7) None of the above are intended as fixed conclusions or prescriptions, but as subjects for discussion and debate that arise naturally from the valuation of household production. Genuine progress can be made from a series of community and regional seminars and conferences, including business and worker representatives, government, homemakers, community organizations and women's groups, to explore the options outlined above and to recommend concrete actions. Key questions for such seminars include:
 - a) How can the valuation of household production assist government in formulating strategies to overcome poverty among Nova Scotian children, single mothers, unattached elderly women and other groups with disproportionate poverty rates who are particularly dependent on the household economy? What changes are necessary in the assessment of poverty thresholds and pension benefits? What kinds of social infrastructure are appropriate to support the household economy, to recognize and enhance the value it creates, and to invest in the human capital on which the health of the market economy ultimately depends?
 - b) How can employers and employees work together to create flexible workplace arrangements, including job-sharing, flex-hours and working from home, to reduce time stress and maintain a balance between paid and unpaid work

¹⁷⁶ See McCamant, *CoHousing*, and Fromm, *Collaborative Communities*, cited above. The U.S. magazine *CoHousing Quarterly*, and the Canada Mortgage and Housing Corporation also have information and studies on the issue.

responsibilities without reducing market productivity? Is it possible to devise a set of “best workplace practices” as standards and targets to which businesses might aspire, and on the basis of which annual awards might be given?

- c) How can households increase the efficiency of their production processes by reducing capital expenditures that do not save time and labour and by evaluating the benefits and costs of shifts between the household and market economies, particularly the trends in child-care, eating out and shopping? In the long term, how can households effectively share investments in household capital, and explore cooperative housing and living arrangements that can enhance efficiency in the use of equipment, time and space while strengthening community?
- d) How can gender equity be enhanced in both the household and market economies?

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Addendum: Additional Selected Bibliography

Note: The following additional references are kindly provided and recommended by Stella Lord, researcher, Nova Scotia Advisory Council on the Status of Women.

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