

MEASURING SUSTAINABLE DEVELOPMENT

APPLICATION OF THE GENUINE PROGRESS INDEX TO NOVA SCOTIA

THE ECONOMIC VALUE OF UNPAID HOUSEWORK
AND CHILD-CARE IN NOVA SCOTIA

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EXECUTIVE SUMMARY

1. The Nova Scotia Pilot Project

It is now widely acknowledged that market statistics like the GDP are inadequate as measures of social progress and frequently send misleading and inaccurate signals to policy-makers. Increases in crime, toxic pollution, divorce, accidents and disease currently count as economic growth, as does the depletion of natural resources. The GDP can grow even if most people are getting poorer. And the value of unpaid work is ignored, resulting in actual over-estimates of GDP growth rates.

In fact, the GDP was never intended to be used as it is today – as an overall measure of well-being. Simon Kuznets, principal architect of the GDP, himself said:

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.

Improving the bottom line today may actually impose long-term costs, while investments in social and environmental assets can improve future productive capacity and economic prosperity.

For these reasons, much work has been done by international organizations, national statistical agencies and independent researchers to develop more comprehensive and accurate measures of progress that integrate social, environmental and economic indicators. For example, Dr. Lars Osberg, renowned economist at Dalhousie University and president-elect of the Canadian Economics Association, has recently developed an Index of Economic Well-Being for Canada, that includes the value of unpaid work, trends in equality, poverty, livelihood security, and several other important variables.

The time is now ripe for a practical, policy-relevant, provincial application of the new methods, and the Nova Scotia Department of Economic Development and Tourism together with ACOA have supported an effort that will enable Nova Scotia to take the lead in this important development. Last November, Statistics Canada designated the Nova Scotia Genuine Progress Index as a pilot project for the country.

Over the next two years, 20 components of the index will be developed, one at a time, with a view to assisting policy makers in applying the methods and developing the basis for a sustainable economy in the new millennium. These include natural resource accounts for forestry, fisheries, agriculture and subsoil assets, valuations of unpaid work, costs of crime, underemployment and pollution, trends in income distribution, health care, educational attainment and sustainable transportation, and other vital social, economic and environmental indicators.

The project will build on earlier work, and attempt to give as complete a description of each component as possible for policy purposes. Each module is reviewed in detail by Statistics Canada and by other experts and stakeholders, and is designed for easy replication by other provinces. An inter-provincial conference on the new methods is scheduled for Halifax in mid-1999, and a composite index of sustainable development will be drawn from the 20 components when the project is completed early in the year 2000.

2. Valuations of Unpaid Work

The first component, valuing civic and voluntary work, was released in July, and today's report on the economic value of unpaid household work and child-care is the second data release. These reports complement the findings of Dr. Osberg and others, who have also recognized the necessity of valuing unpaid production in their own work. Dr. Andrew Harvey of St. Mary's University's Economics Department, and president of the International Association for Time Use Research, has been a global pioneer in developing the time use surveys which are the basis for valuing unpaid work.

The Advisory Board for this report is listed on page 2, the basic replication methods for other provinces are on pages 92-93, and the policy implications are summarized on pages 107-112.

The study found that Nova Scotians contribute 941 million hours a year in unpaid household work, or 1,230 hours per adult, 25% more than the 707 million hours they work for pay. This work is essential to economic survival, well-being and quality of life, and is an essential precondition for a healthy market economy. Without it, social costs would rise and workplace productivity decline. If it had to be replaced for pay, it would be worth \$8.5 billion a year to the provincial economy, or 51% of GDP at factor cost.

Yet this vital contribution remains invisible, appearing nowhere in our conventional accounts. When we pay for child-care and housecleaning, or when we eat out, this adds to the GDP and counts as economic growth and "progress". Marry your housekeeper, and the GDP goes down. Cook your own meals and look after your own children, and it has no value in our measures of progress. In other words, shifts from the household economy to the market economy count, misleadingly, as economic growth, even though no additional production may be taking place.

We cannot properly understand the economy as a whole if we ignore the household sector entirely. Conventional economic texts describe firms as producers and households as consumers. A key to the new accounting methods involves a profound shift of view, seeing the household not only as a unit of consumption but as a unit of economic production. Canada's Chief Statistician, Ivan Fellegi, has said the issue is no longer "about whether unpaid work should or can be measured, it is about the most effective and efficient ways of going about it." This report is a contribution to that effort.

We have used Statistics Canada's time use surveys to determine the amount of time Nova Scotians spend preparing food, cleaning, shopping and doing house repairs. "Primary child-care" is counted as time spent feeding, dressing, washing, changing diapers, reading to and otherwise directly relating to children while not doing any other task. We then calculate what it would cost to replace these hours for pay at the current Nova Scotia market rate of \$9.20 an hour for domestic services and \$7.58 an hour for child-care.

3. Policy Implications

What is not counted, measured and valued does not receive attention in the policy arena. No matter how much we acknowledge the value of our human, social and environmental assets in principle, they will not be given priority if they are excluded from the economic accounting and financial systems which provide the primary cues for the actual behaviour of government, business and individuals. Measuring a hidden aspect of our economy, like household work, therefore inevitably raises vital policy issues that have remained invisible. Changing the accounting system therefore fundamentally restructures the framework of the policy process. Here are some examples.

a) Work Arrangements

The structure of the market economy has changed fundamentally in the last 40 years. Women have doubled their labour force participation. 71% of couples with children are now dual earners, compared to only 30% three decades ago. But our workplace arrangements have not accommodated the new reality and still reflect the reality of an earlier era in which there was one main earner and one main home-maker. The increasing time stress of balancing home and job responsibilities is still regarded as a personal, domestic problem, not a public policy issue.

When we measure unpaid household work and bring its contribution out of the shadows, the picture changes. We find that women's share of domestic chores and child-care has hardly changed in 40 years. Women still do twice as much as men. Even when both partners are working full-time, more than half of full-time working wives are solely responsible for all domestic chores and three-quarters of them do all the meal preparation, housecleaning and laundry. Working mothers put in an average of 11 ¼ hours a day of paid and unpaid work on weekdays and another 15 hours of unpaid work on weekends. They are the most time-stressed segment of the population.

There is a clear need for a more pro-active approach to flexible work arrangements that allow employees to balance the responsibilities of the market and household economies more effectively, including arrangements for flexible hours, job-sharing and working from home. If government gave an annual award to the business that most successfully reduced time stress

among its employees and adjusted work arrangements most successfully to the new labour market realities, workplace innovations would be greatly encouraged.

We are speaking here of the economics of daily life, and issues that directly affect the quality of life of all citizens. They cannot be properly addressed while maintaining an exclusive and narrow focus on paid work alone, as if it were separate from the daily reality of household production. The issue is not one for governments alone. The gender division of labour within the household will receive more attention when these measures are regularly tracked. While women's advances in the paid work sector are rightly viewed as a sign of growing freedom, women's loss of free time is rarely considered.

b) Gender Pay Inequities

The very types of work traditionally performed by women, and regarded as “free” in the household economy, are still under-valued in the market economy. Though good child-care requires more skill, intelligence, effort and constant alertness than many types of office, factory or store work, and is a direct investment in the human capital on which our future economy strength will depend, it brings just \$7.58 an hour on average. In fact, part-time domestic services, child-care and home-care are actually excluded from minimum wage requirements in the province.

The low wages paid for market equivalents of household work, and still overwhelmingly performed by women in the market economy, help explain why women still earn only 66 cents to the male dollar in Nova Scotia, even for full-time work. Properly valuing household work and the skills it fosters, including the ability to carry out multiple tasks, conflict management and organizational skills, can eventually help narrow gender pay inequities.

c) Ending Child Poverty

Valuing household work can provide the shift of view necessary to end child poverty in Canada. High rates of child poverty are directly correlated with high poverty rates for single mothers. 54% of Nova Scotia's 47,000 poor children live in single-parent families. But the average 50 hours a week of productive household work and child-care performed by single mothers are currently invisible and unvalued, and the needs of these women accordingly receive low policy priority. As a consequence, more than 70% of single mothers in Nova Scotia live below Statistics Canada's low-income cut-off, and this poverty is passed on to their children.

Those single mothers who do have paid jobs pay three times the portion of their income on child-care as married mothers and it is difficult for them to find jobs that pay well enough to cover their child-care costs and other expenses of working. Working single mothers still carry the unpaid household work burden alone, and therefore have only an hour a day of primary child-

care time with their own children. Not surprisingly, only 14% of lone parents in the Atlantic provinces are employed for the full year. The remaining 86% are either not in the labour force or are unemployed for all or part of the year. Because their household responsibilities limit their market options, single mothers are more than six times as likely to live in poverty as married couples.

Poor children have markedly higher rates of poor health, infancy death and respiratory illnesses and they perform more poorly in school than richer children, leading to high social and economic costs in the future. It would cost \$206 million to close the poverty gap for all poor children in Nova Scotia.

If household work is measured and valued as *bona fide* work of economic value to society, then social supports like family services, child tax benefits and subsidized child-care are seen as essential social infrastructure for the household economy, rather than as welfare. If effective child-rearing is viewed as a direct investment in human capital, such services are analogous to taxpayer support for business investment and job creation in the market economy.

In 1989 the Canadian Parliament unanimously voted to end child poverty by the year 2000. But there is now 40% more child poverty than at that time. The low policy priority of the issue is reflected in the fact that only two questions were asked on the issue during a year of parliamentary debate, compared to 87 on crime, 81 on the deficit and 32 on Quebec. Maclean's annual poll asking Canadians to identify the most important problem facing Canada did not mention "poverty" among the 19 options offered. Regularly measuring the value of unpaid household work can raise the policy profile of this vital issue and mobilize the political will to tackle the task.

d) Household Efficiencies

The study found that household work hours have hardly changed in 40 years despite the proliferation of "labour-saving" devices. Smaller households and more rooms per person have produced declining economies of scale in household production. For example, it does not take much longer to cook and shop for 6 people than for 3, and household equipment is less efficiently used for smaller numbers. At a time of declining real incomes and rising debt, continued household spending on capital equipment does not appear to be yielding a commensurate dividend in free time.

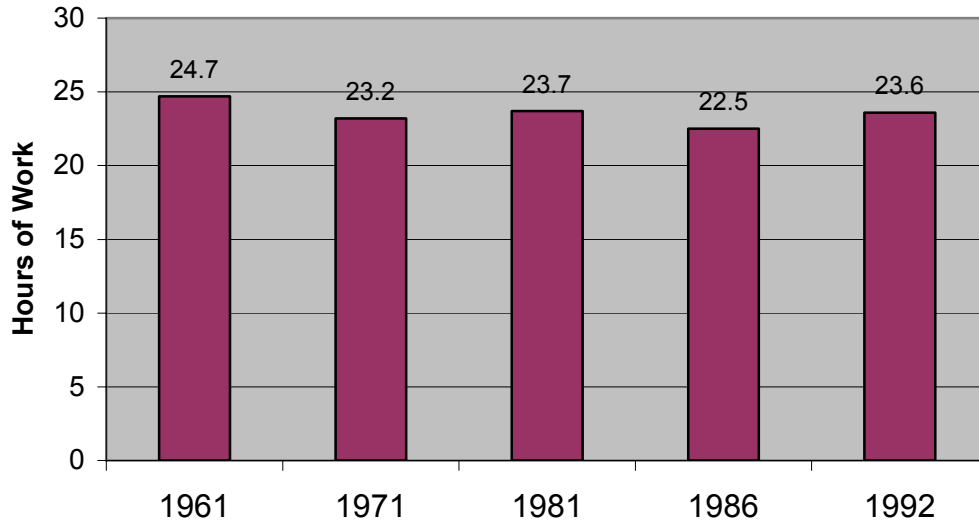
The Nova Scotia study attempts to value capital inputs into household production as well as labour inputs in order to examine the functioning of the household economy more closely. Comparisons with other countries reveal that citizens of Denmark, for example, do eight hours less housework than Canadians and have 11 hours more free time per week. In the long run, the

analysis suggests that more efficient living arrangements, including shared use of household capital equipment, might increase efficiencies in household production, increase free time and enhance the quality of life.

Measuring unpaid household work can also elucidate vital links between the market and non-market sectors. For example, the study found that the consumer price indices for those services that are shifting from the household to the market economy have risen faster than the overall consumer price index and much faster than wages. This means that Nova Scotians are paying more for paid child-care and for eating out at restaurants than their incomes allow. This information can encourage greater efficiencies in production and in strategic choices for households as well as businesses.

In sum, measuring and valuing unpaid household work is not a theoretical accounting exercise but a practical tool to raise the policy profile of hidden and neglected issues that directly affect the daily quality of life. It can help us better understand the economy as a whole and the important links between the market and non-market sectors, and to invest more effectively in the social and human capital on which future prosperity depends.

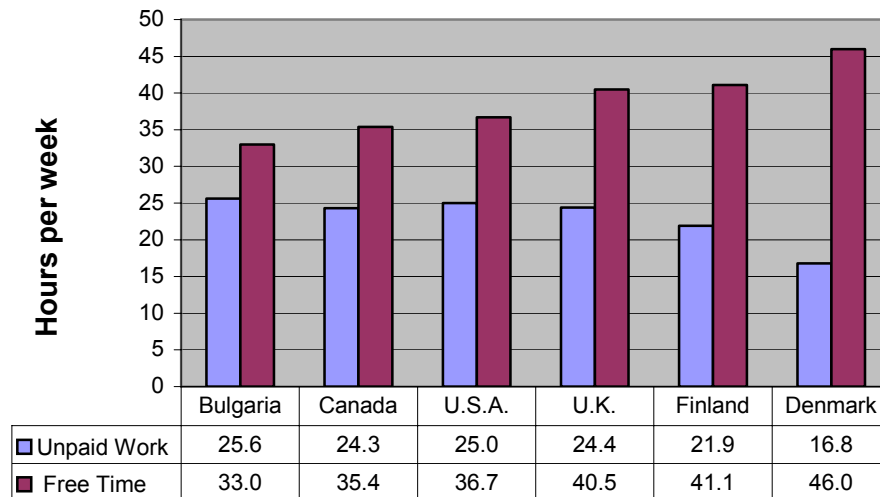
Chart 4.3: Unpaid Housework and Child Care, Nova Scotia, 1961-1992
Average Hours Per Person, Per Week, Population 15+



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.

Chart 4.5: Average Weekly Hours, Unpaid Household Work and Free Time Population age 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.

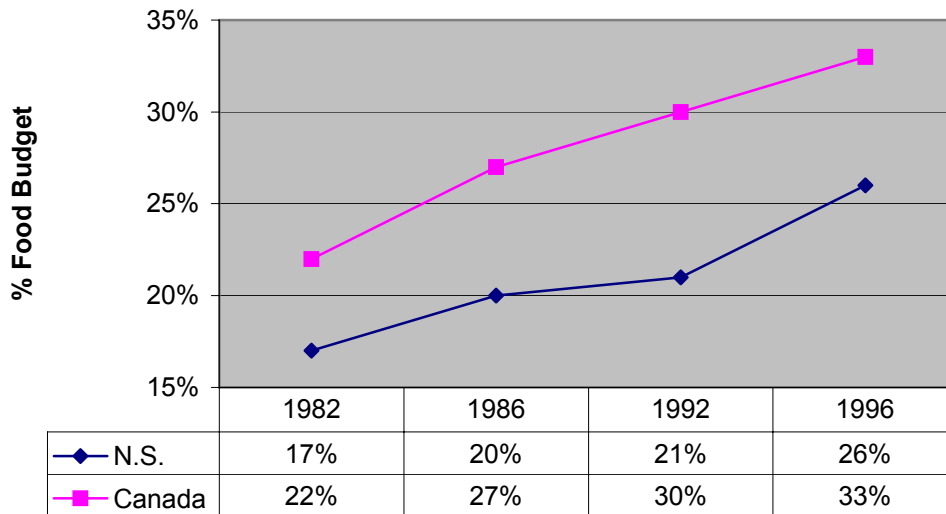
Table 4.1: Trends in Unpaid Household Work, Nova Scotia

| | Domestic Chores | Cooking/Washing | House-cleaning/Laundry | Shopping/Managing | Repair | Help & Care | Household Transport |
|------|-----------------------|-----------------|------------------------|-------------------|--------|-------------|---------------------|
| | <i>Hours Per Week</i> | | | | | | |
| 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 |
| | <i>Hours Per Day</i> | | | | | | |
| 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.

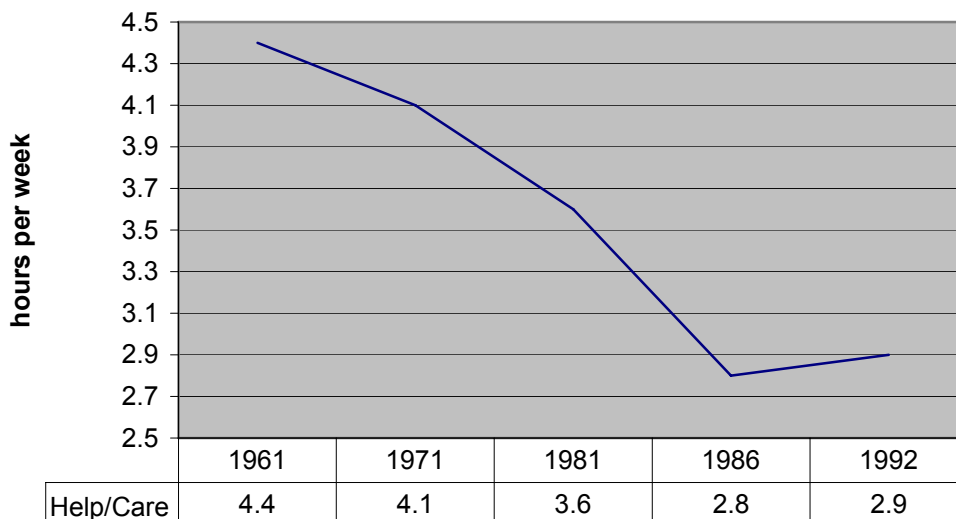
NOTE 2: The slightly higher shopping hours in 1986 may be due to the fact that the time use survey that year was conducted fairly close to Christmas. Although Statistics Canada made adjustments to the data to account for this fact, this probably only partially corrected the anomaly (Chris Jackson, Statistics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

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.

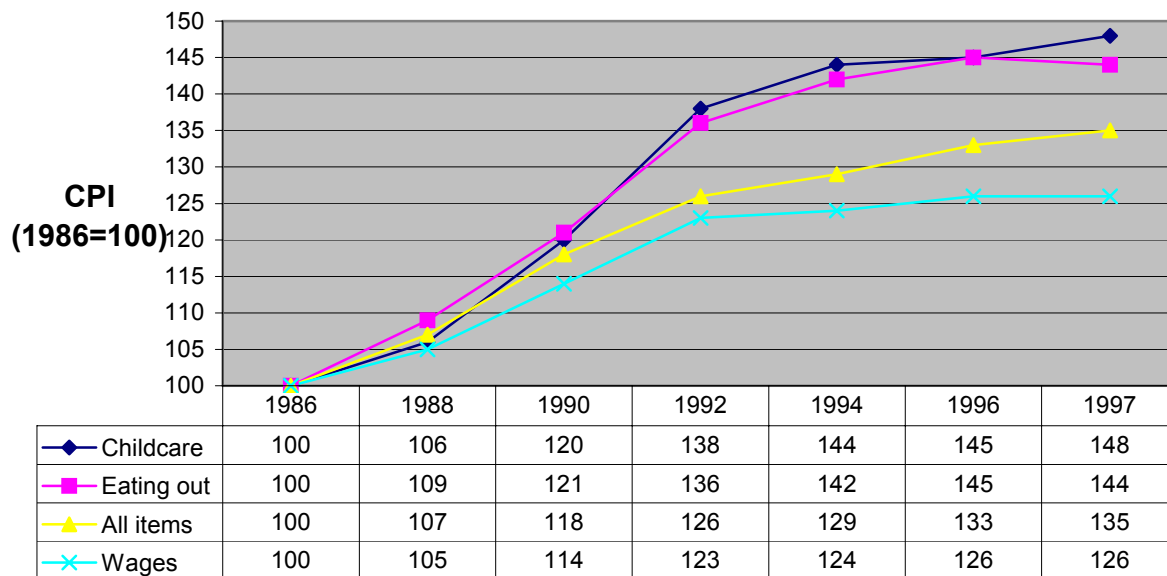
Chart 4.9: Weekly Hours of Household Help and Care*, Nova Scotia, 1961-1992



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

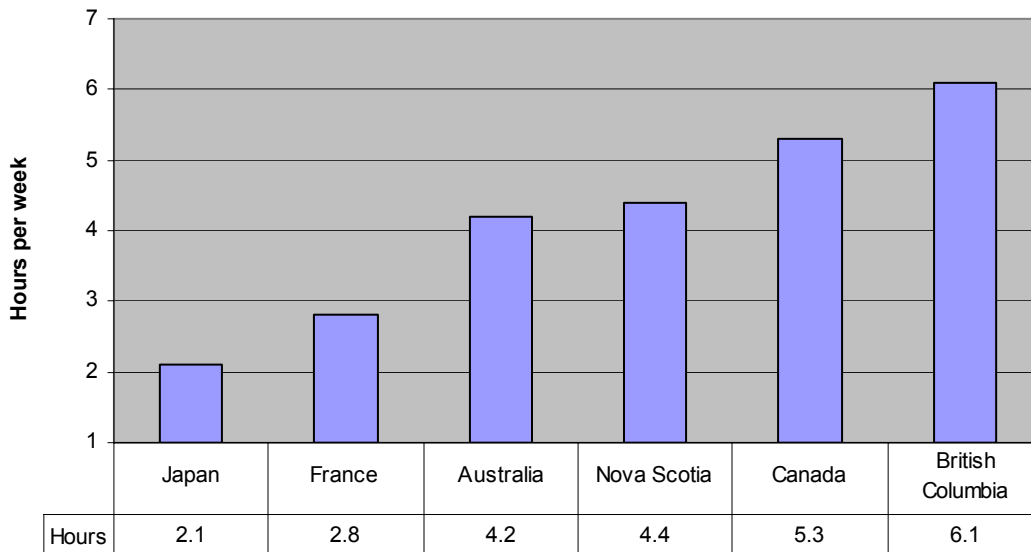
* The definition “help and care” consists mainly of primary child-care. But it also includes help and care to elderly, sick or disabled adults within the household. The assumption here is that this latter category has remained constant and the trend reflects changes in primary child-care hours.

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



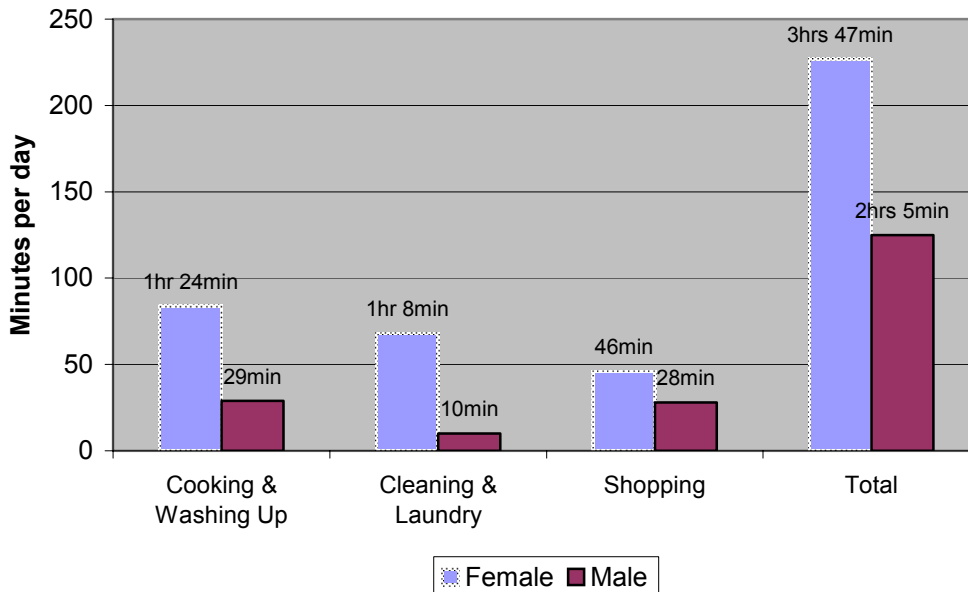
Sources: Statistics Canada. *The Consumer Price Index*, catalogue no. 62-001-XPB; and CANSIM database, 7466, P803032, 803050, and 803000; and CANSIM 1453, D703360: Average Weekly Wages and Salaries, Nova Scotia: Industrial Composite.

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



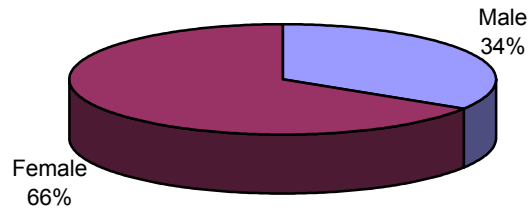
Sources: Statistics Canada, *Initial Data Release*, provincial tables; Andrew Harvey et. al., *Where Does Time Go?*, Statistics Canada, catalogue 11-612E, No. 4, page 56.

Chart 5.2: Female / Male Share of Domestic Chores, Nova Scotia, Average hours and minutes per day



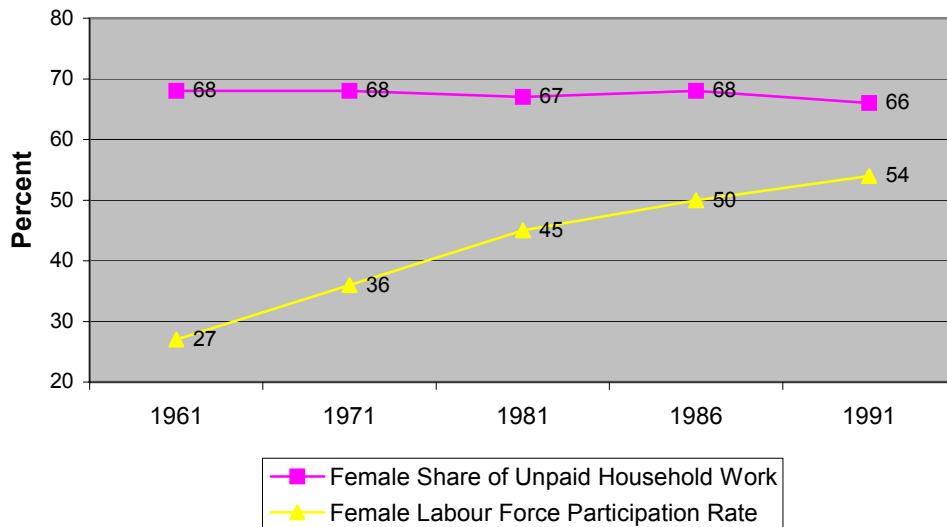
Source: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, Table 1; Statistics Canada, *Households Unpaid Work*, page 72.

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



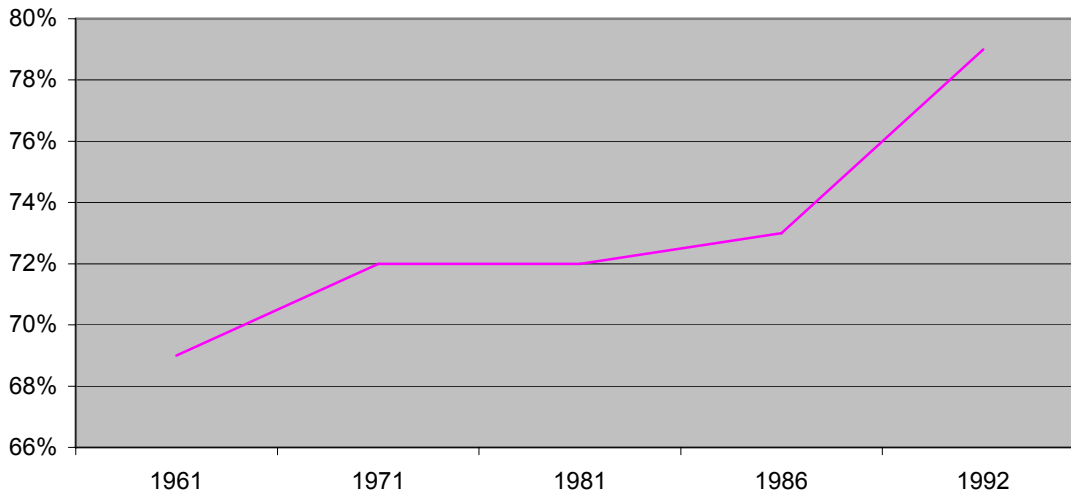
Source: Statistics Canada, *Initial Data Release from the 1992 General Social Survey on Time Use*, Table 1; Statistics Canada, *Households Unpaid Work*, page 72.

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 House Cleaning is Increasing in Canada



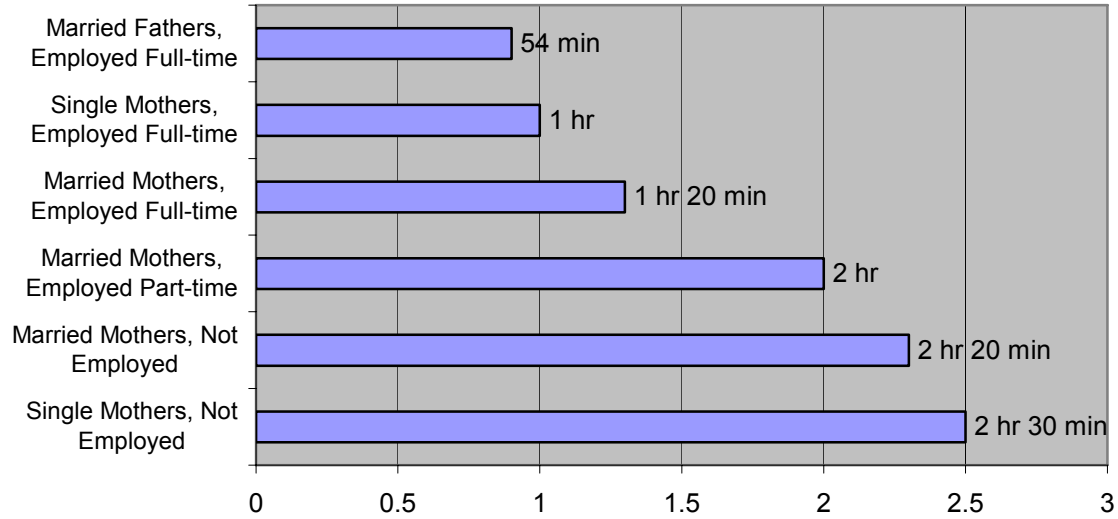
Source: Statistics Canada, *Households' Unpaid Work*, page 49

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.

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

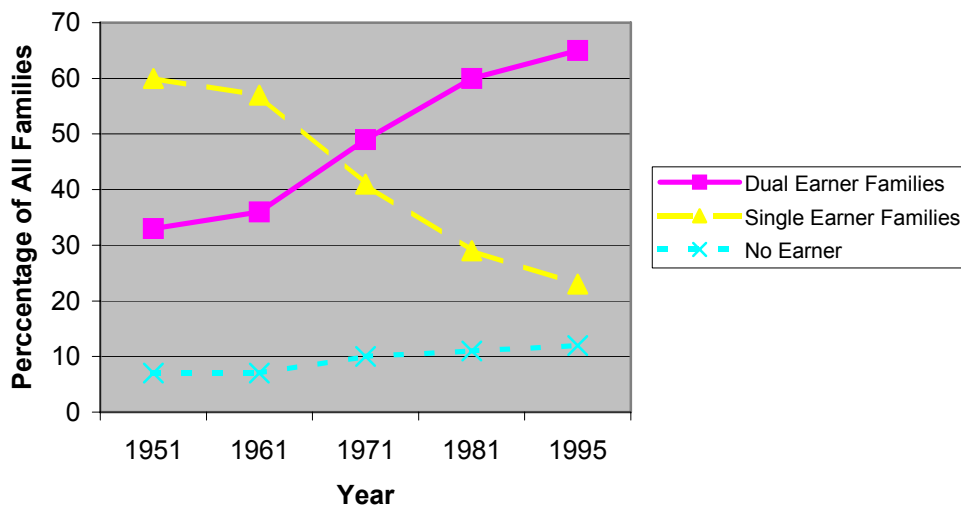


Source: Judith Frederick, *As Time Goes By...*, Statistics Canada, catalogue no. 89-544E, page 25

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.

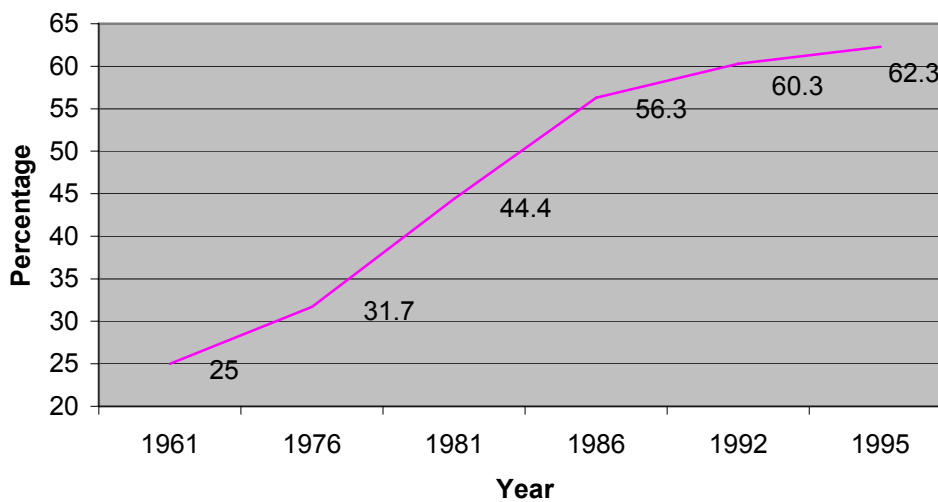
Working Mothers in Canada:

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 Age 0-2,

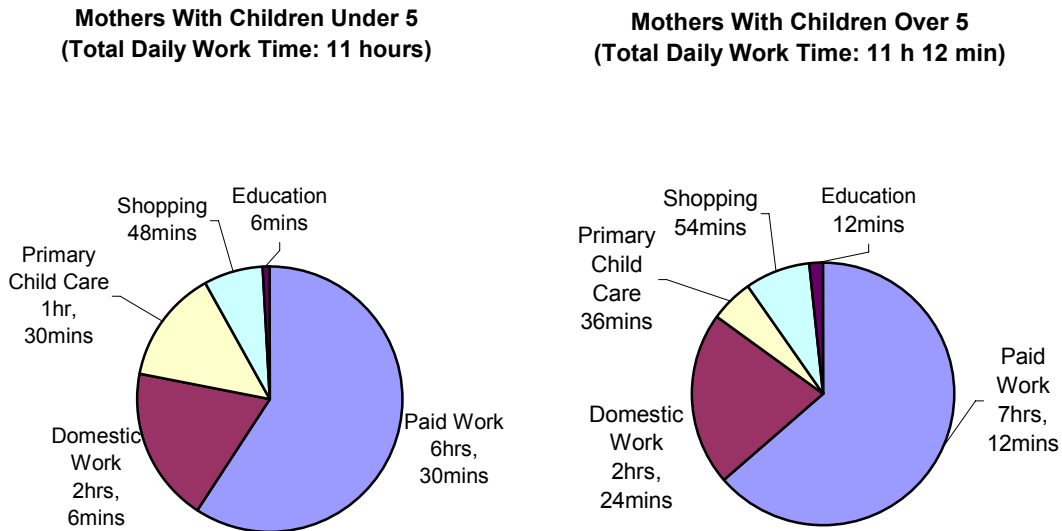


Canada, 1961-1995

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.

Chart 5.12: A Day in the Life of a Working Mother

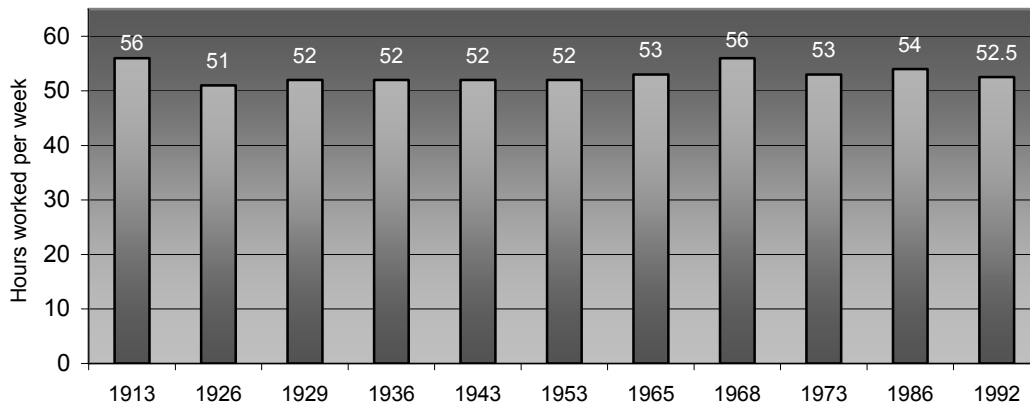
Average Weekday Work Hours, Employed Mothers, Canada



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 2 ½ hours each time.

Chart 6.1: The Constancy of Housewives' Unpaid Work: 1913-1992

A Survey of American and Canadian Studies

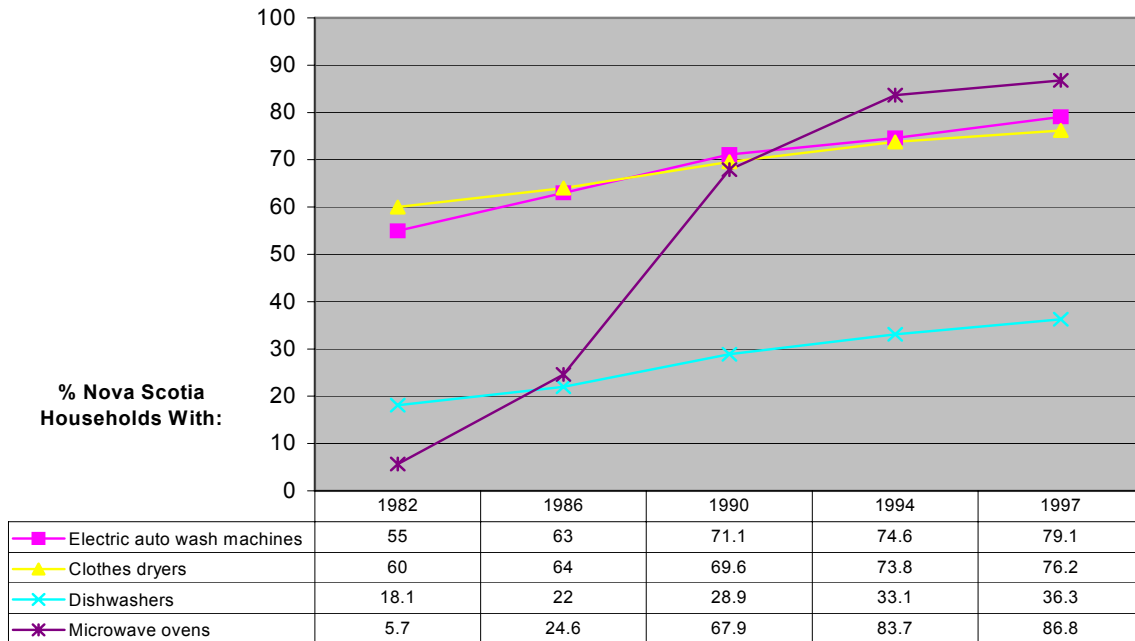


Sources:

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.¹

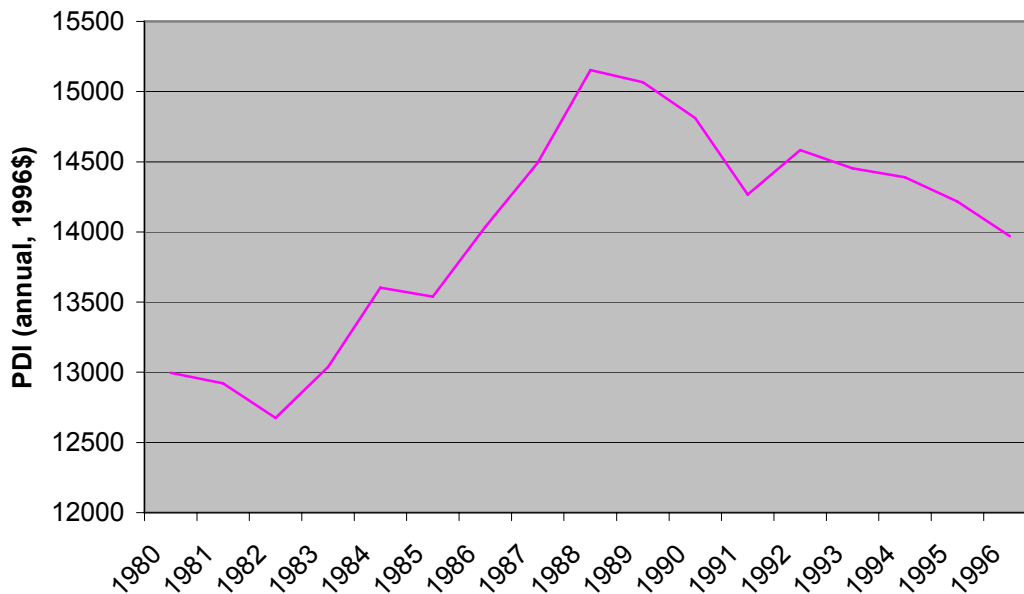
Note: All data refer to full-time housewives.

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\$)

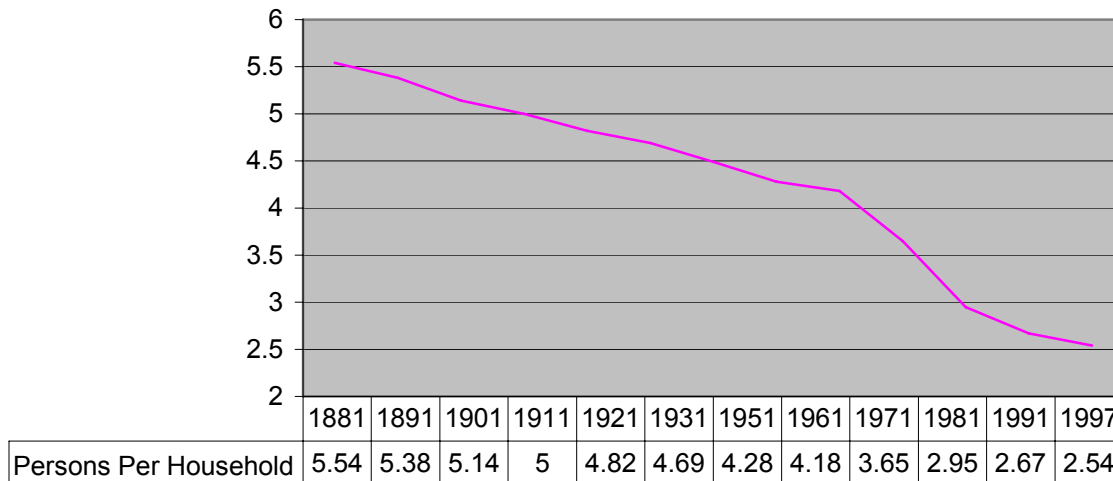


Sources: Personal Disposable Income from CANSIM database 5091, D43232; Consumer Price Index from CANSIM 7466, P803116, and Statistics Canada, *Canadian Economic Observer*, catalogue 11-210-XPB, 1996/1997

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 | % House- hold 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% |

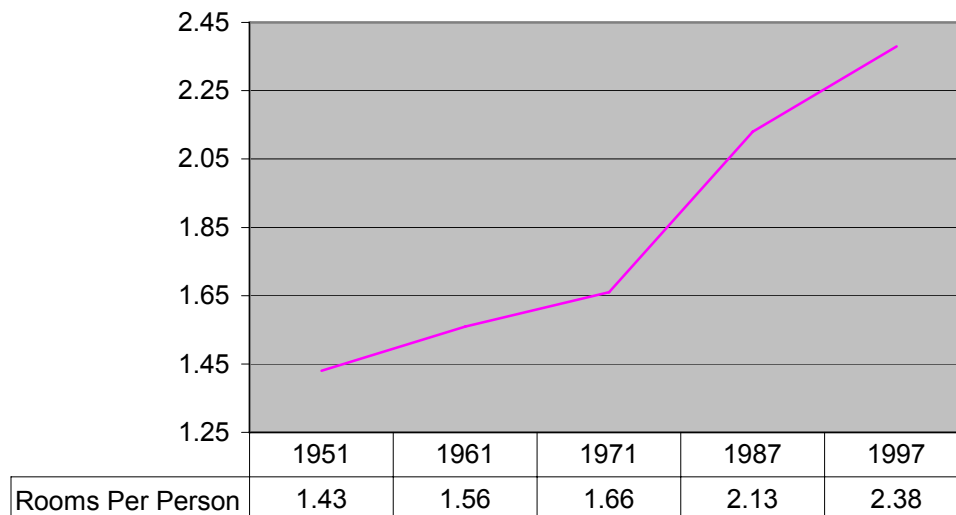
Chart 6.6: Persons Per Household, Nova Scotia, 1881-1997



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Chart 6.7: Rooms Per Person, Nova Scotia, 1951-1997

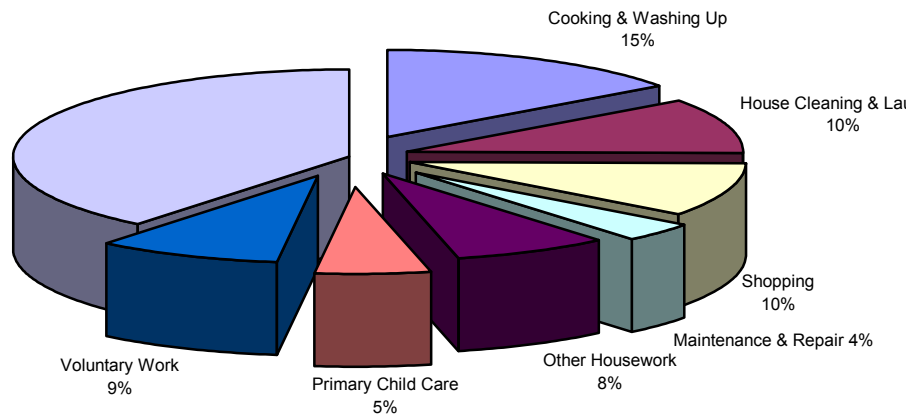
...More Rooms Per Person Means Fewer People to Clean More Space



Sources for Charts 5.5, 5.6 and 5.7:

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.

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.

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

