The Index of Economic Well-being: An Overview

Lars Osberg
Department of Economics
Dalhousie University
Halifax, Nova Scotia B3H 3J5
902-494-6988, fax 902-494-6917
osberg@is.dal.ca

Andrew Sharpe
Center for the Study of Living Standards
111 Sparks Street, Suite 500
Ottawa, Ontario K1P 5B5
613-233-8891, fax 613-233-8250
csls@csls.ca

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In the fall of 1998 the Centre for the Study of Living Standards (CSLS) introduced a new indicator of sustainable development for Canada (Osberg and Sharpe, 1998), appropriately called the Index of Economic Well-being (IEWB). Since then the CSLS has continued to develop the Index, producing estimates for the United States (Osberg and Sharpe, 1999), the Canadian provinces (Osberg and Sharpe, 2000b), OECD countries (Osberg and Sharpe, 2000a and 2001a) and updated estimates for Canada and the United States (Osberg and Sharpe, 2001b).[1] The Index has stimulated much interest among researchers and policy analysts, particularly at the international level.[2]

The objective of this paper is to provide a comprehensive overview of the Index of Economic Well-being.[3] The paper is divided into three main parts. Part one discusses the motivation and genesis of the project, namely the work of Lars Osberg on the measurement of economic well-being for the Canadian government's MacDonald Commission in the mid-1980s. The second part sets out the four components of the Index and briefly presents estimates of the Index for the United States and Canada from 1971 to 1999.[4] The third part of the paper discusses a number of the lessons learned from this project that may be relevant to other indicator initiatives. These include data issues (e.g. comparability of data over time and across space, treatment of missing data points); methodology issues involved in the construction of the index (e.g. transformation of trends for variables where a decrease represents an improvement, growth rate versus level comparisons); conceptual issues resolved and unresolved in the construction of the index (e.g. construction of a stock of human capital, treatment of costs of CO2 emissions, quantification of the social costs of environmental degradation); and the weighting of the four components of the Index.

A major finding of this research is that the weighting given the four components of the Index is crucial for both the trends and levels exhibited by the Index. The greater the weight given consumption, the closer trends in the Index approach trends in GDP per capita or the more a country's relative level of the Index approaches its relative GDP per capita level. This relationship is accounted for by the correlation between per capita consumption and output. This paper shows that the less the weight given consumption and the greater the weight given equality and economic security, the more both the trend

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[1] The original work on the Index was funded by the Applied Research Branch of Human Resources Development Canada, who published the first estimates for Canada (Osberg and Sharpe, 1998). Subsequent work has not received external funding.

[2] In addition to the large number of presentations made on the Index to Canadian audiences, the index has been presented at conferences and seminars in England, France (OECD), Spain, the Netherlands, Poland, Hong Kong, and the United States.

[3] For an evaluation of a number of quality of life and economic well-being indexes, including the Index of Economic Well-being, see Hagerty et al (2001).

[4] A more detailed discussion of trends in the Index of Economic Well-being in the United States and Canada is found in Osberg and Sharpe (2001a). All data underlying the Index are posted at www.csls.ca under the Index of Economic Well-being.

and the level of the Index for Canada approaches or even exceeds that for the United States.

Background behind the Index

The Index of Economic Well-being originated in a research paper one of us (Lars Osberg) did for the MacDonald Commission in the mid-1980s (Osberg, 1985). This paper was motivated by the believe that commonly used indicators of economic welfare, such as GDP per capita, were not truly capturing trends in economic well-being.

In modern democracies, national systems of social and economic statistics have become a crucial part of the informational feedback loop of public policy. By providing measures of social and economic outcomes, statistical agencies provide decision-makers and voters with the information that often defines the success or failure of public policies. Evidence on such successes or failures can be used to reallocate resources, or to replace governments; hence the calculation of measures of economic well being is an important issue. However, current measures – such as trends in per capita disposable income - may not necessarily be a good guide to popular perceptions of trends in economic well being.

The core problem of statistical agencies is that of deciding what information to record and how to present it. Knowing that all statistics summarize a complex reality, and that there are wide variations among the public in which aspects of social reality are considered to be of greatest importance, statistical agencies still have to decide what to count, and what not to count, as part of a measure of economic well being.

For many years, the System of National Accounts (SNA) has been the accounting framework within which most discussions of trends in economic well-being have been conducted, and Gross Domestic Product (GDP) per capita has been an often used summary measure of economic trends. The compilers of the national accounts have often protested that their attempt to measure the aggregate value of marketed economic output was never intended as a full measure of economic well-being. Nevertheless, it has often been used as such, and the GDP accounting exercise has attracted a great deal of criticism as being a misleading indicator of economic well-being. Dissatisfaction with the GDP as a measure has led to a number of proposals for substitute measures (e.g. the Genuine Progress Indicator).

Summarizing the economic well-being of a complex society inevitably requires a series of ethical and statistical judgments. There are many different dimensions to well-being, which are valued to different degrees by different observers. With a single index number it may be difficult to disentangle the relative importance of value judgments in the construction of the index. Furthermore, in thinking about the appropriate public policy response, it is not particularly useful to know only that well being has gone “up” or “down”, without also knowing which aspect of well being has improved or deteriorated.

In our view, the construction of measures of economic well being is a problem in the optimal aggregation of information. If the objective is to improve the quality of public decision making and political debate, excess aggregation is not helpful, because it does not enable value judgments and statistical judgments to be separated. Furthermore, excess aggregation offers no guide to policy priorities.

Osberg's 1985 proposal was that an index of economic well-being should be based on indices of consumption, accumulation, inequality and insecurity, *with the explicit recognition that the weights attached to each component will vary, depending on the values of different observers.*[5] The underlying hypothesis is that public debate is likely to be improved if issues of fact, analysis and values are as clearly separated as possible. Measurement of the current level, or trend, of economic well being can be seen as the first stage of a three stage discussion in which a society asks: (1) Where are we? (2) Do we want to go somewhere else? (3) How do we get there?

Issues of measurement, of values and of analysis may be conceptually distinct, but in a single index of economic well being, they often become hopelessly entangled. If the democratic debate on economic policy is to be fruitful, it would seem desirable to separate issues of measurement (question 1) from the debate on ends (issue 2) or the discussion of means (item 3).

If the discussion is organized in this way, those people who fundamentally care most about a particular aspect of well being can discuss the facts about that aspect of well being, without confusing the discussion with other issues. (For example, those who are concerned most with the bequest that this generation will leave for the future can discuss whether the best way to safeguard sustainability is to emphasize environmental regulation, or capital accumulation, without simultaneously concerning distributional issues.) Such discussions of measurement issues are of a fundamentally different nature from discussions of values – which aspect of economic well being *should* receive greatest weight.

This basic framework - that a society's well-being depends on societal consumption and accumulation and on the individual inequality and insecurity that surround the distribution of macro economic aggregates - is consistent with a variety of theoretical perspectives. We therefore avoid a specific, formal model.

[5] By specifying additive sub-indices, we are implicitly assuming that preferences for social outcomes are separable in their components (e.g. that the weight placed on consumption does not depend on the weight placed on inequality). We do not explicitly constrain the weights to be assigned to each component of well being, since we think of them as the preferences of different observers. However, some observers may, if they are consistent, have linked preferences – for example, if attitudes to insecurity are driven solely by risk aversion, then the weight an individual places on inequality, and the weight they place on insecurity, will both depend on the second derivative of their utility function.

An Index of Economic Well-being

GDP is a measure of the aggregate marketed income of a society, however "income" is a flow variable that does not directly consider the aggregate value of the bequest this generation will leave to its descendants. Although those now alive clearly care about the level of their own consumption, they also care (in varying degrees) about the well-being of future generations. Furthermore, trends in average income do not reveal the chances which individuals have to share personally in the prosperity of the average. Individuals are justifiably concerned about where they might sit in the distribution of income, and the degree to which their personal economic future is secure. The four components or dimensions of economic well-being are, therefore:

- 2.1 effective per capita consumption flows
  - consumption of marketed goods and services, and effective per capita flows of household production, leisure and other unmarketed goods and services;

- 2.2 net societal accumulation of stocks of productive resources
  - net accumulation of tangible capital, housing stocks and consumer durables, net changes in the value of natural resources stocks; environmental costs, net change in level of foreign indebtedness; accumulation of human capital and R&D investment

- 2.3 income distribution - poverty and inequality,
  - the intensity of poverty (incidence and depth) and the inequality of income;

- 2.4 economic insecurity,
  - economic security from job loss and unemployment, illness, family breakup, poverty in old age;

A fuller discussion of the rationale for this framework of consumption, accumulation, distribution and insecurity can be found in Osberg (1985). We distinguish these four main dimensions of economic well-being to enable persons with differing value judgements (e.g. a greater or lesser preference for intergenerational bequest, or for the reduction of poverty, compared to increases in average consumption) to account explicitly for those values. Each dimension of economic well-being is itself an aggregation of many underlying trends, on which the existing literature is sometimes spotty.

We recognize that the System of National Accounts has, thanks to many years of development effort by international agencies, produced an accounting system for GDP which is rigorously standardized across countries. Internationally comparable statistics on other dimensions of economic well-being are far less complete. However, using GDP per capita as a measure of well-being would implicitly: (1) assume that the aggregate share of income devoted to accumulation (including the value of unpriced environmental assets) is automatically optimal, and (2) set the weight of income distribution or economic insecurity to zero, by ignoring entirely their influence. Neither assumption seems justifiable.

Average Consumption Flows

Current consumption is certainly an important component of economic well being – but a better measure than GDP per capita is required. The objective of this section is to estimate its average effective level, and the reason for discussing our methodology in some detail is to show specifically how GDP can be improved on.

The starting point is aggregate real personal consumption per capita in constant prices. The System of National Accounts provides a strong basis for estimating the consumption of marketed goods and the cost of providing government services, and there have been enough studies of the value of household production to enable some confidence as to the range of reasonable values.[6] Estimates are more imprecise when one considers the value of a number of other factors that also influence consumption flows, such as leisure, regrettables, the underground economy[7] and life expectancy. These factors are discussed below, with approximate estimates of their value, in some cases. At this stage in the development of the Index of Economic Well-being, our preference (wherever possible) is to include, rather than exclude, imprecise measures. Since omitting a variable would implicitly set its value to zero, an imprecise measure is likely to embody a smaller error than omitting a variable. However, sometimes there is no estimate available at all and omission is unavoidable.

Life expectancy has increased significantly in recent years North America, and we have every reason to believe that having a long life is an important component of well-being. The economic value of these extra years of life should be included in the total consumption flows of individuals, since presumably people care both about how much they consume per year, and how many years they get to consume it.

Years of life are one thing, and years of healthy, enjoyable life are a slightly different thing. A full appraisal of the value of increased longevity should consider trends in morbidity and health-adjusted life expectancy (HALE), as well as easier-to-

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[6] The original version of the Index of Economic Well-being for Canada (Osberg and Sharpe, 1998) included unpaid work in consumption flows, which we believe should be included in the Index. This was possible because Statistics Canada has produced time series estimates of the value of household production and volunteer work for Canada. Because U.S. statistical agencies have not produced such estimate, unpaid work is not discussed and included in this paper.

[7] Earlier versions of the Index of Economic Well-being included estimates of the underground economy, based on benchmark estimates by Statistics Canada, the Bureau of Economic Statistics, and the trend in the share of the self-employed in total employment, on the argument that the self-employed have greater opportunity to hide income than paid workers. Since there always has been some level of "underground" activity, the issue for the measurement of trends in well-being is whether or not the prevalence of the underground economy has changed substantially over time. Rising tax rates may have increased the incentive to go underground, but the increased penetration of franchise systems in the small business sector and the greater computerization of business records may have also made it more difficult to escape detection by tax authorities. We do not include these estimates in this paper, because they make very little difference to measured output trends. Because the base level of underground activity is a relatively small share of GDP, the trend in a small number is an even smaller fraction of GDP.

measure trends in longevity. However, in considering either, one has to face the issue that the value of more years of life may look very different, the closer one actually is to death. Changes in life expectancy are occurring "in real time" and are affecting the well-being of all now alive. In aggregating over the population now alive, one is aggregating over individuals at very different points in the life course. Although the economist's reflex is to consider the discounted value of lifetime utility, it may be highly problematic to view the value of additional years of life as discounted to the point of view of a teenager. For the purposes of the Index, we adopt the simple expedient of considering an increase in consumption per year or consumption for an increased number of years to be equivalent – i.e. we add to consumption flows in each year the percentage increase in average life expectancy. However, we do recognize the crudity of this measure of an existential issue.

Between 1971 and 1999, Canada enjoyed a 8.1 per cent increase life expectancy from 73.0 to 78.9 years. The United States was up 8.0 per cent from 71.1 to 76.8 years. Personal consumption per capita is adjusted upward by the increase in life expectancy relative to base.

When individuals cohabit in households, they benefit from economies of scale in household consumption. There is a large literature on the estimation of "equivalence scales", which attempt to account for the magnitude of such economies of scale in households of different sizes. When comparing the average effective consumption of individuals over time, the implication is that as households have shrunk in average size, economies of scale have been lost. Trends in average per capita consumption should, therefore, be adjusted for the average loss over time of economies of scale in household consumption.

Since economies of scale diminish in family size, the extent of change in economies of scale depends on where change occurs in the distribution of family sizes. All western countries have experienced a long-term decline since the 1970s in average family size – in the United States, a 10.9 per cent decline (from 3.57 in 1971 to 3.18 in 1999). The equivalence scale used by the Luxembourg Income Study (LIS), that is the square root of family size, has been applied to average family income to construct an index of equivalent family income (1971= 100), which is used to adjust personal consumption per capita.

Some of the economic activity included in GDP does not contribute to economic welfare, but rather are defensive expenditures, or intermediate inputs, that individuals make in order to be able to produce or consume. The costs households pay in order to commute to work are considered in the GDP to be part of household consumption, but the expenses which firms incur to bring materials to the work site are seen as an intermediate input in production. Since intermediate inputs in the business sector are netted out in the calculation of value added, it can be argued that similar expenditures by households should be subtracted from marketed consumption to obtain a better estimate of true consumption flows. Similarly, if the good that individuals want to consume is "a crime free street", but it now takes a greater expenditure on police services to produce that

good, an increase in police expenditures that only serves to maintain the crime rate unchanged should not be counted as an increase in (public sector) consumption.

This paper uses the estimates of costs of commuting, crime, house pollution abatement and auto accidents constructed by Anielski and Rowe (1999) and subtracts these from the value of current consumption.

Among OECD countries there are major differences in both the initial level and trends over time in the average annual number of hours worked. Given these differences, level and growth rate comparisons of economic well-being are affected by working time differences. In this paper, we want to compare economic well-being over time and across countries. Ideally, one would like estimates of the proportion of non-market time that is spent in home production and the proportion of market remunerated time that consists of on the job leisure, in order to account for changes in the pace of work, both at home and in the workplace. Such measures are, however, infrequently available for any one country and difficult to compare across countries. We, therefore, proceed by standardizing for hours of paid work in relative, not absolute, terms, where the benchmark is the average annual hours worked per adult of working age in the United States in 1971.

Unlike the Measure of Economic Welfare developed by James Tobin and William Nordhaus in the early 1970s, no attempt is made here to define leisure activities, estimate the amount of leisure enjoyed, and place a value on this total leisure time. Rather, we adjust the value of consumption for differences in paid hours relative to a benchmark, with countries having average annual hours worked less than the benchmark (United States in 1971) having a positive adjustment to consumption and countries having more working time than the benchmark having a negative adjustment. Within the United States, years with fewer hours worked than those in the benchmark year have positive adjustments and those with more hours worked, negative adjustments.

Our methodology is equivalent to saying that at the margin, individuals ascribe a value equal to the after tax average wage to changes in non-working time that are not due to unemployment fluctuations. By comparing changes in working time to a benchmark level, we avoid the necessity of placing a monetary value on infra marginal hours of leisure, which might be highly problematic. Estimates of relative working time per person employed are adjusted for the employment/working age population ratio to provide estimates of relative non-working time on a working age population (15-64) basis to account for differences in employment/population ratios across countries. These estimates are then valued at the after tax wage rate to provide estimates of the value of relative non-working time per working age person. This figure is then adjusted by the working age population/total population ratio to control for differences in demographic structures across countries. This amount, expressed in constant prices of the national currency, is then added to consumption flows to produce a working time-adjusted estimate of consumption relative to the U.S. benchmark. However, unemployment does not constitute leisure. To account for involuntary leisure we subtract average annual

hours of unemployment per working age person from the relative non-working time estimate.

There are very large differences in working time per employee across countries, and in 1999 the United States had the second highest average annual hours worked at 1976 hours per year. Between 1980 and 1999 most of the countries on which we have data experienced declines in working time, while the United States experienced increases. Average annual hours of non-working time relative to the 1971 U.S. benchmark are calculated as the difference between a country's average annual hours worked per working age person in a given year and the 1971 figure for the United States (1185 hours). By 1999, per adult working hours in the United States were 141 hours above their 1971 level, but only up 54 hours in Canada. Since some of these changes are large (141 hours is equivalent to 2.7 hours per week) they represent substantial changes in well-being, which should be reflected in a reasonable measure of economic progress. However, since leisure hours receive zero valuation in GDP accounting, neither the declines nor the increases are reflected in GDP per capita.

Estimates of the imputed value of non-working time per person are expressed in constant prices in national currency units. These estimates are calculated as the product of the average annual number of hours of non-working time per working age person relative to the U.S. 1971 benchmark, after tax hourly compensation and the ratio of the working age population to the total population. Because we use national currency units (as opposed to common currency units), and because we are evaluating differentials at the margin, level comparisons of the aggregate value of non-working time are not possible.

Some hours of unemployment are not by choice and do not contribute to economic well-being. Indeed, if there are psychological costs to unemployment, such hours may have strong disutility associated with them. The Index cannot provide estimates of the negative utility of unemployment time, nor the partial value of such time. As an approximation, however, in the calculation of the imputations for the value of non-working time, we can deduct hours of unemployment – i.e. assign such hours zero value.

The provision of non-marketed or heavily subsidized services by the government is part of the consumption flow. Current expenditure data (all levels of government including defense and capital consumption allowances, but excluding debt service charges and transfer payments) are taken from the national accounts of the two countries, expressed in constant prices. Government final consumption expenditures represented 19.9 per cent of total consumption in the United States in 1999, compared to 29.3 per cent than in Canada.

The components of per capita consumption flows (adjusted personal consumption including the cost of regretables and the imputation for non-working time, and government consumption) are summed to total consumption flows in index form for Canada and the United States for the 1971-99 period in Table 1 and Figure 1. Consumption rose 65.9 per cent in the United States and 46.9 per cent in Canada over the period.

Accumulation, Sustainability and the Intergenerational Bequest

If individuals alive today care about the well being of future generations, measurement of trends in current well-being should include consideration of changes in the well-being of generations yet unborn. This consideration of future generations can also be justified on the grounds that a concept of "society" should include both present and future generations. Either way, wealth accumulation by this generation will increase the bequest left to future generations, and is an important component of well-being.

We emphasize that this component of economic well-being consists of those stocks of real productive assets that can generate real income for future generations – not the financial instruments that will determine the *allocation* of the returns from those assets. Financial "Generational Accounting" techniques focus on the distributional impact of government debt – but in this section we are concerned with the real accumulation of the total stock of productive assets. It is the stocks of "wealth" left to the next generation, broadly conceived to include environmental and human resources as well as physical capital stock, which will determine whether a society is on a long-run sustainable trajectory of aggregate consumption, irrespective of the distribution of those consumption flows at the individual level.

The physical capital stock includes residential and non-residential structures, machinery, and equipment in both the business and government sector. The greater the capital stock, the greater is the future productive capacity and future potential consumption flows, and economic well-being. The capital stock data are based on the perpetual inventory method where investment flows are accumulated over time, with depreciation rates applied to the different assets. Data for the current net fixed capital stock, expressed in constant prices of national currency units. It is assumed that the estimates are internationally comparable, although the use of different depreciation rates by statistical agencies may reduce comparability for both level and rate of growth comparisons. Between 1971 and 1999, the increase in the fixed capital stock, on a per capita basis, was higher in Canada (71.0 per cent) than in the United States (62.6 per cent).

Closely related to the physical capital stock is the concept of the research and development (R&D) capital stock. In an era of rapid technological change, expenditure on R&D is a crucial ingredient in the ability of society to innovate and create wealth. Statistical agencies do not produce R&D stock data, but OECD data on annual flows of total business enterprise expenditure on research and development can be accumulated into a stock of R&D capital valued at cost of investment - a depreciation rate of 20 per cent on the declining balance is assumed.

Current consumption levels could be increased by running down stocks of non-renewable natural resources or by exploiting renewable resources in a non-sustainable manner, but this would be at the cost of the consumption of future generations. A key aspect of the wealth accumulation component of economic well-being is net changes in

the value of natural resources. From an intergenerational perspective, it is the value of the natural resources, not their physical extent, which counts. The valuation of these resources poses conceptual problems but Statistics Canada (1997) has provided estimates for both physical and value estimates of natural resources such as forests, energy reserves, and minerals. The Bureau of Economic Analysis (*Survey of Current Business*, July 1994) has provided estimates of the sub-soil assets for the United States to 1991

The human capital accumulated by the workforce generates both current and future income. Trends in the stock of human capital, including both formal educational attainment levels and on-the-job training, are important determinants of current and future economic well-being. School retention and participation in post-secondary education have increased dramatically in many countries over the last three decades, and there is a strong relationship between educational attainment and individual income. The Index uses an admittedly crude and incomplete (but feasible) input cost method - the cost per year of education expenditures at the primary, secondary and post secondary levels. Yearly estimates of the distribution of education attainment in the population were then used to compute the total cash cost of production of human capital in education. OECD data on the educational attainment of the 25-64 population and expenditure per student (available in both local currency and U.S. dollars) for the early childhood, primary, secondary, non-university tertiary and university level education were used to estimate the per capita stock of human capital. In order to distinguish clearly inter country differences in the quantity of education obtained, as opposed to differences in its cost of production, we apply a common cost base (the cost of education in the United States) to both countries.

We do not count the gross level of government or corporate debt as a “burden” on future generations, and we do not count as part of the intergenerational bequest the value of paper gains in the stock market. In general, financial instruments represent both assets to their holders and liabilities to their issuers. The distribution of such assets/liabilities will play a major role in allocating the real returns to the future capital stock, but the issue at this point is the aggregate value of the intergenerational bequest.

However, net debt to foreigners is another issue. Since interest payments on the net foreign indebtedness of citizens of one country to residents of other countries will lower the aggregate future consumption options of those citizens, increases in the level of foreign indebtedness reduce economic well-being within a given country. Estimates of the net investment position, expressed in current U.S. dollars, are published in the IMF's *International Financial Statistics Yearbook*. These estimates have been converted to current price national currencies at market exchange rates and then deflated by the GDP deflator and adjusted for population to obtain real per capita estimates in the net international investment position, expressed in national currency units.

Like the excess depletion of natural resources, current consumption can be increased at the expense of the degradation of the environment, reducing the economic well-being of future generations. Consequently, changes in the level of air and water pollution should be considered an important aspect of the wealth accumulation. Countries

pass on from generation to generation both a natural and man-made national heritage. If this heritage were damaged, the economic well-being of future generations would be reduced. Since it is very difficult, if not impossible, to put a monetary value on, for example, the pristine condition of national parks, or historic buildings, there will be no attempt to set an aggregate value to these assets. However, the issue of *trends* in well-being is the *change* in such assets, which is easier to measure and for which indicators of environmental quality can be developed.

Probably the best-known environmental change is global warming arising from increased emissions of greenhouse gases, the most common of which is carbon dioxide emissions. Fortunately, data are available on these emissions and it is possible to estimate the costs of these emissions. These costs can then be subtracted from the stock of wealth to obtain an environmentally adjusted stock of wealth.

The conceptual issues to be dealt with in estimating the costs of CO2 emissions include whether the costs should be viewed from a global, national or sub-national perspective, whether the costs increase linearly with the levels of pollution, whether the costs should be borne by the producer or receptor of trans-border emissions, and whether costs should vary from country to country or be assumed the same for all countries. Since global warming affects all countries, we estimate world total costs of emissions and allocate these costs on the basis of a country's share of world GDP. Fankhauser (1995) has estimated the globalized social costs of CO2 emissions (with no adjustment for different national costs) at $20 U.S. per ton in 1990. World Bank researchers (Atkinson et al. 1997) have applied this number to CO2 emissions in developed countries to estimate the value of the loss of environmental services as a proportion of output and the measure of genuine saving.

According to data from the International Energy Agency, world CO2 emissions in 1997 were 22,636 millions of metric tons. Based on the $20 U.S. per ton cost of CO2 emissions, the world social cost of CO2 emissions was $452,720 million. This amount was allocated on the basis of a country's share of real world GDP, expressed in U.S. dollars. It was then converted into national currency at the purchasing power parity exchange rate and divided by population. As these costs represent a loss in the value of the services provided by the environment, they can be considered a deduction from the total stock of wealth of the society. For example, in 1997, per capita stocks of wealth in Canada were reduced by $415 Canadian because of the social costs imposed by CO2 emissions according to this methodology.

As the estimates of the physical capital stock, the R&D capital stock, net foreign debt, and environmental degradation are expressed in value terms, they can be aggregated and presented on a per capita basis. Net foreign debt per capita is a negative entry, while the social costs of CO2 emissions are subtracted from the stocks of wealth. For the 1971-1999 period, estimates for the five components of the wealth stock included in this paper are available. Table 1 and Figure 2 provide our estimates of trends in the accumulation of productive assets for Canada and the United States for the 1971-99 period. The rate of

change for per capita real wealth stocks in national currency at constant prices was 43.7 per cent in the United States and 38.6 per cent in Canada.

Income Distribution - Inequality and Poverty

The idea that "Social Welfare" depends, in general, on both average income and the inequality of incomes has a long tradition in welfare economics. However, in measuring the level of social welfare, the exact relative weight to be assigned to changes in average incomes, compared to changes in inequality, cannot be specified by economic theory. Since Atkinson (1970) it has been recognized that the measurement of inequality itself depends on the relative value which the observer places on the utility of individuals at different points in the income distribution. For a "Rawlsian", only changes in the well-being of the least well off matter, but others will admit some positive weight for the income gains of the non-poor, and will assign some negative weight to inequality among the non-poor.

Since the economic well-being of the population is affected both by inequality in the distribution of income and by the extent of poverty, there are two issues: 1) one's perspective on the importance of inequality/poverty compared to trends in average income, and 2) one's view of the relative weight to be placed on poverty compared to inequality. We, therefore, suggest that a compound sub-index should place some weight (β) on a measure of inequality in the aggregate distribution of income and some weight ($1-\beta$) on a measure of poverty.

The most popular measure of inequality in the distribution of income is undoubtedly the Gini index. For the purposes of the construction of the index of economic well-being, we have chosen the Gini coefficient of household income.[8] Income inequality in 1999 as measured by the Gini coefficient was considerably larger in the United States (0.457) than in Canada (0.403).

Recently, Osberg and Xu (2000) have noted that the Sen-Shorrocks-Thon measure of poverty intensity is both theoretically attractive as a measure of poverty, and also convenient, since it can be decomposed as the product of the poverty rate, the average poverty gap ratio and the inequality of poverty gap ratios. Furthermore, since the inequality of poverty gap ratios is essentially constant, changes in poverty depend on changes in the poverty rate and the average poverty gap ratio. The intensity of poverty for all persons, with the poverty threshold defined in relative terms as one half median

[8] Since there is no data available on inequality and poverty within families, we have no option but to follow the standard pattern of assuming that equivalent income is equally shared among family members. If children do not in fact share equally in household resources, inequality within the family can make a very big difference to perceptions of the level of child poverty – and the same implications would hold for gender inequalities. However, since the issue for this paper is the *trend* of poverty, our conclusions will hold unless there has been a systematic trend over time in the degree of inequality within families (e.g. if senior citizen families, whose share of the poverty population has fallen over time, have systematically different levels of within-family inequality than younger families).

equivalent after-tax income, in 1999 in the United States was about double that in Canada.

The overall index of equality is a weighted average of the indices of poverty intensity for all units or households and the Gini coefficient, with the weights 0.75 and 0.25 respectively. Table 1 and Figure 3 present the trend in the index of economic equality from 1971 to 1999. In Canada, economic equality rose 7.6 per cent over the period, while it fell 21.6 per cent in the United States.

Economic Security

If individuals knew their own economic futures with certainty, their welfare would depend only on their actual incomes over their lifetimes, since there would be no reason to feel anxiety about the future. However, uncertainty about the future will decrease the economic welfare of risk averse individuals. Individuals can try to avoid risk through social and private insurance, but such mechanisms do not completely eliminate economic anxieties, which have to be considered a subtraction from well-being.

Although public opinion polling can reveal that many feel themselves to be economically insecure, and that such insecurity decreases their subjective state of well-being, the concept of economic insecurity is rarely discussed in academic economics. Consequently, there is no generally agreed definition of economic insecurity. We argue that economic insecurity is, in a general sense, "the anxiety produced by a lack of economic safety – i.e. by an inability to obtain protection against subjectively significant potential economic losses." In this sense, individuals' perceptions of insecurity are inherently forward looking, the resultant of their expectations of the future and their current economic context – hence only imperfectly captured by measures such as the ex post variability of income flows. Ideally, one would measure trends in economic security with data which included (for example) the percentage of the population who have credible guarantees of employment continuity and the adequacy of personal savings to support consumption during illness or unemployment. However, such data is not widely available. For these reasons, rather than attempt an overall measure of economic insecurity, this paper adopts a "named risks" approach, and addresses the change over time in four key economic risks.

Over fifty years ago, the United Nations' Universal Declaration of Human Rights stated:

> *Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other loss of livelihood in circumstances beyond his control.* [Article 25][9]

[9]In the 1990s, the gender specificity of the language of 1948 will strike many people as odd – but Article 2 makes it clear that all Articles of the Universal Declaration of Human Rights are to be guaranteed to male and female persons equally.

For the Index, we construct measures of the percentage change over time in the economic risks associated with unemployment, illness, "widowhood" (or single female parenthood) and old age. In each case, we model the risk of an economic loss associated with the event as a conditional probability, which can itself be represented as the product of a number of underlying probabilities. We weight the prevalence of the underlying risk by the proportion of the population that it affects. The core hypothesis underlying the measure of economic insecurity proposed here is that changes in the subjective level of anxiety about a lack of economic safety are proportionate to changes in objective risk.

The economic risk associated with unemployment can be modeled as the product of the risk of unemployment in the population and the extent to which people are protected from the income risks of unemployment. We have taken as a proxy for the risk of unemployment changes in the employment rate (employment/population ratio). Changes in this ratio reflect changes in the unemployment rate and changes in the participation rate (both cyclical and structural). The extent to which people have been protected by unemployment insurance (UI) from the financial impacts of unemployment can be modeled as the product of: 1) the percentage of the unemployed who claim regular UI benefits, and 2) the percentage of average weekly wages replaced by UI.

In the Index, we do not attempt to model the psychological insecurities associated with health. Recent decades have seen both substantial advances in medical technology and increased awareness of health hazards (such as Jakob-Kreutzfeld Syndrome -"mad cow disease") which were previously unimaginable. It is not clear whether subjective anxieties about health have increased or fallen as a result.

Viewed from a longer-term perspective, the economic insecurities associated with illness in developed economies certainly dropped considerably with the introduction of universal health insurance in many countries. However, a full estimate of the trend in economic anxieties associated with ill health should include the risk of loss of earnings. Historically, a portion of the labour force has had some income loss protection through sick leave provisions in their individual or collective employment contracts. One implication of a trend to short-term contract employment and self-employment in developed economies is an increase in the fraction of the population whose employment income ceases totally in the event of ill health. Data limitations prevent us from modelling such risks. Instead, we focus on the risk of health care costs, assuming that risk is proportional to the share of uninsured private medical care expenses in disposable income.

Private medical expenses as a share of disposable income in 1999 represented 13.9 per cent of personal disposable income in the United States and 4.4 per cent in Canada. However, to follow the convention that increases in the sub-components of the index of economic security are improvements, we want an index of "security" and not an index of "insecurity", hence we multiply the risk of illness, where increases are negative for economic well-being, by –1. A negative sign, therefore, indicates that an increased

negative value represents a decline in well-being (and a decreased negative value, an increase in well-being).

When the UN Universal Declaration of Human Rights was drafted in 1948, the percentage of single parent families was relatively high in many countries, partly as a result of World War II. At that point in time, "widowhood" was the primary way in which women and children lost access to male earnings. Since then, divorce and separation have become the primary origins of single parent families. However, it remains true that many women and children are "one man away from poverty", since the prevalence of poverty among single parent families is extremely high. To model trends in this aspect of economic insecurity, we multiply (the probability of divorce) * (the poverty rate among single female parent families)[10] * (the average poverty gap ratio among single female parent families). The product of these last two variables is proportional to the intensity of poverty.

We stress that in constructing a measure of the economic insecurity associated with single parent status, we are *not* constructing a measure of the social costs of divorce. Economic well-being is only part of social well-being, and divorce has emotional and social costs (e.g. for the involved children) that are not considered here. Arguably, over time the social costs associated with divorce (e.g. stigma) have changed, as the institution of marriage itself has changed – but such issues lie well beyond the scope of this paper. The gross divorce rate (number of divorces divided by the number of legally married couples) in 1999 was 2.1 per cent in the United States, but lower in Canada (1.0 per cent). The poverty rate for single female parents was 45.2 per cent in the United States and 43.0 per cent in Canada in 1997 (the most recent year comparable data for the two countries were available). The average poverty gap ratio for single female parent households was 39.8 per cent in the United States and 31.2 per cent in Canada.

Again, to follow the convention that increases in the sub-components of the index of economic security are improvements, we want an index of "security" and not an index of "insecurity", hence we multiply the risk of single-parenthood, where increases are negative for economic well-being, by -1. A negative sign, therefore, indicates that an increased negative value represents a decline in well-being (and a decreased negative value, an increase in well-being).

Since income in old age is the result of a lifelong series of events and decisions, which we cannot hope to disentangle in this paper, we model the idea of "insecurity in old age" as the chance that an elderly person will be poor, and the average depth of that poverty. The poverty rate for the elderly in 1997 was much higher in the United States, at 23.7 per cent than in Canada, 5.4 per cent. The average poverty gap ratio for the elderly was also much higher in the United States (28.3 per cent) than in Canada (15.8 per cent).

[10] However, RATE= INCIDENCE x AVERAGE DURATION. Since the poverty rate among single parents is equal to the conditional probability that a single parent will enter poverty and the average duration of a poverty spell, we implicitly account jointly for the duration of poverty spells and for their likelihood.

Again, to follow the convention that increases in the sub-components of the index of economic security are improvements; we want an index of "security" and not an index of "insecurity". Hence we multiply the risk of elderly poverty by -1. A negative sign, therefore, indicates that an increased negative value represents a decline in well-being (and a decreased negative value, an increase in well-being).

The four risks discussed above have been aggregated into an index of economic security using as aggregation weights the relative importance of the four groups in the population:

- For unemployment, the proportion of the population aged 15-64 in the total population.
- For illness, the proportion of the population at risk of illness, which is 100 per cent.
- For single parent poverty, the proportion of the population consisting of married women with children under 18.
- For old age poverty, the proportion of the population in immediate risk of poverty in old age, defined as the proportion of the population aged 45-64 in the total population.

The above proportions have been normalized for all years to one. For example the weights for Canada in 1999 were the following: unemployment (0.2784), illness (0.4149), single parenthood (0.2134), and old age (0.0934).

Based on the above weights, the indexes of economic security for Canada and the United States are shown in Table 1 and Figure 4. From 1971 to 1999, economic security fell 26.6 per cent in Canada, with all of the decline taking place in the 1990s. In the United States, economic security fell 10.4 per cent with the decline taking place in the 1980s.

Estimates of Trends in the Overall Index of Economic Well-being

Trends in any index are determined by the choice of variables that are included in the index, the trends in those variables, and the weights these variables receive. As the sub-components of the consumption flows and wealth stocks are expressed in dollars, there is no need for explicit weighting. Their dollar values represent implicit weights. In terms of the inequality/poverty subcomponents, a somewhat Rawlsian perspective would assign greater importance to poverty than to overall inequality trends. On this basis, a weight of 0.1877 or (=0.25*0.75) has therefore been given to the poverty intensity and 0.0625 (=0.25*0.25) to the Gini -i.e. poverty is given three times the weight of inequality. The subcomponents of the economic security index are weighted by the relative importance of the specific population at risk in the total population.

The most transparent weighting scheme is one of equal weighting of the four components of the Index of Economic Well-being. This is the weighting scheme chosen for the base index in this paper. Table 1 and Figure 5 show that under these weights the Index of Economic Well-being advanced 21.9 per cent in the United States and 16.6 per

cent in Canada over the 1971-1999 period.

Since the four main dimensions of average consumption, intergenerational bequest, inequality/poverty and insecurity are separately identified, it is easy to conduct sensitivity analyses of the impact on perceived overall trends of different weighting of these dimensions. For this purpose, an alternative or consumption-biased weighting scheme (0.7 for consumption and 0.1 for the three other components of the Index) has also been used. Table 1 and Figures 6 and 7 show trends in the overall Index of Economic Well-being for Canada and the United States over the 1971-1999 period under the two weighting schemes. The Index based on the consumption-biased weighting scheme exhibit much stronger growth in both countries, reflecting the greater increases in consumption than in equality or economic security.

In the United States, GDP per capita increased by 84.1 per cent between 1971 and 1999 (Table 1 and Figure 8). In contrast, the Index of Economic Well-being based on equal weighting rose 21.9 per cent and based on consumption-biased weighting rose 48.3 per cent. The wedge between trends GDP per capita and the Index of Economic Well-being was due to the substantial decrease in economic equality (-11.6 per cent) and in economic security (-10.4 per cent) over this period. As well, increases in money income were obtained at the cost of increases in working hours.

In Canada, GDP per capita increased by 73.0 per cent between 1971 and 1999. In contrast, the Index of Economic Well-being based on equal weighting rose 16.6 per cent and based on heavy consumption-biased weighting rose 34.8 per cent. Again, the difference between trends in GDP per capita and the Index of Economic Well-being in Canada reflected the limited rise in equality (7.6 per cent) and the decline in economic security (-26.4 per cent).

We are acutely conscious that the data sources available to us are far from what we would like. However, we believe that the data are reliable enough to give a preliminary indication of trends in economic well-being from a broader perspective than that provided by GDP accounting

Level Comparisons of Economic Well-being

Comparisons of the level of well-being across countries are inherently much more problematic than comparisons of the trends in various components of economic well-being within countries. In cross-country comparisons, the institutional context of economic data differs to a far greater extent than in within country, over time comparisons. Calculations of purchasing power parity equivalence across several countries have greater uncertainty than comparisons of within country consumer price levels. Statistical agencies in different countries differ in their data availability and data gathering practices to a greater degree than they change those practices over time in the same country.

Despite the pitfalls noted above, levels comparisons are needed if one wishes to

shed light on relative levels of economic well-being across countries, as opposed to trends in economic well-being. If a country already has a high level of economic well-being, the fact that it may be experiencing slower rates of increase in economic well-being than a country with a lower level of well-being may not be particularly important.

Table 2 compares the levels of the various components and subcomponents of the Index of Economic Well-being for Canada and the United States for 1999. The weights given the four components of the Index determines which country has the higher level of economic well-being. Relative to the United States, Canada has lower levels of per capita consumption flows (69.2 per cent of the U.S. level) and stocks of wealth (92.1 per cent), but higher levels of equality (143.8 per cent) and economic security (150.2 per cent) than the United States.

Under an equal weighting of the four components of the Index, Canada emerges as having the high overall level of economic well-being, 13.8 per cent above that in the United States. This result is consistent with public opinion surveys that find Canadians rank Canada's quality of life above that in the United States because of greater equality and economic security in Canada. Under the consumption-biased weighting scheme, Canada ends up with a lower level of economic well-being (87 per cent of the U.S. level).

Lessons Learned from Construction of the Index of Economic Well-being

The experience over the last four years of constructing the Index of Economic Well-being has provided a large number of lessons that may be relevant to other researchers working in the social and economic indicators area. These issues are discussed below.

General Issues[11]

A key decision made from the start was to construct an actual index of economic well-being, not a set of economic well-being indicators. We believe that this decision to develop a composite indicator was the appropriate one. Its great advantage is that it produced bottom lines for the four components of the Index and the overall Index. These bottom lines have been very useful in capturing media attention and stimulating public interest in the exercise. In addition, the detailed sets of indicators that have been developed to derive the five bottom lines mean that it is very easy to identify the drivers of the bottom lines for the trends in the four components of the Index and the overall Index.

In setting up an index explicitly based on sub indices with specific weights (0.4 for consumption, 0.1 for accumulation and .25 for each of inequality and insecurity) we were not actually doing anything that other indices did not also do. [The Human

[11] See Sharpe (1999) for a general discussion of issues in the construction of composite indicators.

Development Index of the UNDP is, for example, based on sub indices of real per capita GDP, education and life expectancy, each of which receive equal weight.] However, we provided the underlying sub-indices explicitly and said specifically that the weights attached to each sub index would vary, depending on the values of the observer. We did this because we think that all indices have implicit in them a set of value choices [equal weighting, as in the HDI, *is* a value choice] and we wanted to be transparent about ours – and to enable other analysts, with different value emphases, to use our data to aggregate the sub-indices into an overall measure of well-being. [In practice, the weights used often do not matter much for the assessment of overall trends, but we thought it important to be able to show that explicitly.]

However, in retrospect it is clear that we did two things, in one step, that could be done in separate steps, and that we confused readers in the process. We tried to introduce the idea that there are four main components of the Index of Economic Well-Being (Average Consumption, Accumulation, Distribution and Insecurity) at the same time as we discussed the possible differences people might have in their preferences for each component. In retrospect, it would have been clearer if we had first introduced an index in which there are four components and each component has equal weight, and then, in a separate section, introduced the idea of differential weights. The trend lines for an overall index with a weighting of .25, .25 .25, .25 are almost identical to those of an index with component weightings of .4, .1 , .25, .25 and we would have been spared the criticism that it was our own particular values that generated the overall result.

Data issues

The data requirements for construction of for the Index of Economic well-being have been immense, with information on over 20 variables needed for a long period. For a number of the variables such as poverty rates and gaps, the CSLS had to calculate the numbers from micro-data seta such as the Survey of Consumer Finances and the Luxembourg Income Study. For other variables such as the stock of human capital, R&D stocks, and the costs of CO2 emissions, the CSLS had to develop new estimates. Extrapolation and interpolation were used to develop estimates for years where data were unavailable.

In thinking of how to operationalize a new index, one can either specify a wish list of the variables that ideally would be available to construct the index, or work with the data that actually is available now. If one asks for the ideal set of variables, one can never hope to describe past trends in well being, because the requisite data were not collected at the time. The strategy of specifying the ideal set of variables has the potential advantage of influencing future data gathering by statistical agencies, but only if calculation of the IEWB is adopted as an agency priority (and if that is to happen, the feasibility and utility of the index has to be shown, in a concrete way).

Working with the data that now exists does, however, force many compromises, since clearly the data gathering was not done with the needs of the IEWB in mind. The longer the time span over which we want to calculate the index, and the larger the

number of countries we want to compare, the greater the number of compromises which are required. If we are to maintain comparability among countries, we have to restrict attention to a lowest common denominator of available data, with the implication that a multinational comparison (e.g. of the OECD nations) presents estimates for Canada (based on the limited set of variables that are available for all countries) which are somewhat different from the estimates we present based on the maximum use of available Canadian data series.

Methodological Issues

In the Index of Economic Well Being we consider both average income and the distribution of income. However, the literature on average trends and distributional trends has typically measured these two types of trends with opposite signs. In thinking about trends in average income, it is clear that an increase is a "good thing". However, distributional trends have typically been analyzed with reference to measures of inequality and poverty, for which increases are "bad things". Similarly, economic insecurity may arise from the probability of unemployment, and to what extent the income loss from such unemployment is replaced by unemployment insurance, but the desired attribute is "security".

One way of dealing with the necessity of "inverting" a standard measure is to take the reciprocal – however that technique has a highly nonlinear impact[12] on the transformed variable. The implication is that in order to maintain a comparable magnitude of the change in measured "equality" as the change in measured "inequality" in standard measures such as the Gini index, a linear transformation is desirable.

At the most general level of abstraction, it is clear that "well-being" or "sustainability" or "Human Development" are, over the entire range of possible outcomes, best thought of as ordinal and not cardinal numbers. Those analysts who (like ourselves) are willing to try to assign specific numbers to such imprecise magnitudes must justify their efforts with the thought that they are constructing statistical series that are a local approximation. If one thinks, for example of the impact of average income levels on economic well being, the utility that individuals derive from income could quite possibly change in a number of ways over the entire range of possible income levels. The rationale for a local linear approximation to an unknowable functional form is based on the hypothesis that, for example, although it would be hard to imagine how well off Canadians would feel if their incomes were 0.001 of current levels of income, one can imagine the impact of a 10 per cent change. We think it is reasonable to ask the question how well being has changed over periods of time such as 20 or 25 years and for the range

[12] If the measure of inequality were the Gini index and one were to compare a decrease in inequality such as a change from 0.4 to 0.35 or a change from 0.2 to 0.15, taking the reciprocal would mean that the former change registers as an increase in equality from 2.5 to 2.87 (an absolute change of 0.37 or about 14 per cent) and the latter change registers as an increase from 5 to 6.66 (which is an absolute change of 1.66 or approximately 33 per cent).

of changes typically observed in such time frames – but larger shifts strain the credibility of particular index values.

In general, numerical indices which are expressed relative to a base year are sensitive to how that base is constructed.[13] There does not seem to be any way around this fact, and it is a problem common to all indices – not just our own.

The convention of multiplying the index of the variable by -1 and then adding 2 was adopted. The disadvantages of this approach are that it is hard for the uninitiated to understand and makes the calculation of percentage changes problematic. But is appears that no better methodology has been developed.

Conceptual Issues

Many conceptual issues were tackled in the construction of the Index, including the treatment of the underground economy, the valuation of life expectancy, the valuation of non-working time, the construction of the stock of human capita, the modeling of the risks of unemployment, old age poverty, financial loss from illness, and single-parent poverty.

By far the greatest conceptual challenge for the Index has been the integration of the environmental degradation into the Index. Indeed, this challenge has only very partially been met by the inclusion of the costs of CO2 emissions. Putting monetary values on changes in ecosystems is extremely difficult. An alternative approach is to develop indexes of the state of different ecosystems without resorting to aggregation of the changes in the different states by prices. We plan work along these lines in the near future.

Conclusion

It is increasingly being recognized that the sustainability of stocks, particularly environmental stocks, inequality, and economic security are important components of economic well-being. The purpose of this Index of Economic Well-being is to provide an empirical embodiment of this recognition.

The Index is an on-going exercise, with much work left to do. Nevertheless, we believe that the Index at this stage in its development represents an important addition to the literature of measures of economic well-being both for Canada and for other

[13] A change in unemployment from 10% in the base year to 13% can also be seen as a change in employment from 90% to 87%. If one calculates an index of unemployment, the change from 1 to 1.3 looks considerably larger than a change from 1 to 0.966. Similarly, an index of pollutants in the atmosphere could be expressed as parts per million that are, or are not, of a particular chemical compound and an index of risk of nuclear reactor malfunction risk could be expressed as a probability of breakdown (e.g. .0001) or as a probability of safe operation (e.g. 0.9999). Clearly, a given change in absolute probability or parts per million looks very different in percentage terms, depending on the choice.

countries. We would be happy to receive comments and suggestions on this work in order to improve it.

References

Anielski, Mark and Rowe (1999) "The Genuine Progress Indicator: An Update," Redefining Progress, March (www.rprogress.org/pubs)

Atkinson, Anthony B. (1970) "On the Measurement of Inequality" *Journal of Economic Theory* Vol 2, 244-263.

Atkinson, Giles, Richard Dubourg, Kirk Hamilton, Mohan Munasinghe, David Pearce, and Carlos Young (1997) *Measuring Sustainable Development: Macroeconomics and the Environment* (Cheltenham, UK: Edward Elgar).

Fankhauser, S. (1995) "Evaluating the Social Costs of Greenhouse Gas Emissions" *Energy Journal* 15: 157-84.

Hagerty, Michael, Robert A. Cummins, Abbott L. Ferris, Kenneth Land, Alex C. Michalos, Mark Peterson, Andrew Sharpe, Joseph Sirgy and Joachim Vogel (2001) "Quality of Life Indexes for National Policy: Review and Agenda for Research," *Social Indicators Research*, pp. 1-96.

Osberg, Lars (1985) "The Measurement of Economic Well-being" in D. Laidler (research coordinator), *Approaches to Economic Well-being*, Vol. 26, Research Studies of the MacDonald Commission (Toronto: University of Toronto Press).

Osberg, Lars and Andrew Sharpe (1998) "An Index of Economic Well-being for Canada," Research Paper, Applied Research Branch, Human Resources Development Canada (posted at www.csls.ca).

Osberg, Lars and Andrew Sharpe (1999) "An Index of Economic Well-being for Canada and the United States," paper presented to the annual meeting of the American Economic Association, New York, New York, January 3-5. (posted at www.csls.ca).

Osberg, Lars and Andrew Sharpe (2000a) "An Index of Economic Well-being for OECD Countries," paper presented to the annual meeting of the American Economic Association, Boston, Mass. January 5-7. (posted at www.csls.ca).

Osberg, Lars and Andrew Sharpe (2000b) " An Index of Economic Well-being for the Canadian Provinces" November. (posted at www.csls.ca)

Osberg, Lars and Andrew Sharpe (2001a) "Comparisons of Trends in GDP and Economic Well-being - the Impact of Social Capital" in *The Contribution of Human and Social Capital to Sustained Economic Growth and Well Being* edited by John Helliwell, (Ottawa: Human Resources Development Canada and Paris: OECD) pp. 310-351.

Osberg, Lars and Andrew Sharpe (2001b) “Has Economic well-being Improved in Canada and the United States?” paper presented at the conference “What Has Happened to the Quality of Life in America and Other Advanced Industrialized Nations?” Jerome Levy Economics Institute of Bard College, Annandale-on-the-Hudson, New York, June 6-7.

Osberg, Lars, and Kuan Xu (2000) “International Comparisons of Poverty Intensity: Index Decomposition and Bootstrap Inference” *Journal of Human Resources* 35(1), Winter: 51-81.

Sharpe, Andrew (1999) “A Survey of Indicators of Economic and Social Well-being” Paper prepared by the Centre for the Study of Living Standards for Canadian Policy Research Networks, July. www.csls.ca under reports

Statistics Canada (1997) Environment-Economy Indicators and Detailed Statistics 1997 (Econnections: Linking the Environment and the Economy) Cat. No. 16-200, December.

Table 1: Canada, Components of Personal Consumption

Year	Personal Consumption per capita (1992 $)	Index of Life Expectancy 1971=1.00	Index of Equivalent Income 1971=1.00	Adjusted Personal Consumption per capita including regrettables (1992$)	Total Regrettable Cost Per Cap. (1992 $)	Adjusted Personal Consumption Per Cap. (1992 $)	Index of Adjusted Personal Consumption 1971=1.00
	A	C	D	E=A*C*D	F	G=E-F	G'
1971	9,671	1.000	1.000	9,671	1,166	8,505	0.9728
1972	10,132	1.006	0.995	10,138	1,333	8,805	1.0071
1973	10,707	1.011	0.990	10,720	1,368	9,352	1.0696
1974	11,104	1.017	0.985	11,124	1,316	9,808	1.1219
1975	11,401	1.023	0.980	11,428	1,358	10,070	1.1518
1976	11,855	1.014	0.975	11,728	1,444	10,284	1.1763
1977	12,066	1.020	0.970	11,944	1,518	10,425	1.1924
1978	12,349	1.026	0.966	12,232	1,573	10,659	1.2192
1979	12,571	1.032	0.961	12,459	1,568	10,891	1.2457
1980	12,665	1.037	0.956	12,560	1,502	11,058	1.2648
1981	12,698	1.035	0.951	12,498	1,477	11,020	1.2605
1982	12,236	1.041	0.946	12,051	1,429	10,621	1.2148
1983	12,460	1.047	0.942	12,278	1,481	10,797	1.2350
1984	12,899	1.052	0.937	12,719	1,572	11,147	1.2749
1985	13,441	1.058	0.932	13,261	1,642	11,619	1.3289
1986	13,838	1.047	0.928	13,443	1,636	11,807	1.3505
1987	14,229	1.053	0.923	13,831	1,625	12,206	1.3961
1988	14,653	1.059	0.918	14,251	1,665	12,586	1.4396
1989	14,914	1.065	0.914	14,514	1,660	12,854	1.4702
1990	14,881	1.071	0.909	14,490	1,714	12,777	1.4613
1991	14,498	1.066	0.905	13,978	1,661	12,317	1.4088
1992	14,576	1.068	0.900	14,010	1,704	12,306	1.4075
1993	14,665	1.070	0.896	14,052	1,746	12,305	1.4075
1994	14,956	1.072	0.891	14,286	1,788	12,498	1.4295
1995	15,110	1.074	0.887	14,389	1,823	12,566	1.4372
1996	15,320	1.077	0.882	14,554	1,860	12,694	1.4518
1997	15,826	1.077	0.878	14,968	1,900	13,068	1.4947
1998	16,148	1.080	0.873	15,225	1,946	13,279	1.5189
1999	16,573	1.082	0.869	15,578	1,996	13,582	1.5535

Sources: Appendix Tables A1, A2, A5, A26

Table 2: Canada, Components of Total Consumption

Year	Adjusted Personal Consumption per capita (1992 $)	Gov't Real Current Expenditure Per Capita (1992 $)	Imputed Value of Leisure Per Capita (With Unemployment Adjustment) (1992$)	Total Consumption Flows Per Capita (1992 $)	Index 1971=1.01
	A	B	C	D=A+B+C	E=Index of D
1971	8,505	4,207	-0.5	12,712	1.0000
1972	8,805	4,252	33.6	13,091	1.0299
1973	9,352	4,399	69.0	13,820	1.0872
1974	9,808	4,613	106.5	14,528	1.1429
1975	10,070	4,852	192.5	15,115	1.1890
1976	10,284	4,879	250.6	15,414	1.2126
1977	10,425	5,047	282.4	15,755	1.2394
1978	10,659	5,084	135.7	15,879	1.2492
1979	10,891	5,088	30.3	16,009	1.2594
1980	11,058	5,197	0.6	16,255	1.2788
1981	11,020	5,211	-60.1	16,171	1.2722
1982	10,621	5,258	77.3	15,957	1.2553
1983	10,797	5,294	84.8	16,176	1.2725
1984	11,147	5,304	17.5	16,468	1.2955
1985	11,619	5,482	-93.2	17,007	1.3379
1986	11,807	5,530	-193.4	17,144	1.3487
1987	12,206	5,537	-297.0	17,446	1.3724
1988	12,586	5,714	-399.2	17,901	1.4082
1989	12,854	5,774	-486.2	18,142	1.4272
1990	12,777	5,894	-501.7	18,169	1.4293
1991	12,317	5,986	-380.2	17,923	1.4099
1992	12,306	5,975	-204.7	18,076	1.4220
1993	12,305	5,907	-202.4	18,010	1.4168
1994	12,498	5,769	-280.7	17,986	1.4149
1995	12,566	5,676	-260.8	17,980	1.4145
1996	12,694	5,538	-224.5	18,007	1.4166
1997	13,068	5,412	-286.0	18,194	1.4313
1998	13,279	5,452	-290.1	18,442	1.4508
1999	13,582	5,480	-389.4	18,673	1.4690

Sources: A-Table 1, B - Appendix Table A2, C - Appendix Table A29.

Table 3: Canada, Stocks of Wealth

Year	Total Per Capita Net Capital Stock (1992 $)	Per Capita Depreciated Accumulated Stock GERD (1992 $)	Total Real Per Capita Value of Nat. Res. (1992 $)	Human Capital per capita (1992 $)	Per Capita Real Net Int'l Investment Position (1992 $)	Per Capita Greenhouse Gas Emis-sion Cost (1992 $)	Total Real Per Capita Wealth (1992 $)	Index 1971=1.00
	A	B	C	D	E	F	G=A+B+C+D+E-F	H-index of G
1971	26,441	789	15,632	55,304	-5,583	362	92,222	1.0000
1972	27,034	838	14,826	55,346	-5,584	364	92,095	0.9986
1973	27,970	875	15,112	55,950	-5,442	369	94,096	1.0203
1974	28,886	900	16,302	56,658	-5,241	379	97,126	1.0532
1975	29,787	921	16,859	57,359	-5,598	384	98,944	1.0729
1976	30,741	934	17,588	58,069	-6,150	391	100,790	1.0929
1977	31,639	954	17,735	58,742	-6,372	391	102,308	1.1094
1978	32,521	980	19,173	59,358	-7,593	393	104,045	1.1282
1979	33,536	1,014	23,507	59,979	-8,037	397	109,602	1.1884
1980	34,545	1,049	27,789	60,858	-7,648	396	116,197	1.2600
1981	35,828	1,101	23,222	61,659	-8,377	403	113,030	1.2256
1982	36,410	1,162	20,771	62,473	-7,670	387	112,759	1.2227
1983	36,861	1,212	22,181	63,449	-7,618	389	115,695	1.2545
1984	37,299	1,274	21,353	64,078	-7,810	396	115,797	1.2556
1985	37,917	1,348	19,612	64,772	-8,696	401	114,552	1.2421
1986	38,537	1,419	13,580	65,468	-9,269	400	109,333	1.1855
1987	39,363	1,470	14,412	66,201	-9,444	402	111,600	1.2101
1988	40,391	1,511	14,615	66,938	-9,050	402	114,003	1.2362
1989	41,328	1,541	14,959	67,004	-9,138	397	115,297	1.2502
1990	42,031	1,581	15,005	68,051	-9,503	388	116,778	1.2663
1991	42,435	1,619	11,790	68,615	-9,680	379	114,400	1.2405
1992	42,683	1,657	10,746	69,598	-10,526	376	113,784	1.2338
1993	42,748	1,705	10,055	70,745	-11,125	384	113,743	1.2334
1994	43,068	1,756	10,951	71,459	-11,282	400	115,553	1.2530
1995	43,211	1,800	12,292	71,974	-10,775	400	118,103	1.2806
1996	43,454	1,839	14,421	72,547	-10,065	400	121,797	1.3207
1997	44,096	1,871	15,293	73,652	-9,738	400	124,773	1.3530
1998	44,649	1,929	15,242	74,320	-10,083	400	125,657	1.3625
1999	45,203	1,981	14,884	75,260	-9,064	400	127,863	1.3865

Sources: A - Appendix Table A7, B- Appendix Table A8, C- Appendix Table A12,
D - Appendix Table A13, E - Appendix Table A14, F- Appendix Table A25.

Table 4: Canada, Index of Economic Inequality

Year	Poverty Intensity	Poverty Intensity Index	Gini Coeff. (income after tax)	Gini Coeff. (income after tax), Index	Overall index of Inequality
	A	A'	B	B'	C=-1*(A'*0.75+B'*0.25)
1971	0.044	1.000	0.373	1.000	-1.000
1972	0.044	1.000	0.368	0.987	-0.997
1973	0.044	1.000	0.368	0.987	-0.997
1974	0.044	1.005	0.363	0.973	-0.997
1975	0.044	1.010	0.364	0.976	-1.002
1976	0.041	0.944	0.374	1.003	-0.958
1977	0.048	1.084	0.362	0.971	-1.055
1978	0.046	1.052	0.367	0.984	-1.035
1979	0.045	1.021	0.355	0.952	-1.004
1980	0.041	0.937	0.358	0.960	-0.943
1981	0.038	0.856	0.351	0.941	-0.878
1982	0.038	0.859	0.353	0.946	-0.881
1983	0.038	0.861	0.363	0.973	-0.889
1984	0.042	0.948	0.359	0.962	-0.951
1985	0.038	0.870	0.358	0.960	-0.892
1986	0.035	0.805	0.359	0.962	-0.845
1987	0.036	0.810	0.357	0.957	-0.847
1988	0.034	0.771	0.355	0.952	-0.816
1989	0.031	0.713	0.352	0.944	-0.771
1990	0.034	0.777	0.352	0.944	-0.819
1991	0.034	0.776	0.357	0.957	-0.821
1992	0.034	0.785	0.356	0.954	-0.827
1993	0.033	0.754	0.358	0.960	-0.805
1994	0.033	0.760	0.354	0.949	-0.807
1995	0.036	0.811	0.357	0.957	-0.848
1996	0.038	0.877	0.362	0.971	-0.900
1997	0.040	0.905	0.363	0.973	-0.922
1998	0.040	0.905	0.366	0.981	-0.924
1999	0.040	0.905	0.366	0.981	-0.924

Sources: A - Appendix Table A18, B- Appendix Table A17.

Table 5: Risk imposed by unemployment, Canada

Year	Employment rate	% of the unemployed people receiving reg.benefits	Average weekly benefits/ average weekly earnings (%)	ER Index	Coverage Index	Income Replacement Index	multiplicative Index
	A	B	C	D= index of A	E=Index of B	F=Index of C	G=D*E*F
1971	54.5	73.71	31.25	1.0000	1.0000	1.0000	1.0000
1972	54.9	94.93	45.27	1.0073	1.2878	1.4486	1.8792
1973	56.4	107.40	46.64	1.0349	1.4570	1.4925	2.2503
1974	57.3	110.88	45.98	1.0514	1.5042	1.4714	2.3269
1975	56.9	98.03	45.51	1.0440	1.3299	1.4563	2.0220
1976	57.2	85.30	44.53	1.0495	1.1572	1.4250	1.7306
1977	56.9	78.07	44.18	1.0440	1.0591	1.4138	1.5632
1978	57.4	76.93	45.20	1.0532	1.0436	1.4464	1.5897
1979	58.8	71.50	41.19	1.0789	0.9700	1.3181	1.3794
1980	59.4	68.03	41.65	1.0899	0.9229	1.3328	1.3406
1981	60.0	67.21	40.14	1.1009	0.9118	1.2845	1.2894
1982	57.3	76.74	39.69	1.0514	1.0410	1.2701	1.3901
1983	57.0	75.02	40.19	1.0459	1.0177	1.2862	1.3690
1984	57.7	74.27	40.14	1.0587	1.0075	1.2846	1.3702
1985	58.5	73.90	40.96	1.0734	1.0025	1.3108	1.4105
1986	59.6	76.33	42.04	1.0936	1.0355	1.3453	1.5235
1987	60.5	76.68	42.42	1.1101	1.0403	1.3575	1.5676
1988	61.7	83.14	43.20	1.1321	1.1279	1.3825	1.7653
1989	62.1	84.19	43.88	1.1394	1.1421	1.4041	1.8272
1990	61.7	83.56	45.43	1.1321	1.1336	1.4538	1.8658
1991	59.7	78.56	46.17	1.0954	1.0658	1.4776	1.7250
1992	58.4	72.07	46.14	1.0716	0.9776	1.4763	1.5466
1993	58.0	65.52	45.89	1.0642	0.8888	1.4684	1.3890
1994	58.4	59.50	44.31	1.0716	0.8071	1.4179	1.2263
1995	58.8	53.15	44.09	1.0789	0.7210	1.4108	1.0975
1996	58.5	49.45	43.57	1.0734	0.6708	1.3941	1.0039
1997	59.0	43.32	41.74	1.0826	0.5876	1.3357	0.8497
1998	59.7	43.37	42.11	1.0954	0.5883	1.3474	0.8684
1999	60.6	43.10	42.77	1.1119	0.5847	1.3687	0.8899

Source: Table A24, Data on employment rate are from Historical Labour force Survey 71F0004XCB.

Table 6: Canada, Risk imposed by Illness

Year	Medical Care Expenses,% of Disposable income	Index
1971	2.55	-1.000
1972	2.55	-1.000
1973	2.55	-1.000
1974	2.55	-1.000
1975	2.55	-1.000
1976	2.52	-0.988
1977	2.55	-1.000
1978	2.55	-1.000
1979	2.56	-1.004
1980	2.67	-1.047
1981	2.66	-1.043
1982	2.78	-1.090
1983	2.88	-1.129
1984	2.92	-1.145
1985	3.03	-1.188
1986	3.18	-1.247
1987	3.24	-1.271
1988	3.28	-1.286
1989	3.30	-1.294
1990	3.43	-1.345
1991	3.62	-1.420
1992	3.80	-1.490
1993	3.96	-1.553
1994	4.12	-1.616
1995	4.20	-1.649
1996	4.32	-1.693
1997	4.36	-1.710
1998	4.39	-1.721
1999	4.42	-1.733

Source: Data for total private health expenditure are from CIHI, http://www.cihi.ca/medrls/4nov19.htm
Data for after-tax personal income are from Statistics Canada, CANSIM series D15724
Note: Data for total private health expenditure for 1999 was extrapolated on the assumption of constant growth from the 1997 to 1998 period.

Table 7: Canada, Risk Imposed by Single Parent Poverty

Year	Divorces D190	Number of married people, all ages, (measured in July of every year) C241401	married couples	Divorce rate (% of legally married couples) (A)	Poverty rate for single women with children under 18 (B)	Poverty gap (C)	Index of A (A')	Index of B (B')	Index of C (C')	Multiplicative index (A'*B'*C')*-1
1971	29,685	9,939,404	4,969,702	0.597	0.507	0.395	1.000	1.000	1.0000	-1.0000
1972	32,389	10,146,905	5,073,453	0.638	0.507	0.395	1.069	1.000	1.0000	-1.0688
1973	36,704	10,372,391	5,186,196	0.708	0.507	0.395	1.185	1.000	1.0000	-1.1848
1974	45,019	10,627,031	5,313,516	0.847	0.506	0.367	1.418	0.998	0.9284	-1.3139
1975	50,611	10,888,970	5,444,485	0.930	0.505	0.339	1.556	0.996	0.8567	-1.3273
1976	54,207	11,143,393	5,571,697	0.973	0.547	0.330	1.629	1.079	0.8346	-1.4663
1977	55,370	11,340,210	5,670,105	0.977	0.505	0.399	1.635	0.995	1.0101	-1.6429
1978	57,155	11,521,182	5,760,591	0.992	0.502	0.412	1.661	0.990	1.0408	-1.7119
1979	59,474	11,703,828	5,851,914	1.016	0.500	0.424	1.701	0.986	1.0715	-1.7968
1980	62,019	11,918,218	5,959,109	1.041	0.476	0.402	1.742	0.938	1.0175	-1.6630
1981	67,671	12,131,822	6,065,911	1.116	0.452	0.381	1.868	0.891	0.9635	-1.6025
1982	70,436	12,296,525	6,148,263	1.146	0.490	0.352	1.918	0.965	0.8894	-1.6466
1983	68,567	12,435,426	6,217,713	1.103	0.512	0.336	1.846	1.009	0.8504	-1.5834
1984	65,172	12,566,482	6,283,241	1.037	0.517	0.338	1.736	1.019	0.8551	-1.5126
1985	61,976	12,691,358	6,345,679	0.977	0.524	0.343	1.635	1.032	0.8682	-1.4652
1986	78,304	12,825,640	6,412,820	1.221	0.483	0.330	2.044	0.953	0.8343	-1.6249
1987	96,200	12,781,480	6,390,740	1.505	0.498	0.319	2.520	0.981	0.8065	-1.9937
1988	83,507	12,722,215	6,361,108	1.313	0.485	0.319	2.198	0.957	0.8063	-1.6951
1989	80,998	12,706,809	6,353,405	1.275	0.435	0.323	2.134	0.858	0.8179	-1.4972
1990	78,463	12,634,050	6,317,025	1.242	0.506	0.312	2.079	0.997	0.7883	-1.6338
1991	77,020	12,522,971	6,261,486	1.230	0.491	0.310	2.059	0.967	0.7829	-1.5587
1992	79,034	12,907,302	6,453,651	1.225	0.461	0.296	2.050	0.909	0.7479	-1.3935
1993	78,226	13,295,575	6,647,788	1.177	0.431	0.282	1.970	0.850	0.7126	-1.1934
1994	78,880	13,685,640	6,842,820	1.153	0.428	0.283	1.930	0.844	0.7152	-1.1655
1995	77,636	14,069,207	7,034,604	1.104	0.458	0.283	1.848	0.903	0.7168	-1.1954
1996	71,528	14,444,072	7,222,036	0.990	0.508	0.298	1.658	1.001	0.7523	-1.2488
1997	67,408	14,487,629	7,243,815	0.931	0.430	0.312	1.558	0.847	0.7899	-1.0423
1998	69,088	14,516,917	7,258,459	0.952	0.430	0.312	1.593	0.847	0.7899	-1.0662
1999	69,088	14,535,881	7,267,941	0.951	0.430	0.312	1.591	0.847	0.7899	-1.0648

Sources: Divorce rate is calculated by using Cansim series C241401 and D190. For 1999, data on divorces is assumed to be equal to data to 1998.

(B) and (C) calculated from Survey of Consumer Finance by authors. Data for 1971 and 1972 are assumed to equal data from 1973 and data for 1998 and 1999 are assumed to equal data for 1997. Data for 1974, 1978, and 1980 are interpolations based on the average of data for the two surrounding years. Poverty is measured as the percentage of persons below the threshold of one half of equivalent after-tax median income ordered on an individual basis, excluding households with zero or negative income.

Table 8: Canada, Risk of Poverty Imposed by Old Age

Year	Elderly poverty rate (A)	Elderly poverty gap (% of poverty line) (B)	Poverty intensity (C=A*B)	Poverty Intensity *Index, C'*
1971	0.284	0.262	0.0743	-1.0000
1972	0.284	0.262	0.0743	-1.0000
1973	0.284	0.262	0.0743	-1.0000
1974	0.300	0.264	0.0791	-1.0643
1975	0.316	0.265	0.0839	-1.1294
1976	0.311	0.253	0.0786	-1.0573
1977	0.343	0.282	0.0967	-1.3016
1978	0.319	0.258	0.0824	-1.1083
1979	0.296	0.234	0.0691	-0.9304
1980	0.259	0.216	0.0561	-0.7543
1981	0.222	0.199	0.0442	-0.5954
1982	0.166	0.157	0.0260	-0.3501
1983	0.152	0.180	0.0273	-0.3674
1984	0.146	0.181	0.0264	-0.3547
1985	0.117	0.200	0.0234	-0.3143
1986	0.110	0.185	0.0203	-0.2736
1987	0.100	0.181	0.0181	-0.2432
1988	0.124	0.167	0.0208	-0.2800
1989	0.114	0.147	0.0167	-0.2246
1990	0.080	0.147	0.0118	-0.1591
1991	0.060	0.134	0.0080	-0.1081
1992	0.059	0.148	0.0087	-0.1171
1993	0.064	0.145	0.0093	-0.1245
1994	0.050	0.150	0.0075	-0.1009
1995	0.041	0.141	0.0058	-0.0785
1996	0.058	0.160	0.0093	-0.1250
1997	0.054	0.158	0.0086	-0.1153
1998	0.054	0.158	0.0086	-0.1153
1999	0.054	0.158	0.0086	-0.1153

Calculated from Survey of Consumer Finance by authors. Data for 1971 and 1972 are assumed to equal data from 1973 and data for 1998 and 1999 are assumed to equal data for 1997. Data for 1974, 1978, and 1980 are exptrapolations based on the average of data for the two surrounding years. Poverty is measured as the percentage of persons below the threshold of one half of equivalent after-tax median income ordered on an individual basis, excluding households with zero or negative income.

Table 9: Index of Economic Security, Canada

Year	Index 1 Unemployed Risk	Index 2 Illness Risk	Index 3 Single Parent Poverty Risk	Index 4 Old Age risk	Weight for Index of WAP (15+ Pop/ All Pop)	Weight for Index of Pop under risk for health	Weight for Index of women in poverty	Weight for Index of Elderly Pop	Weighted Index 1 Unemployment	Weighted Index 2 Health	Weighted Index 3 Women	Weighted Index 4 Old Age	Average Weighted Index
	A	B+2	C+2	D+2	E	F	G	H	I=A*E	J=B*F	K=C*G	L=D*H	M=I+J+K+L
1971	1.0000	1.0000	1.0000	1.0000	0.2638	0.4178	0.2412	0.0773	0.2638	0.4178	0.2412	0.0773	1.0000
1972	1.8792	1.0000	0.9312	1.0000	0.2645	0.4179	0.2403	0.0773	0.4971	0.4179	0.2238	0.0773	1.2160
1973	2.2503	1.0000	0.8152	1.0000	0.2669	0.4169	0.2388	0.0774	0.6005	0.4169	0.1947	0.0774	1.2895
1974	2.3269	1.0000	0.6861	0.9357	0.2695	0.4158	0.2372	0.0775	0.6271	0.4158	0.1628	0.0725	1.2781
1975	2.0220	1.0000	0.6727	0.8706	0.2722	0.4146	0.2356	0.0776	0.5503	0.4146	0.1585	0.0675	1.1910
1976	1.7306	1.0118	0.5337	0.9427	0.2705	0.4161	0.2355	0.0779	0.4681	0.4210	0.1257	0.0734	1.0882
1977	1.5632	1.0000	0.3571	0.6984	0.2720	0.4158	0.2344	0.0779	0.4252	0.4158	0.0837	0.0544	0.9790
1978	1.5897	1.0000	0.2881	0.8917	0.2738	0.4152	0.2331	0.0779	0.4353	0.4152	0.0672	0.0695	0.9871
1979	1.3794	0.9961	0.2032	1.0696	0.2756	0.4148	0.2320	0.0777	0.3801	0.4131	0.0471	0.0831	0.9235
1980	1.3406	0.9529	0.3370	1.2457	0.2771	0.4146	0.2309	0.0775	0.3715	0.3950	0.0778	0.0965	0.9408
1981	1.2894	0.9569	0.3975	1.4046	0.2781	0.4146	0.2300	0.0773	0.3585	0.3967	0.0914	0.1086	0.9553
1982	1.3901	0.9098	0.3534	1.6499	0.2787	0.4148	0.2292	0.0774	0.3874	0.3774	0.0810	0.1276	0.9734
1983	1.3690	0.8706	0.4166	1.6326	0.2792	0.4149	0.2283	0.0775	0.3823	0.3612	0.0951	0.1266	0.9652
1984	1.3702	0.8549	0.4874	1.6453	0.2797	0.4151	0.2275	0.0778	0.3832	0.3549	0.1109	0.1279	0.9769
1985	1.4105	0.8118	0.5348	1.6857	0.2801	0.4155	0.2267	0.0777	0.3950	0.3373	0.1213	0.1310	0.9846
1986	1.5235	0.7529	0.3751	1.7264	0.2803	0.4159	0.2260	0.0778	0.4270	0.3131	0.0848	0.1343	0.9592
1987	1.5676	0.7294	0.0063	1.7568	0.2798	0.4167	0.2255	0.0780	0.4387	0.3039	0.0014	0.1370	0.8810
1988	1.7653	0.7137	0.3049	1.7200	0.2793	0.4173	0.2249	0.0785	0.4931	0.2978	0.0686	0.1349	0.9945
1989	1.8272	0.7059	0.5028	1.7754	0.2783	0.4183	0.2245	0.0788	0.5086	0.2953	0.1129	0.1399	1.0566
1990	1.8658	0.6549	0.3662	1.8409	0.2779	0.4189	0.2239	0.0793	0.5185	0.2744	0.0820	0.1459	1.0208
1991	1.7250	0.5804	0.4413	1.8919	0.2779	0.4190	0.2230	0.0802	0.4793	0.2432	0.0984	0.1517	0.9726
1992	1.5466	0.5098	0.6065	1.8829	0.2779	0.4185	0.2218	0.0818	0.4298	0.2134	0.1345	0.1539	0.9317
1993	1.3890	0.4471	0.8066	1.8755	0.2779	0.4182	0.2207	0.0833	0.3860	0.1869	0.1780	0.1562	0.9071
1994	1.2263	0.3843	0.8345	1.8991	0.2775	0.4180	0.2197	0.0848	0.3403	0.1606	0.1833	0.1611	0.8454
1995	1.0975	0.3513	0.8046	1.9215	0.2774	0.4177	0.2186	0.0863	0.3045	0.1467	0.1759	0.1659	0.7929
1996	1.0039	0.3073	0.7512	1.8750	0.2775	0.4173	0.2174	0.0878	0.2786	0.1282	0.1633	0.1646	0.7347
1997	0.8497	0.2903	0.9577	1.8847	0.2777	0.4167	0.2162	0.0894	0.2360	0.1210	0.2070	0.1685	0.7324
1998	0.8684	0.2792	0.9338	1.8847	0.2780	0.4159	0.2148	0.0912	0.2414	0.1161	0.2006	0.1719	0.7301
1999	0.8899	0.2673	0.9352	1.8847	0.2784	0.4149	0.2134	0.0934	0.2477	0.1109	0.1996	0.1759	0.7341

Sources: Tables 5,6,7,8 for indexes, and Table A20 for weights.

Table 10: Overall Well being Index, Canada

Year	Consumption Flows 0.25	Wealth Stocks 0.25	Inequality Measures	Equality Measures 0.25	Economic Security 0.25	Well-being Index
	A	B	C	D=C+2	E	G=0.25*A+0.25*B+0.25*D+0.25*E
1971	1.0000	1.0000	-1.0000	1.0000	1.0000	1.0000
1972	1.0299	0.9986	-0.9966	1.0034	1.2160	1.0620
1973	1.0872	1.0203	-0.9966	1.0034	1.2895	1.1001
1974	1.1429	1.0532	-0.9972	1.0028	1.2781	1.1193
1975	1.1890	1.0729	-1.0018	0.9982	1.1910	1.1128
1976	1.2126	1.0929	-0.9585	1.0415	1.0882	1.1088
1977	1.2394	1.1094	-1.0553	0.9447	0.9790	1.0681
1978	1.2492	1.1282	-1.0350	0.9650	0.9871	1.0823
1979	1.2594	1.1884	-1.0037	0.9963	0.9235	1.0919
1980	1.2788	1.2600	-0.9427	1.0573	0.9408	1.1342
1981	1.2722	1.2256	-0.8776	1.1224	0.9553	1.1439
1982	1.2553	1.2227	-0.8812	1.1188	0.9734	1.1426
1983	1.2725	1.2545	-0.8888	1.1112	0.9652	1.1508
1984	1.2955	1.2556	-0.9513	1.0487	0.9769	1.1442
1985	1.3379	1.2421	-0.8925	1.1075	0.9846	1.1680
1986	1.3487	1.1855	-0.8447	1.1553	0.9592	1.1622
1987	1.3724	1.2101	-0.8468	1.1532	0.8810	1.1542
1988	1.4082	1.2362	-0.8164	1.1836	0.9945	1.2056
1989	1.4272	1.2502	-0.7709	1.2291	1.0566	1.2408
1990	1.4293	1.2663	-0.8187	1.1813	1.0208	1.2244
1991	1.4099	1.2405	-0.8211	1.1789	0.9726	1.2005
1992	1.4220	1.2338	-0.8275	1.1725	0.9317	1.1900
1993	1.4168	1.2334	-0.8054	1.1946	0.9071	1.1880
1994	1.4149	1.2530	-0.8072	1.1928	0.8454	1.1765
1995	1.4145	1.2806	-0.8476	1.1524	0.7929	1.1601
1996	1.4166	1.3207	-0.9002	1.0998	0.7347	1.1429
1997	1.4313	1.3530	-0.9222	1.0778	0.7324	1.1486
1998	1.4508	1.3625	-0.9242	1.0758	0.7301	1.1548
1999	1.4690	1.3865	-0.9242	1.0758	0.7341	1.1663

Sources: Tables 2,3,4,9

Table 10b: Overall Well being Index, Canada

Year	Consumption Flows 0.4	Wealth Stocks 0.1	Inequality Measures	Equality Measures 0.25	Economic Security 0.25	Well-being Index
	A	B	C	D=C+2	E	G=0.4*A+0.1*B+0.25*D+0.25*E
1971	1.0000	1.0000	-1.0000	1.0000	1.0000	1.0000
1972	1.0299	0.9986	-0.9966	1.0034	1.2160	1.0667
1973	1.0872	1.0203	-0.9966	1.0034	1.2895	1.1101
1974	1.1429	1.0532	-0.9972	1.0028	1.2781	1.1327
1975	1.1890	1.0729	-1.0018	0.9982	1.1910	1.1302
1976	1.2126	1.0929	-0.9585	1.0415	1.0882	1.1268
1977	1.2394	1.1094	-1.0553	0.9447	0.9790	1.0876
1978	1.2492	1.1282	-1.0350	0.9650	0.9871	1.1005
1979	1.2594	1.1884	-1.0037	0.9963	0.9235	1.1026
1980	1.2788	1.2600	-0.9427	1.0573	0.9408	1.1370
1981	1.2722	1.2256	-0.8776	1.1224	0.9553	1.1509
1982	1.2553	1.2227	-0.8812	1.1188	0.9734	1.1475
1983	1.2725	1.2545	-0.8888	1.1112	0.9652	1.1535
1984	1.2955	1.2556	-0.9513	1.0487	0.9769	1.1502
1985	1.3379	1.2421	-0.8925	1.1075	0.9846	1.1824
1986	1.3487	1.1855	-0.8447	1.1553	0.9592	1.1867
1987	1.3724	1.2101	-0.8468	1.1532	0.8810	1.1785
1988	1.4082	1.2362	-0.8164	1.1836	0.9945	1.2314
1989	1.4272	1.2502	-0.7709	1.2291	1.0566	1.2673
1990	1.4293	1.2663	-0.8187	1.1813	1.0208	1.2489
1991	1.4099	1.2405	-0.8211	1.1789	0.9726	1.2259
1992	1.4220	1.2338	-0.8275	1.1725	0.9317	1.2182
1993	1.4168	1.2334	-0.8054	1.1946	0.9071	1.2155
1994	1.4149	1.2530	-0.8072	1.1928	0.8454	1.2008
1995	1.4145	1.2806	-0.8476	1.1524	0.7929	1.1802
1996	1.4166	1.3207	-0.9002	1.0998	0.7347	1.1573
1997	1.4313	1.3530	-0.9222	1.0778	0.7324	1.1604
1998	1.4508	1.3625	-0.9242	1.0758	0.7301	1.1680
1999	1.4690	1.3865	-0.9242	1.0758	0.7341	1.1787

Sources: Tables 2,3,4,9

Table A1: Canada, Personal Consumption on Consumer Goods and Services

Measure	Personal Consumption (millions of 1992 $)	Population (persons)	Personal Consumption per capita (1992 $)	Index 1971=1.00
Matrix	6535	1		
Series	*d15372	*d1		
1961	134,009	18,224,500	7,353	0.760
1962	140,860	18,570,750	7,585	0.784
1963	146,731	18,919,000	7,756	0.802
1964	154,507	19,277,250	8,015	0.829
1965	163,548	19,633,500	8,330	0.861
1966	171,654	19,997,500	8,584	0.888
1967	178,057	20,363,750	8,744	0.904
1968	185,983	20,692,000	8,988	0.929
1969	195,023	20,994,250	9,289	0.961
1970	198,364	21,287,500	9,318	0.964
1971	210,322	21,747,419	9,671	1.000
1972	224,819	22,188,099	10,132	1.048
1973	240,443	22,455,735	10,707	1.107
1974	252,874	22,773,084	11,104	1.148
1975	263,377	23,101,938	11,401	1.179
1976	277,572	23,414,220	11,855	1.226
1977	285,897	23,694,351	12,066	1.248
1978	295,598	23,936,305	12,349	1.277
1979	303,855	24,170,847	12,571	1.300
1980	309,935	24,471,393	12,665	1.310
1981	314,720	24,785,074	12,698	1.313
1982	306,931	25,083,464	12,236	1.265
1983	315,693	25,336,486	12,460	1.288
1984	329,926	25,577,263	12,899	1.334
1985	346,955	25,813,686	13,441	1.390
1986	360,738	26,068,572	13,838	1.431
1987	375,678	26,402,271	14,229	1.471
1988	392,093	26,758,946	14,653	1.515
1989	406,034	27,224,791	14,914	1.542
1990	411,343	27,642,857	14,881	1.539
1991	405,783	27,989,713	14,498	1.499
1992	412,940	28,329,685	14,576	1.507
1993	420,442	28,670,208	14,665	1.516
1994	433,649	28,995,383	14,956	1.546
1995	442,941	29,315,266	15,110	1.562
1996	453,983	29,632,617	15,320	1.584
1997	473,895	29,943,787	15,826	1.636
1998	487,866	30,212,788	16,148	1.670
1999	504,763	30,456,749	16,573	1.714

Note: Population is the annual average number of persons for the quarterly estimates.
For all Appendix Tables *D, *P numbers are CANSIM series numbers.

Table A2: Canada, Government Spending, all levels.

Matrix Series	Real Current Expenditure (mill. of 1992 $) 6522 *d14848	Population (persons) thousands 1 *d1	Real Current Expenditure Per Capita (1992 $)	Index 1971=1.00
1961	51,557	18,224.5	2,828.99	0.6725
1962	53,923	18,570.8	2,903.65	0.6902
1963	55,760	18,919.0	2,947.30	0.7006
1964	58,702	19,277.3	3,045.14	0.7239
1965	61,356	19,633.5	3,125.07	0.7429
1966	66,789	19,997.5	3,339.87	0.7939
1967	72,649	20,363.8	3,567.56	0.8481
1968	77,397	20,692.0	3,740.43	0.8892
1969	80,760	20,994.3	3,846.77	0.9144
1970	87,850	21,287.5	4,126.83	0.9810
1971	91,485	21,747.4	4,206.71	1.0000
1972	94,346	22,188.1	4,252.10	1.0108
1973	98,782	22,455.7	4,398.97	1.0457
1974	105,059	22,773.1	4,613.30	1.0967
1975	112,092	23,101.9	4,852.06	1.1534
1976	114,247	23,414.2	4,879.39	1.1599
1977	119,590	23,694.4	5,047.19	1.1998
1978	121,700	23,936.3	5,084.33	1.2086
1979	122,979	24,170.8	5,087.91	1.2095
1980	127,172	24,471.4	5,196.76	1.2354
1981	129,157	24,785.1	5,211.08	1.2388
1982	131,901	25,083.5	5,258.48	1.2500
1983	134,119	25,336.5	5,293.51	1.2584
1984	135,654	25,577.3	5,303.69	1.2608
1985	141,501	25,813.7	5,481.63	1.3031
1986	144,166	26,068.6	5,530.26	1.3146
1987	146,180	26,402.3	5,536.64	1.3161
1988	152,897	26,758.9	5,713.86	1.3583
1989	157,195	27,224.8	5,773.97	1.3726
1990	162,937	27,642.9	5,894.36	1.4012
1991	167,541	27,989.7	5,985.81	1.4229
1992	169,262	28,329.7	5,974.72	1.4203
1993	169,362	28,670.2	5,907.25	1.4042
1994	167,263	28,995.4	5,768.61	1.3713
1995	166,380	29,315.3	5,675.54	1.3492
1996	164,104	29,632.6	5,537.95	1.3165
1997	162,053	29,943.8	5,411.91	1.2865
1998	164,725	30,212.8	5,452.16	1.2961
1999	166,905	30,456.7	5,480.07	1.3027

Note: Series d15599 is the Implicit price index, G.D.P., 1992 =100, net government current expenditure on goods and services.

Table A5: Canada, Costs of Various Regrettables

	Population (thousands) d1	Cost of Commuting (bil 1992 $)	Cost of Commuting Per Capita (1992 $)	Cost of Crime (bil 1992 $)	Cost of Crime Per Capita (1992 $)	Cost of House Pollution Abatement (bil 1992 $)	Cost of House Pollution Abatement Per Capita (1992 $)	Cost of Auto Accidents (bil 1992 $)	Cost of Auto Accidents Per Capita (1992 $)	Total Regrettable Cost Per Cap. (1992 $)	Index 1971=1.00
1971	21,747	13.1	601	2.4	112	0.6	29	9.2	424	1,166	1.000
1972	22,188	15.2	687	2.7	121	0.8	35	10.9	491	1,333	1.143
1973	22,456	16.1	718	2.8	125	0.9	40	10.9	485	1,368	1.174
1974	22,773	16.1	708	2.9	129	1.0	45	9.9	433	1,316	1.129
1975	23,102	16.1	698	3.1	133	1.3	55	10.9	471	1,358	1.165
1976	23,414	17.5	749	3.2	137	1.4	60	11.7	498	1,444	1.238
1977	23,694	18.8	794	3.2	135	1.5	65	12.4	524	1,518	1.303
1978	23,936	19.7	824	3.3	139	1.5	64	13.1	546	1,573	1.349
1979	24,171	20.4	842	3.5	143	1.5	64	12.5	519	1,568	1.345
1980	24,471	20.4	832	3.6	147	1.5	63	11.3	460	1,502	1.288
1981	24,785	20.7	837	3.6	145	1.8	72	10.5	424	1,477	1.267
1982	25,083	20.2	807	3.7	148	1.8	71	10.1	403	1,429	1.226
1983	25,336	21.5	849	3.7	147	2.2	86	10.1	399	1,481	1.270
1984	25,577	23.2	906	3.8	150	2.3	90	10.9	426	1,572	1.348
1985	25,814	24.5	947	4.0	154	2.4	94	11.5	446	1,642	1.408
1986	26,069	24.1	923	4.0	152	2.7	103	11.9	457	1,636	1.403
1987	26,402	24.2	917	4.1	155	2.3	87	12.3	466	1,625	1.394
1988	26,759	25.4	947	4.2	158	2.6	96	12.4	464	1,665	1.428
1989	27,225	26.1	959	4.4	160	2.2	80	12.5	461	1,660	1.424
1990	27,643	26.2	950	4.5	162	1.9	69	14.7	533	1,714	1.470
1991	27,990	25.2	901	4.5	160	1.4	50	15.4	549	1,661	1.424
1992	28,330	26.1	922	4.5	158	1.5	54	16.1	569	1,704	1.462
1993	28,670	27.0	942	4.6	161	1.5	54	16.9	590	1,746	1.498
1994	28,995	28.0	967	4.6	159	1.7	57	17.5	605	1,788	1.534
1995	29,315	28.4	970	4.7	159	1.6	54	18.8	640	1,823	1.564
1996	29,633	28.8	974	4.7	159	1.5	50	20.1	677	1,860	1.596
1997	29,944	29.3	977	4.8	159	1.4	47	21.4	716	1,900	1.630
1998	30,213	29.7	982	4.8	160	1.3	44	22.9	759	1,946	1.669
1999	30,457	30.1	988	4.9	160	1.3	42	24.5	805	1,996	1.712

Source: Hans Messinger, Statistics Canada, "Measuring Sustainable Economic Welfare: Looking Beyond GDP."
Note: Cost of commuting - cost of traveling to and from work using either public transportation or private vehicle, as well as an estimate of time use while commuting;
Cost of crime and automobile accidents - costs associated with medical and legal expenses, and expenditures related to lost or damaged property. Spending on crime prevention (alarm systems, locks etc.) are also deducted from consumer expenditures;
Cost of household pollution abatement - represents expenditures on air and water filters and devices to improve air and water quality in the home. Data for 1995 onwards are extrapolated on assumption of constant growth from the 1989 to 1994 period.

Recalculation into 1992 dollars base has done with consumer price index 1992=100, 1986=78.1, Source P200000.

Table A6: Canada, Life Expectancy at Birth

Year	Life Expectancy			Index
	Male	Female	Average	1971=1.00
1971	69.4	76.5	73.0	1.000
1972	69.8	76.9	73.4	1.006
1973	70.2	77.4	73.8	1.011
1974	70.6	77.8	74.2	1.017
1975	71.0	78.2	74.6	1.023
1976	70.3	77.7	74.0	1.014
1977	70.7	78.1	74.4	1.020
1978	71.1	78.6	74.8	1.026
1979	71.5	79.0	75.3	1.032
1980	71.9	79.4	75.7	1.037
1981	71.9	79.1	75.5	1.035
1982	72.3	79.5	75.9	1.041
1983	72.7	80.0	76.3	1.047
1984	73.1	80.4	76.8	1.052
1985	73.5	80.9	77.2	1.058
1986	73.0	79.8	76.4	1.047
1987	73.4	80.2	76.8	1.053
1988	73.8	80.7	77.3	1.059
1989	74.3	81.1	77.7	1.065
1990	74.7	81.6	78.1	1.071
1991	74.6	80.9	77.8	1.066
1992	74.8	81.0	77.9	1.068
1993	75.0	81.1	78.0	1.070
1994	75.2	81.2	78.2	1.072
1995	75.4	81.3	78.4	1.074
1996	75.7	81.4	78.6	1.077
1997	75.8	81.4	78.6	1.077
1998	76.0	81.5	78.8	1.080
1999	76.2	81.6	78.9	1.082

Source: Data for 1921, 1926, 1931, 1936, 1941, 1946, 1951, 1956, 1961, 1966, 1971, 1976, 1981, 1986, 1991, 1994, and 1995 are from Statistics Canada *Births and Deaths, 1995* Cat, No. 84-210.
Other years are interpolated on the assumption of constant growth between the benchmark years.
Data for 1996 are from Statistics Canada Cat No. 91-209, 1997.
Data for 1997 are from Statistics Canada, *The Daily* , December 22, 1999.
Data for 1998 and 1999 were extrapolated on the basis of constant growth in 1992 to 1997 period.
The average is evenly weighted between both sexes.

Table A7: Canada, Net Year-End Capital Stock in Millions of 1992 K$

Matrix Series	population thousands 1 d1	Canada non-res. (mil 1992 $)	Canada non-res. Per Capita (1992 $)	Housing Capital Stock (mil 1992 $)	Housing Per Capita Capital Stock (1992 $)	Total Per Capita Net Capital Stock (1992 $)	Total Per Capita Net Capital Stock Index 1971=1.00
1961	18,225	199,091	10,924	166,400	9,131	20,055	0.758
1962	18,571	206,467	11,118	173,442	9,340	20,457	0.774
1963	18,919	214,399	11,332	180,692	9,551	20,883	0.790
1964	19,277	225,396	11,692	189,460	9,828	21,520	0.814
1965	19,634	239,457	12,196	198,620	10,116	22,313	0.844
1966	19,998	257,058	12,855	206,972	10,350	23,204	0.878
1967	20,364	271,239	13,320	215,540	10,584	23,904	0.904
1968	20,692	281,973	13,627	225,968	10,921	24,548	0.928
1969	20,994	291,666	13,893	238,487	11,360	25,252	0.955
1970	21,288	301,566	14,166	249,519	11,721	25,888	0.979
1971	21,747	312,106	14,351	262,927	12,090	26,441	1.000
1972	22,188	322,037	14,514	277,801	12,520	27,034	1.022
1973	22,456	334,325	14,888	293,763	13,082	27,970	1.058
1974	22,773	347,697	15,268	310,125	13,618	28,886	1.092
1975	23,102	362,761	15,703	325,387	14,085	29,787	1.127
1976	23,414	374,823	16,008	344,943	14,732	30,741	1.163
1977	23,694	385,574	16,273	364,085	15,366	31,639	1.197
1978	23,936	395,505	16,523	382,918	15,997	32,521	1.230
1979	24,171	409,864	16,957	400,730	16,579	33,536	1.268
1980	24,471	429,105	17,535	416,269	17,010	34,545	1.306
1981	24,785	454,194	18,325	433,812	17,503	35,828	1.355
1982	25,083	466,476	18,597	446,802	17,813	36,410	1.377
1983	25,336	470,638	18,576	463,283	18,285	36,861	1.394
1984	25,577	474,709	18,560	479,291	18,739	37,299	1.411
1985	25,814	481,755	18,663	497,025	19,254	37,917	1.434
1986	26,069	486,387	18,658	518,206	19,879	38,537	1.457
1987	26,402	494,383	18,725	544,889	20,638	39,363	1.489
1988	26,759	509,374	19,036	571,443	21,355	40,391	1.528
1989	27,225	525,881	19,316	599,279	22,012	41,328	1.563
1990	27,643	538,327	19,474	623,535	22,557	42,031	1.590
1991	27,990	546,517	19,526	641,221	22,909	42,435	1.605
1992	28,330	548,560	19,363	660,648	23,320	42,683	1.614
1993	28,670	547,567	19,099	678,013	23,649	42,748	1.617
1994	28,995	552,270	19,047	696,503	24,021	43,068	1.629
1995	29,315	557,038	19,002	709,718	24,210	43,211	1.634
1996	29,633	563,225	19,007	724,425	24,447	43,454	1.643
1997	29,944	577,182	19,276	743,208	24,820	44,096	1.668
1998	30,213	587,752	19,454	761,234	25,196	44,649	1.689
1999	30,457	595,536	19,553	781,190	25,649	45,203	1.710

Sources: Housing stock are unpublished data obtained from Statistics Canada.
Data for non-residential stock from 1976-99 obtained from Statistics Canada, Cansim series D993325.
Data prior to 1976 have been extrapolated using total capital stock estimates in 1986 dollars D886842
using the transformation that in 1986, 1992 $/ 1986 $ = 117.7

Table A8: Canada, Expenditures and Stocks of R&D Investment

Year Series	GERD (millions $) 	GDP defl. 1992=100 d15612	Real GERD (mil. 1992 $) 	Accumulated Stock GERD (mil. 1992 $) 	Depreciated Accumulated Stock GERD (mil. 1992 $) 	population thousands d1	Per Capita Depreciated Accumulated Stock GERD (1992 $) 	Index 1971=1.00
1963	458	19.4	2,364	2,364	2,364	18,919	124.9	0.158
1964	555	19.9	2,789	5,153	4,680	19,277	242.8	0.308
1965	662	20.7	3,206	8,359	6,950	19,634	354.0	0.449
1966	750	21.7	3,460	11,819	9,020	19,998	451.1	0.572
1967	853	22.6	3,770	15,589	10,986	20,364	539.5	0.684
1968	905	23.5	3,859	19,448	12,648	20,692	611.3	0.775
1969	976	24.5	3,980	23,428	14,098	20,994	671.5	0.851
1970	1,059	25.7	4,117	27,545	15,395	21,288	723.2	0.917
1971	1,285	26.6	4,835	32,380	17,152	21,747	788.7	1.000
1972	1,372	28.2	4,870	37,249	18,591	22,188	837.9	1.062
1973	1,470	30.8	4,769	42,018	19,641	22,456	874.7	1.109
1974	1,689	35.4	4,778	46,796	20,491	22,773	899.8	1.141
1975	1,901	39.0	4,874	51,671	21,267	23,102	920.6	1.167
1976	2,071	42.6	4,864	56,535	21,878	23,414	934.4	1.185
1977	2,322	45.5	5,106	61,641	22,609	23,694	954.2	1.210
1978	2,609	48.5	5,382	67,023	23,469	23,936	980.5	1.243
1979	3,044	53.1	5,733	72,756	24,508	24,171	1,013.9	1.286
1980	3,575	58.9	6,067	78,823	25,673	24,471	1,049.1	1.330
1981	4,415	65.4	6,753	85,576	27,292	24,785	1,101.1	1.396
1982	5,198	71.0	7,321	92,897	29,155	25,083	1,162.3	1.474
1983	5,517	74.8	7,378	100,275	30,702	25,336	1,211.8	1.536
1984	6,206	77.3	8,028	108,304	32,590	25,577	1,274.2	1.616
1985	6,904	79.2	8,714	117,018	34,786	25,814	1,347.6	1.709
1986	7,460	81.5	9,159	126,177	36,988	26,069	1,418.9	1.799
1987	7,865	85.3	9,226	135,403	38,816	26,402	1,470.2	1.864
1988	8,373	89.2	9,392	144,795	40,445	26,759	1,511.5	1.916
1989	8,944	93.3	9,589	154,384	41,945	27,225	1,540.7	1.954
1990	9,756	96.1	10,149	164,533	43,705	27,643	1,581.1	2.005
1991	10,207	98.7	10,341	174,875	45,306	27,990	1,618.7	2.052
1992	10,698	100.0	10,701	185,575	46,945	28,330	1,657.1	2.101
1993	11,490	101.5	11,320	196,896	48,876	28,670	1,704.8	2.162
1994	12,121	102.6	11,814	208,709	50,915	28,995	1,756.0	2.226
1995	12,660	105.1	12,046	220,755	52,778	29,315	1,800.3	2.283
1996	13,102	106.7	12,279	233,034	54,501	29,633	1,839.2	2.332
1997	13,383	107.7	12,426	245,461	56,027	29,944	1,871.1	2.372
1998	14,411	107.1	13,456	258,916	58,277	30,213	1,928.9	2.446
1999	14,911	108.8	13,705	272,621	60,327	30,457	1,980.7	2.511

Source: GERD data for 1963-97 are from Statistics Canada *Industrial Research and Development* 1997 Intentions, 1998 and 1999 data are from Statistics Canada (1999) "Estimates of Canadian Research and Development Expenditures (GERD), Canada, 1988 to 1999, and by Province 1988 to 1997". Catalogue. No. 88F0006XPB, www.statcan.ca

Note: GERD is general domestic expenditure on research and development.
The depreciation is 20% of a declining balance.

Table A9: Canada, Value of Timber Stocks

Year	Value of Timber Stocks Stock Value II mil. dollars	GDP Deflator 1992=100 *d15612	population thousands *d1	Real Per Capita Value of Timber Stocks Stock Value II 1992$	Real Per Capita Value of Timber Stocks Stock Value II Index 1971=1.00
1961	14,339.2	18.7	18,225	4,213	1.168
1962	15,337.5	19.0	18,571	4,353	1.207
1963	16,193.8	19.4	18,919	4,418	1.225
1964	17,190.3	19.9	19,277	4,481	1.243
1965	17,801.7	20.7	19,634	4,391	1.218
1966	19,001.7	21.7	19,998	4,384	1.216
1967	19,399.7	22.6	20,364	4,211	1.168
1968	20,287.2	23.5	20,692	4,181	1.159
1969	21,361.8	24.5	20,994	4,149	1.151
1970	21,170.6	25.7	21,288	3,866	1.072
1971	20,840.4	26.6	21,747	3,606	1.000
1972	22,830.5	28.2	22,188	3,652	1.013
1973	28,154.7	30.8	22,456	4,067	1.128
1974	35,539.7	35.4	22,773	4,415	1.224
1975	40,142.3	39.0	23,102	4,455	1.236
1976	46,251.0	42.6	23,414	4,640	1.287
1977	52,029.5	45.5	23,694	4,829	1.339
1978	57,905.0	48.5	23,936	4,990	1.384
1979	68,057.0	53.1	24,171	5,303	1.470
1980	80,154.5	58.9	24,471	5,559	1.542
1981	86,325.2	65.4	24,785	5,328	1.477
1982	82,893.7	71.0	25,083	4,655	1.291
1983	78,778.6	74.8	25,336	4,158	1.153
1984	72,899.7	77.3	25,577	3,687	1.023
1985	69,619.2	79.2	25,814	3,404	0.944
1986	78,756.2	81.5	26,069	3,709	1.029
1987	108,761.8	85.3	26,402	4,832	1.340
1988	141,988.6	89.2	26,759	5,952	1.651
1989	165,348.3	93.3	27,225	6,511	1.806
1990	175,304.3	96.1	27,643	6,597	1.830
1991	162,819.1	98.7	27,990	5,894	1.634
1992	141,574.1	100.0	28,330	4,999	1.386
1993	123,972.1	101.5	28,670	4,260	1.181
1994	132,919.3	102.6	28,995	4,468	1.239
1995	182,052.2	105.1	29,315	5,909	1.639
1996	229,176.6	106.7	29,633	7,248	2.010
1997	268,259.4	107.7	29,944	8,318	2.307
1998	268,259.4	107.1	30,213	8,290	2.299
1999	268,259.4	108.8	30,457	8,095	2.245

Source: Statistics Canada *Econections* CD-ROM Cat. No. 16-200-XKE.
Note: Nominal values of timber stocks in 1998 and 1999 are assumed to equal their 1997 value.

Table A10: Canada, Value of Energy Natural Resources

Year	Real Value of Recoverable Bitumous Coal Res. Present Value (mil 1992$)	Real Value of Established Crude Bitumen Res. Present Value (mil 1992$)	Real Value of Established Natural Gas Reserves Present Value (mil 1992$)	Real Value of Established Crude Oil Reserves Present Value (mil 1992$)	Real Value of Subbituminous Coal & Lignite Reserves Present Value (mil 1992$)	Total Real Energy Reserves (mil 1992$)	Per Capita Total Real Energy Reserves (1992 $)	Index 1971=1.00
1961			4,479	24,225				
1962			5,869	24,408				
1963			7,004	27,906				
1964			8,262	41,949				
1965			8,965	36,533				
1966			9,700	40,062				
1967		62	9,453	41,083				
1968		535	9,969	42,670				
1969		0	10,559	41,314				
1970		0	10,364	42,015				
1971	30,523	0	8,844	44,666	2,707	86,740	3,989	1.000
1972	28,790	607	8,276	42,828	2,554	83,055	3,743	0.938
1973	26,315	836	17,533	50,300	2,334	97,317	4,334	1.087
1974	22,946	1915	35,784	76,618	2,035	139,298	6,117	1.534
1975	20,799	1194	64,355	79,237	1,845	167,429	7,247	1.817
1976	19,052	1834	95,101	76,387	1,690	194,064	8,288	2.078
1977	18,642	0	91,090	86,711	1,809	198,252	8,367	2.098
1978	20,497	0	104,337	95,982	1,900	222,717	9,305	2.333
1979	19,917	0	119,166	91,516	2,479	233,077	9,643	2.418
1980	13,856	22674	185,550	89,734	3,002	314,816	12,865	3.225
1981	13,635	13270	190,401	92,773	4,047	314,126	12,674	3.178
1982	15,742	19736	179,328	106,920	5,065	326,790	13,028	3.266
1983	18,464	19272	200,643	139,302	5,367	383,047	15,118	3.790
1984	26,551	17978	180,886	137,507	6,916	369,839	14,460	3.625
1985	23,529	17813	166,956	135,499	6,269	350,065	13,561	3.400
1986	20,795	8187	111,839	49,638	4,814	195,274	7,491	1.878
1987	18,725	18254	71,136	61,195	5,266	174,575	6,612	1.658
1988	20,467	3126	59,257	29,521	5,686	118,056	4,412	1.106
1989	14,373	9566	52,429	35,932	3,730	116,029	4,262	1.069
1990	17,701	19759	62,211	43,290	4,266	147,226	5,326	1.335
1991	16,496	10241	44,102	22,912	4,577	98,328	3,513	0.881
1992	12,404	10221	47,320	23,482	4,537	97,965	3,458	0.867
1993	16,164	8758	61,895	21,631	4,925	113,373	3,954	0.991
1994	11,899	11724	68,550	19,700	5,854	117,727	4,060	1.018
1995	13,654	15812	40,823	24,006	4,906	99,201	3,384	0.848
1996	14,733	22182	60,986	32,209	4,361	134,471	4,538	1.138
1997	13,840	25525	66,323	21,148	4,506	131,343	4,386	1.100
1998	13,918	25668	66,695	21,267	4,531	132,078	4,372	1.096
1999	13,700	25267	65,652	20,934	4,461	130,015	4,269	1.070

Source: Statistics Canada *Econections* CD-ROM Cat. No. 16-200-XKE.

Note: Nominal values of all energy natural resources in 1998 and 1999 are assumed to equal their 1997 value.

Table A11: Canada, Value of Mineral Natural Resources (proven and probable)

	Value of Nickel, Copper, Molybdenum & Uranium Reserves Present Value (mil $)	Value of Gold Reserves Present Value (mil $)	Value of Iron Reserves Present Value (mil $)	Value of Zinc-Lead-Silver Reserves Present Value (mil $)	Value of Potash Reserves Present Value (mil $)	GDP defl. 1992=100	Population thous.	Total Value of Minerals (mil $)	Total Real Value of Minerals Per Capita (1992 $)	Index 1971=1.00
1971	17,314	0	13,448	10,166	5,525	26.6	21,747	46,453	8,038	1.000
1972	17,314	0	13,448	10,166	5,525	28.2	22,188	46,453	7,431	0.924
1973	17,314	0	13,448	10,166	5,525	30.8	22,456	46,453	6,711	0.835
1974	17,314	0	13,448	10,166	5,525	35.4	22,773	46,453	5,770	0.718
1975	17,314	0	13,448	10,166	5,525	39.0	23,102	46,453	5,156	0.641
1976	17,314	0	**13,448**	10,166	**5,525**	42.6	23,414	46,452	4,660	0.580
1977	**17,314**	0	15,105	10,166	6,330	45.5	23,694	48,914	4,540	0.565
1978	25,258	0	13,538	10,166	7,634	48.5	23,936	56,595	4,878	0.607
1979	61,439	**0**	25,550	**10,166**	12,733	53.1	24,171	109,888	8,562	1.065
1980	73,568	2,317	27,475	12,399	19,287	58.9	24,471	135,046	9,365	1.165
1981	41,885	1,128	20,188	3,480	17,902	65.4	24,785	84,584	5,220	0.649
1982	28,218	395	14,910	3,377	8,101	71.0	25,083	55,000	3,088	0.384
1983	29,035	2,458	12,785	3,547	7,191	74.8	25,336	55,017	2,904	0.361
1984	30,692	1,498	11,910	4,737	14,549	77.3	25,577	63,385	3,206	0.399
1985	28,404	1,825	15,316	2,716	5,873	79.2	25,814	54,134	2,647	0.329
1986	23,896	3,962	13,139	5,092	4,440	81.5	26,069	50,528	2,380	0.296
1987	32,625	6,963	15,009	4,347	7,855	85.3	26,402	66,799	2,968	0.369
1988	62,416	5,909	11,704	5,194	16,185	89.2	26,759	101,408	4,251	0.529
1989	61,936	3,356	13,062	9,866	18,065	93.3	27,225	106,287	4,186	0.521
1990	44,917	3,755	9,961	7,848	15,401	96.1	27,643	81,881	3,082	0.383
1991	33,540	2,958	10,375	3,349	15,616	98.7	27,990	65,837	2,383	0.297
1992	32,318	2,340	8,235	4,940	17,020	100.0	28,330	64,854	2,290	0.285
1993	24,406	5,259	7,072	1,178	15,640	101.5	28,670	53,554	1,840	0.229
1994	31,754	6,175	10,179	2,207	21,769	102.6	28,995	72,085	2,423	0.301
1995	46,797	5,569	11,469	2,768	25,815	105.1	29,315	92,418	3,000	0.373
1996	38,516	6,480	13,962	2,667	21,678	106.7	29,633	83,303	2,635	0.328
1997	33,917	2,969	16,350	2,358	27,886	107.7	29,944	83,480	2,589	0.322
1998	33,917	2,969	16,350	2,358	27,886	107.1	30,213	83,480	2,580	0.321
1999	33,917	2,969	16,350	2,358	27,886	108.8	30,457	83,480	2,519	0.313

Source: Statistics Canada *Econections* CD-ROM Cat. No. 16-200-XKE.
Note: Data in bold represent the earliest available data point for that series. This was assumed to be the value for all previous periods.
Nominal values of all minerals in 1998 and 1999 are assumed to be equal to their 1997 value.

Table A12: Canada, Total Value of Natural Resources

Year	Real Per Capita Value of Timber Stocks Stock Value I (1992 $)	Per Capita Total Real Energy Reserves (1992 $)	Total Real Value of Minerals Per Capita (1992 $)	Total Real Per Capita Value of Nat. Res. (1992 $)	Index 1971=1.00
1971	3,606	3,989	8,038	15,632	1.000
1972	3,652	3,743	7,431	14,826	0.948
1973	4,067	4,334	6,711	15,112	0.967
1974	4,415	6,117	5,770	16,302	1.043
1975	4,455	7,247	5,156	16,859	1.078
1976	4,640	8,288	4,660	17,588	1.125
1977	4,829	8,367	4,540	17,735	1.135
1978	4,990	9,305	4,878	19,173	1.226
1979	5,303	9,643	8,562	23,507	1.504
1980	5,559	12,865	9,365	27,789	1.778
1981	5,328	12,674	5,220	23,222	1.486
1982	4,655	13,028	3,088	20,771	1.329
1983	4,158	15,118	2,904	22,181	1.419
1984	3,687	14,460	3,206	21,353	1.366
1985	3,404	13,561	2,647	19,612	1.255
1986	3,709	7,491	2,380	13,580	0.869
1987	4,832	6,612	2,968	14,412	0.922
1988	5,952	4,412	4,251	14,615	0.935
1989	6,511	4,262	4,186	14,959	0.957
1990	6,597	5,326	3,082	15,005	0.960
1991	5,894	3,513	2,383	11,790	0.754
1992	4,999	3,458	2,290	10,746	0.687
1993	4,260	3,954	1,840	10,055	0.643
1994	4,468	4,060	2,423	10,951	0.701
1995	5,909	3,384	3,000	12,292	0.786
1996	7,248	4,538	2,635	14,421	0.923
1997	8,318	4,386	2,589	15,293	0.978
1998	8,290	4,372	2,580	15,242	0.975
1999	8,095	4,269	2,519	14,884	0.952

Sources: Tables A9, A10, A11.

Table A13: Canada, Estimates of the costs of Human Capital by educational attainment level

Year	0 - 8 years, thousands	Cost in millions	Some secondary education	Cost in millions	Graduated from high school, thousands	Cost in millions	Some post-secondary, thousands	Cost in millions	Post-secondary certificate/diploma, thousands	Cost in millions	University degree, thousands	Cost in millions	Work age, thousands	Cost in millions	Population, thousands	Human Capital per capita in 1992$
1971	4353.5	227.0	6882.8	493.5			1700.4	159.9	1569.3	158.4	913.1	164.0	15226.6	1202.7	21,747	55,304
1972	4331.4	225.9	7129.2	511.2			1667.8	156.8	1592.8	160.7	965.8	173.4	15545.0	1228.0	22,188	55,346
1973	4315.7	225.0	7395.1	530.2			1638.2	154.0	1619.0	163.4	1023.0	183.7	15893.0	1256.4	22,456	55,950
1974	4313.8	224.9	7695.2	551.8			1614.3	151.8	1650.9	166.6	1087.0	195.2	16300.4	1290.3	22,773	56,658
1975	4309.3	224.7	8003.0	573.8			1589.8	149.5	1682.5	169.8	1154.4	207.3	16708.9	1325.1	23,102	57,359
1976	4331.9	225.9	8217.2	589.2			1573.4	147.9	1745.2	176.1	1228.0	220.5	17095.8	1359.6	23,414	58,069
1977	4231.9	220.7	8612.6	617.5			1582.7	148.8	1721.0	173.7	1287.3	231.2	17435.4	1391.9	23,694	58,742
1978	4291.3	223.8	8869.6	636.0			1509.6	141.9	1767.8	178.4	1340.6	240.7	17778.9	1420.8	23,936	59,358
1979	4285.5	223.5	9364.0	671.4			1322.8	124.4	1712.2	172.8	1435.1	257.7	18119.5	1449.7	24,171	59,979
1980	4202.2	219.1	9603.5	688.6			1397.6	131.4	1766.0	178.2	1514.4	271.9	18483.6	1489.3	24,471	60,858
1981	4177.0	217.8	9647.9	691.8			1498.4	140.9	1895.3	191.3	1595.5	286.5	18814.2	1528.2	24,785	61,659
1982	4068.2	212.1	9757.3	699.6			1587.3	149.3	1991.1	200.9	1699.2	305.1	19103.1	1567.0	25,083	62,473
1983	3991.4	208.1	9710.9	696.3			1700.5	159.9	2115.7	213.5	1836.4	329.8	19354.8	1607.6	25,336	63,449
1984	3914.7	204.1	9794.2	702.3			1770.5	166.5	2205.9	222.6	1912.7	343.5	19598.0	1638.9	25,577	64,078
1985	3791.1	197.7	9938.2	712.6			1834.4	172.5	2277.1	229.8	2001.8	359.5	19842.5	1672.0	25,814	64,772
1986	3715.3	193.7	9969.8	714.8			1892.4	177.9	2424.3	244.6	2091.1	375.5	20092.8	1706.7	26,069	65,468
1987	3599.6	187.7	10078.5	722.6			1882.8	177.0	2534.1	255.7	2254.0	404.7	20349.0	1747.8	26,402	66,201
1988	3586.4	187.0	9965.1	714.5			1965.7	184.8	2676.1	270.1	2421.3	434.8	20614.6	1791.2	26,759	66,938
1989	3517.0	183.4	10088.5	723.4			1983.5	186.5	2836.7	286.3	2476.3	444.7	20901.9	1824.2	27,225	67,004
1990	3153.7	164.5	4885.9	318.5	4375.2	342.2	1885.4	177.3	4619.5	466.2	2297.3	412.5	21217.0	1881.1	27,643	68,051
1991	3085.3	160.9	4920.5	320.7	4509.7	352.7	1912.5	179.8	4715.1	475.8	2397.5	430.5	21540.6	1920.5	27,990	68,615
1992	3028.4	157.9	4801.2	313.0	4647.3	363.5	1942.2	182.6	4866.5	491.1	2581.7	463.6	21867.3	1971.7	28,330	69,598
1993	2886.3	150.5	4683.9	305.3	4753.2	371.8	1978.3	186.0	5085.2	513.2	2792.7	501.5	22179.7	2028.3	28,670	70,745
1994	2961.0	154.4	4624.2	301.4	4464.6	349.2	1945.4	182.9	5497.1	554.7	2947.6	529.3	22440.0	2072.0	28,995	71,459
1995	2893.0	150.9	4579.0	298.5	4474.7	350.0	2016.2	189.6	5755.2	580.8	3008.5	540.2	22726.5	2109.9	29,315	71,974
1996	2846.0	148.4	4527.4	295.1	4573.1	357.7	2037.7	191.6	5944.0	599.8	3102.5	557.1	23030.7	2149.8	29,633	72,547
1997	2768.4	144.4	4435.2	289.1	4387.2	343.2	2135.6	200.8	6379.3	643.8	3253.5	584.2	23359.3	2205.4	29,944	73,652
1998	2677.6	139.6	4463.7	291.0	4499.3	351.9	2140.4	201.3	6538.9	659.9	3351.3	601.8	23671.1	2245.4	30,213	74,320
1999	2630.5	137.2	4409.1	287.4	4614.2	360.9	2138.4	201.1	6634.3	669.5	3542.5	636.1	23969.0	2292.2	30,457	75,260

Source: Labour Force Historical Review CDROM 71F0004XCB.

Note: I) Data on working age population from 1971 to 1975 were calculated on the basis of the data for 1976 and the growth rate from the historical labour force estimates form 1971 to 1975. Number of persons in each educational group from 1971 to 1975 were calculated on the the base of constant growth rate for this group from 1976 to 1981 and the share of this group from the total working age population for the same period.

II) There is a break in the education series for Some Secondary Education from 1990 onwards. From 1975 to 1990, Some Secondary Education reflects the number of years of completed secondary education from grades 9 through 13, with no attempt to determine if the respondent had actually graduated. However, from 1990 data reflects the

highest grade completed, with the addition to high school graduation.

Table A14: Canada's Net Foreign Debt in millions of dollars

	Population	Net Int'l Investment Position (mil $)	GDP deflator 1992=100	Real Net Int'l Investment Position (mil 1992 $)	Per Capita Real Net Int'l Investment Position (1992 $)	Index 1971=100
Matrix	1	4180				
Series D	d1	d65219	d15612			
1961	18,224,500	-17,006	18.7	-91,063	-4,997	0.895
1962	18,570,750	-18,170	19.0	-95,758	-5,156	0.924
1963	18,919,000	-18,989	19.4	-98,008	-5,180	0.928
1964	19,277,250	-19,680	19.9	-98,894	-5,130	0.919
1965	19,633,500	-21,888	20.7	-105,995	-5,399	0.967
1966	19,997,500	-23,712	21.7	-109,398	-5,471	0.980
1967	20,363,750	-25,636	22.6	-113,308	-5,564	0.997
1968	20,692,000	-27,432	23.5	-116,981	-5,653	1.013
1969	20,994,250	-29,375	24.5	-119,776	-5,705	1.022
1970	21,287,500	-30,054	25.7	-116,828	-5,488	0.983
1971	21,747,419	-32,264	26.6	-121,407	-5,583	1.000
1972	22,188,099	-34,909	28.2	-123,901	-5,584	1.000
1973	22,455,735	-37,666	30.8	-122,193	-5,442	0.975
1974	22,773,084	-42,188	35.4	-119,344	-5,241	0.939
1975	23,101,938	-50,433	39.0	-129,315	-5,598	1.003
1976	23,414,220	-61,307	42.6	-143,998	-6,150	1.102
1977	23,694,351	-68,656	45.5	-150,975	-6,372	1.141
1978	23,936,305	-88,104	48.5	-181,751	-7,593	1.360
1979	24,170,847	-103,154	53.1	-194,264	-8,037	1.440
1980	24,471,393	-110,277	58.9	-187,148	-7,648	1.370
1981	24,785,074	-135,738	65.4	-207,630	-8,377	1.501
1982	25,083,464	-136,601	71.0	-192,396	-7,670	1.374
1983	25,336,486	-144,317	74.8	-193,002	-7,618	1.365
1984	25,577,263	-154,405	77.3	-199,748	-7,810	1.399
1985	25,813,686	-177,833	79.2	-224,466	-8,696	1.558
1986	26,068,572	-196,816	81.5	-241,640	-9,269	1.660
1987	26,402,271	-212,572	85.3	-249,351	-9,444	1.692
1988	26,758,946	-215,905	89.2	-242,182	-9,050	1.621
1989	27,224,791	-232,061	93.3	-248,792	-9,138	1.637
1990	27,642,857	-252,506	96.1	-262,685	-9,503	1.702
1991	27,989,713	-267,408	98.7	-270,930	-9,680	1.734
1992	28,329,685	-298,114	100.0	-298,189	-10,526	1.885
1993	28,670,208	-323,739	101.5	-318,955	-11,125	1.993
1994	28,995,383	-335,633	102.6	-327,128	-11,282	2.021
1995	29,315,266	-331,980	105.1	-315,871	-10,775	1.930
1996	29,632,617	-318,227	106.7	-298,245	-10,065	1.803
1997	29,943,787	-314,048	107.7	-291,595	-9,738	1.744
1998	30,212,788	-326,278	107.1	-304,648	-10,083	1.806
1999	30,456,749	-300,348	108.8	-276,055	-9,064	1.624

Sources: Net Debt is Net International Investment Position (D65219).

Table A17: Gini Coefficients for Canada, All Units

Year	Income before Transfers	Index 1971=1.00	Total Money Income	Index 1971=1.00	Income After Tax	Index 1971=1.00
1971	0.447	1.000	0.400	1.000	0.373	1.000
1972	0.446	0.998	0.395	0.988	0.368	0.987
1973	0.445	0.996	0.392	0.980	0.368	0.987
1974	0.441	0.987	0.389	0.973	0.363	0.973
1975	0.451	1.009	0.392	0.980	0.364	0.976
1976	0.462	1.034	0.402	1.005	0.374	1.003
1977	0.445	0.996	0.388	0.970	0.362	0.971
1978	0.445	0.996	0.394	0.985	0.367	0.984
1979	0.436	0.975	0.381	0.953	0.355	0.952
1980	0.442	0.989	0.383	0.958	0.358	0.960
1981	0.437	0.978	0.377	0.943	0.351	0.941
1982	0.453	1.013	0.381	0.953	0.353	0.946
1983	0.471	1.054	0.393	0.983	0.363	0.973
1984	0.469	1.049	0.389	0.973	0.359	0.962
1985	0.466	1.043	0.388	0.970	0.358	0.960
1986	0.467	1.045	0.389	0.973	0.359	0.962
1987	0.468	1.047	0.390	0.975	0.357	0.957
1988	0.469	1.049	0.390	0.975	0.355	0.952
1989	0.461	1.031	0.386	0.965	0.352	0.944
1990	0.470	1.051	0.389	0.973	0.352	0.944
1991	0.486	1.087	0.395	0.988	0.357	0.957
1992	0.491	1.098	0.394	0.985	0.356	0.954
1993	0.497	1.112	0.396	0.990	0.358	0.960
1994	0.495	1.107	0.394	0.985	0.354	0.949
1995	0.493	1.103	0.397	0.993	0.357	0.957
1996	0.498	1.114	0.403	1.008	0.362	0.971
1997	0.495	1.107	0.403	1.008	0.363	0.973
1998	na		na		0.366	0.981
1999	na		na		0.366	0.981

Source: Statistics Canada *Income after tax, distributions by size in Canada 1994* and *1993* .
Note: Data for 1999 assumed to be equal data for 1998.

Table A18: Poverty Rate and Poverty Gap Ratios, + Poverty Intensity, Canada, 1971-1999

Years	Poverty Rate	Index 1971=1.00	Poverty Gap	Index of poverty gap	Poverty Intensity	Index of Poverty Intensity
	A	A'	B	B'	C=A*B	D=A'*B'
1971	0.137	1.000	0.321	1.000	0.044	1.000
1972	0.137	1.000	0.321	1.000	0.044	1.000
1973	0.137	1.000	0.321	1.000	0.044	1.000
1974	0.137	1.005	0.321	1.000	0.044	1.005
1975	0.138	1.010	0.321	1.001	0.044	1.010
1976	0.137	0.998	0.303	0.945	0.041	0.944
1977	0.143	1.046	0.332	1.036	0.048	1.084
1978	0.141	1.032	0.327	1.019	0.046	1.052
1979	0.139	1.018	0.322	1.003	0.045	1.021
1980	0.132	0.967	0.311	0.969	0.041	0.937
1981	0.125	0.916	0.300	0.935	0.038	0.856
1982	0.128	0.936	0.295	0.918	0.038	0.859
1983	0.132	0.966	0.286	0.891	0.038	0.861
1984	0.135	0.985	0.309	0.962	0.042	0.948
1985	0.127	0.926	0.301	0.939	0.038	0.870
1986	0.121	0.887	0.291	0.908	0.035	0.805
1987	0.121	0.885	0.294	0.916	0.036	0.810
1988	0.119	0.867	0.286	0.890	0.034	0.771
1989	0.110	0.806	0.284	0.885	0.031	0.713
1990	0.120	0.874	0.285	0.889	0.034	0.777
1991	0.117	0.857	0.291	0.906	0.034	0.776
1992	0.119	0.868	0.290	0.905	0.034	0.785
1993	0.120	0.876	0.276	0.861	0.033	0.754
1994	0.118	0.863	0.283	0.880	0.033	0.760
1995	0.121	0.884	0.294	0.917	0.036	0.811
1996	0.125	0.918	0.307	0.956	0.038	0.877
1997	0.125	0.915	0.318	0.989	0.040	0.905
1998	0.125	0.915	0.318	0.989	0.040	0.905
1999	0.125	0.915	0.318	0.989	0.040	0.905

Source: Claculated from Survey of Consumer Finance by authors.

Note: Poverty is measured as the percentage of persons below the threshold of one half of equivalent after-tax median income ordered on an individual basis, excluding households with zero or negative income. Data for 1974, 1978, 1980 are interpolations based on average of previous and subsequent years. Data for 1971, 1972 are assumed to be equal 1973 data, and data for 1998 and 1999 are assumed to be equal to 1997 data.

Table A20: Weights used for Economic Security Index

Year	% of Women and children at Risk of Widowhood	**Normalized Weight of women at risk of single parent poverty**	Pop 45-64, thousands	% 45-64 of Total Pop	**Normalized Weight of 45-64 Pop at Risk of Elderly poverty**	% of Pop affected of risk for health	**Normalized Weight of Pop at risk for health**	All Population (thousands), *d1	Pop 15-64, thousands	Pop 15-64 as % of total Pop	**Normalized Weight of WAP at risk of unemployment**	Total %
	A	B=A/L	C	D=C/H*100	E=D/L	F	G=F/L	H	I	J=I/H*100	K=J/L	L=A+D+F+J
1971	57.73	**0.2412**	4,023.3	18.50	**0.0773**	100.00	**0.4178**	21747.4	13,731.6	63.14	**0.2638**	239.37
1972	57.50	**0.2403**	4,101.3	18.48	**0.0773**	100.00	**0.4179**	22188.1	14,043.3	63.29	**0.2645**	239.28
1973	57.28	**0.2388**	4,170.9	18.57	**0.0774**	100.00	**0.4169**	22455.7	14,372.8	64.01	**0.2669**	239.85
1974	57.05	**0.2372**	4,245.4	18.64	**0.0775**	100.00	**0.4158**	22773.1	14,760.0	64.81	**0.2695**	240.51
1975	56.83	**0.2356**	4,322.8	18.71	**0.0776**	100.00	**0.4146**	23101.9	15,164.6	65.64	**0.2722**	241.18
1976	56.60	**0.2355**	4,382.5	18.72	**0.0779**	100.00	**0.4161**	23414.2	15,220.5	65.01	**0.2705**	240.32
1977	56.38	**0.2344**	4,437.9	18.73	**0.0779**	100.00	**0.4158**	23694.4	15,501.7	65.42	**0.2720**	240.53
1978	56.15	**0.2331**	4,491.0	18.76	**0.0779**	100.00	**0.4152**	23936.3	15,786.2	65.95	**0.2738**	240.86
1979	55.93	**0.2320**	4,529.5	18.74	**0.0777**	100.00	**0.4148**	24170.8	16,059.7	66.44	**0.2756**	241.11
1980	55.70	**0.2309**	4,572.2	18.68	**0.0775**	100.00	**0.4146**	24471.4	16,355.9	66.84	**0.2771**	241.22
1981	55.48	**0.2300**	4,624.0	18.66	**0.0773**	100.00	**0.4146**	24785.1	16,622.6	67.07	**0.2781**	241.20
1982	55.25	**0.2292**	4,678.6	18.65	**0.0774**	100.00	**0.4148**	25083.5	16,853.1	67.19	**0.2787**	241.09
1983	55.03	**0.2283**	4,735.3	18.69	**0.0775**	100.00	**0.4149**	25336.5	17,052.3	67.30	**0.2792**	241.02
1984	54.80	**0.2275**	4,791.0	18.73	**0.0778**	100.00	**0.4151**	25577.3	17,234.8	67.38	**0.2797**	240.91
1985	54.58	**0.2267**	4,830.1	18.71	**0.0777**	100.00	**0.4155**	25813.7	17,401.7	67.41	**0.2801**	240.70
1986	54.35	**0.2260**	4,876.1	18.70	**0.0778**	100.00	**0.4159**	26068.6	17,569.8	67.40	**0.2803**	240.45
1987	54.13	**0.2255**	4,940.8	18.71	**0.0780**	100.00	**0.4167**	26402.3	17,732.5	67.16	**0.2798**	240.00
1988	53.90	**0.2249**	5,031.1	18.80	**0.0785**	100.00	**0.4173**	26758.9	17,913.6	66.94	**0.2793**	239.65
1989	53.68	**0.2245**	5,127.9	18.84	**0.0788**	100.00	**0.4183**	27224.8	18,112.1	66.53	**0.2783**	239.04
1990	53.45	**0.2239**	5,230.8	18.92	**0.0793**	100.00	**0.4189**	27642.9	18,336.7	66.33	**0.2779**	238.71
1991	53.23	**0.2230**	5,358.2	19.14	**0.0802**	100.00	**0.4190**	27989.7	18,562.8	66.32	**0.2779**	238.69
1992	53.00	**0.2218**	5,533.9	19.53	**0.0818**	100.00	**0.4185**	28329.7	18,812.3	66.40	**0.2779**	238.94
1993	52.78	**0.2207**	5,710.2	19.92	**0.0833**	100.00	**0.4182**	28670.2	19,053.1	66.46	**0.2779**	239.15
1994	52.55	**0.2197**	5,884.3	20.29	**0.0848**	100.00	**0.4180**	28995.4	19,250.5	66.39	**0.2775**	239.24
1995	52.33	**0.2186**	6,058.0	20.67	**0.0863**	100.00	**0.4177**	29315.3	19,468.9	66.41	**0.2774**	239.40
1996	52.10	**0.2174**	6,234.3	21.04	**0.0878**	100.00	**0.4173**	29632.6	19,703.4	66.49	**0.2775**	239.63
1997	51.88	**0.2162**	6,422.8	21.45	**0.0894**	100.00	**0.4167**	29943.8	19,956.9	66.65	**0.2777**	239.97
1998	51.65	**0.2148**	6,627.2	21.94	**0.0912**	100.00	**0.4159**	30212.8	20,196.7	66.85	**0.2780**	240.43
1999	51.43	**0.2134**	6,852.8	22.50	**0.0934**	100.00	**0.4149**	30456.7	20,432.0	67.09	**0.2784**	241.01

Sources: Labour Force Historical Review CDROM 71F0004XCB.

Note: Share of population affected of risk for health assumed to be equal 100% for all years.

Table A25: Greenhouse Gas Emissions Cost, Canada.

Year	Canada GDP, million of 1990 G-K Dollars)	World GDP, million of 1990 G-K Dollars)	Canada's share in the world GDP, %	World CO2 Emission (millions of metric tones)	World Emission CO2 Cost, mill. of 1990$ ($24.4 per metric ton)	Canada's share of World CO2 emission social cost (millions of 1990$)	Population, thousands, *D1	Emission cost per capita, 1992$
	A	B	C=A/B*100	D	E=D*24.4	F=C*E/100	G	H=F/G/0.96125
1961	156,283	8,137,175	1.9206	12,982	316,756	6,083.6	18,238	347.02
1962	167,399	8,512,768	1.9664	13,250	323,300	6,357.5	18,583	355.91
1963	176,033	8,884,930	1.9813	13,518	329,844	6,535.0	18,931	359.12
1964	187,778	9,557,792	1.9647	13,786	336,387	6,608.9	19,277	356.65
1965	200,184	10,071,305	1.9877	14,055	342,931	6,816.3	19,634	361.17
1966	213,814	10,649,074	2.0078	14,323	349,475	7,016.8	19,998	365.03
1967	220,497	11,016,274	2.0016	14,591	356,018	7,125.9	20,364	364.04
1968	231,844	11,580,161	2.0021	14,859	362,562	7,258.8	20,692	364.94
1969	244,250	12,227,815	1.9975	15,127	369,105	7,372.9	20,994	365.34
1970	250,734	12,869,817	1.9482	15,395	375,649	7,318.5	21,288	357.65
1971	265,192	13,389,468	1.9806	15,664	382,193	7,569.7	21,780	361.57
1972	280,277	13,988,567	2.0036	15,932	388,736	7,788.8	22,253	364.12
1973	301,880	14,921,483	2.0231	**16,200**	395,280	7,997.0	22,521	369.40
1974	315,080	15,226,809	2.0692	16,468	401,824	8,314.7	22,839	378.73
1975	323,252	15,428,144	2.0952	16,736	408,367	8,556.2	23,169	384.18
1976	343,102	16,110,275	2.1297	17,005	414,911	8,836.4	23,482	391.48
1977	355,375	16,783,237	2.1174	17,273	421,455	8,924.0	23,764	390.66
1978	371,652	17,531,398	2.1199	17,541	427,998	9,073.2	24,008	393.15
1979	386,142	18,118,245	2.1312	17,809	434,542	9,261.1	24,245	397.37
1980	391,866	18,500,325	2.1182	18,077	441,085	9,342.9	24,548	395.94
1981	406,323	18,871,756	2.1531	18,345	447,629	9,637.8	24,864	403.24
1982	393,255	19,074,172	2.0617	18,614	454,173	9,363.7	25,167	387.06
1983	405,827	19,660,980	2.0641	18,882	460,716	9,509.8	25,425	389.11
1984	431,697	20,619,078	2.0937	19,150	467,260	9,782.9	25,671	396.45
1985	452,109	21,429,086	2.1098	19,418	473,804	9,996.3	25,912	401.33
1986	466,864	22,263,660	2.0970	19,686	480,347	10,072.8	26,171	400.40
1987	486,218	23,138,044	2.1014	19,955	486,891	10,231.4	26,503	401.62
1988	510,368	24,275,251	2.1024	20,223	493,435	10,374.1	26,856	401.86
1989	522,476	25,047,613	2.0859	20,491	499,978	10,429.2	27,318	397.16
1990	521,517	25,555,255	2.0407	20,759	506,522	10,336.8	27,733	387.75
1991	512,518	25,711,179	1.9934	21,027	513,065	10,227.3	28,086	378.82
1992	516,356	26,078,852	1.9800	21,295	519,609	10,288.2	28,481	375.79
1993	527,703	26,078,852	2.0235	21,564	526,153	10,646.6	28,858	383.80
1994	549,340	26,078,852	2.1065	21,832	532,696	11,221.0	29,220	399.51
1995			2.1065	**22,100**	539,240	11,358.9	29,574	399.57
1996			2.1065	22,368	545,784	11,496.7	29,918	399.77
1997			2.1065	22,636	552,327	11,634.5	30,241	400.24

Sources: Data on Greenhouse Gas emission in Canada for 1973 and 1995 are from International Energy Agency
Data for the years between 1973 and 1995 were interpolated assuming a constant linear growth trend over the period. This trend was extrapolated backwards and forwards outside. Data on GDP for Canada and the World are from Monitoring the World Economy, Angus Maddison, 1995, P.181, 211.
Data for 1995-1997 GDP share for Canada assumed to be equal to data for 1994.
Recalculation into 1992$ were made with GDP IPI 1990=96.125 1992=100, Source: *D15612.

Table A29: Imputed Value Of Leisure (With Unemployment Adjustment)

	Average annual number of hours worked per person	Employment over Working Age Population Ratio, %	Unemployed (thousands)	WAP (thousands)	Average Annual Number of Hours of Unemployment per Person Aged 15-64.	Annual Number of Hours Worked per Person Aged 15-64 (WAP) Adjusted for Unemployment.	General Government Current Receipts, as a Percentage of Nominal GDP.	Average Compensation per Employed Person per Hour, 1995 constant NCU
	A	B	C	D	E=(A*C)/D	F=(A*B)/100+E	G	H
1971	1909.5	64.2	738.2	15220.5	92.6	1319.1	42.6	14.4
1972	1900.2	64.2	738.2	15220.5	92.2	1312.7	42.9	15.0
1973	1891.3	64.2	738.2	15220.5	91.7	1306.5	42.2	15.5
1974	1881.5	64.2	738.2	15220.5	91.3	1299.7	44.4	16.0
1975	1862.3	64.2	738.2	15220.5	90.3	1286.5	42.6	16.6
1976	1851.7	64.2	738.2	15220.5	89.8	1279.2	42.4	17.6
1977	1834.3	64.0	859.7	15501.7	101.7	1274.9	42.8	18.0
1978	1838.9	64.7	926.2	15786.2	107.9	1297.5	42.1	17.4
1979	1832.0	66.4	863.2	16059.7	98.5	1314.2	41.5	17.2
1980	1818.9	67.1	890.1	16355.9	99.0	1318.9	39.5	17.4
1981	1805.8	68.0	925.5	16622.6	100.5	1327.8	39.5	17.7
1982	1792.9	65.0	1348.8	16853.1	143.5	1308.0	39.5	18.2
1983	1780.0	64.7	1495.5	17052.3	156.1	1307.2	38.9	18.3
1984	1781.1	65.6	1439.4	17234.8	148.8	1316.6	39.8	18.5
1985	1782.3	66.8	1384.8	17401.7	141.8	1331.7	39.5	18.9
1986	1783.4	68.2	1278.1	17569.8	129.7	1345.7	40.5	19.0
1987	1784.6	69.5	1191	17732.5	119.9	1359.8	40.7	19.2
1988	1785.7	71.0	1068.2	17913.6	106.5	1373.5	41.2	19.5
1989	1786.9	71.7	1060.2	18112.1	104.6	1385.8	41.4	19.6
1990	1788.0	71.4	1156.9	18336.7	112.8	1388.6	43.1	20.0
1991	1775.7	69.2	1479.5	18562.8	141.5	1370.8	43.9	20.7
1992	1763.3	67.8	1602.3	18812.3	150.2	1346.2	44.2	21.3
1993	1767.4	67.5	1647	19053.1	152.8	1345.5	43.5	21.4
1994	1784.9	68.1	1514.9	19250.5	140.5	1356.2	43.1	21.0
1995	1787.0	68.6	1393.1	19468.9	127.9	1353.8	43.2	20.8
1996	1784.0	68.3	1436.9	19703.4	130.1	1349.0	43.8	21.0
1997	1787.0	69.0	1378.6	19956.9	123.4	1356.8	44.1	21.3
1998	1779.0	70.0	1277.3	20196.7	112.5	1358.0	44.4	21.0
1999	1785.0	71.1	1190.1	20432	104.0	1373.5	44.0	20.0

Sources: Data for 1980-97 are from Osberg and Sharpe (2000) "International Comparisons of Trends in Economic Well-being", updated August 2001, pa
for the annual meeting of the American Economic Association, January 7-9. Data for A and H for the 1971-80 and 1997-99 have been obtained by applying the growth rate in A and H from Statistics Canada, Aggregate Productivity Measures to these years. Data for B, C, D and L from 1971-75 are assumed to equal their 1976 value. Data for G, from 1971-79 are from the Economic Review, April 1985.

	Average After Tax Compensation per Employed Person per Hour, 1995 constant NCU	Average Annual Number of Hours of Leisure Relative to the US 1980 benchmark adjusted for unemployment, (US = 1319.0)	Imputed Value of Leisure per Person Aged 15-64 Adjusted for Unemployment, 1995 constant NCU.	WAP over Total Population Ratio, %	Imputed Value of Leisure per Capita Adjusted for Unemployment, 1995 constant NCU.	1992$, GDP Deflator = 104.95 in 1995, 100 in 1992
	I=1-(G/100)*H	J	K=H*I	L	M=L*K/100	N=M/104.95*100
1971	8.3	-0.1	-0.7	65.0	-0.5	-0.5
1972	8.6	6.3	54.2	65.0	35.2	33.6
1973	8.9	12.5	111.4	65.0	72.4	69.0
1974	8.9	19.3	171.9	65.0	111.7	106.5
1975	9.6	32.5	310.7	65.0	202.0	192.5
1976	10.2	39.8	404.7	65.0	263.1	250.6
1977	10.3	44.1	453.0	65.4	296.3	282.4
1978	10.0	21.5	215.9	66.0	142.4	135.7
1979	10.0	4.8	47.8	66.4	31.8	30.3
1980	10.5	0.1	0.9	66.8	0.6	0.6
1981	10.7	-8.8	-94.1	67.1	-63.1	-60.1
1982	11.0	11.0	120.7	67.2	81.1	77.3
1983	11.2	11.8	132.3	67.3	89.0	84.8
1984	11.1	2.4	27.2	67.4	18.3	17.5
1985	11.4	-12.7	-145.1	67.4	-97.8	-93.2
1986	11.3	-26.7	-301.1	67.4	-202.9	-193.4
1987	11.4	-40.8	-464.1	67.2	-311.7	-297.0
1988	11.5	-54.5	-625.9	66.9	-419.0	-399.2
1989	11.5	-66.8	-767.0	66.5	-510.3	-486.2
1990	11.4	-69.6	-793.7	66.3	-526.5	-501.7
1991	11.6	-51.8	-601.7	66.3	-399.1	-380.2
1992	11.9	-27.2	-323.5	66.4	-214.8	-204.7
1993	12.1	-26.5	-319.6	66.5	-212.4	-202.4
1994	11.9	-37.2	-443.8	66.4	-294.6	-280.7
1995	11.8	-34.8	-412.2	66.4	-273.7	-260.8
1996	11.8	-30.0	-354.3	66.5	-235.6	-224.5
1997	11.9	-37.8	-450.4	66.6	-300.2	-286.0
1998	11.7	-39.0	-455.4	66.8	-304.4	-290.1
1999	11.2	-54.5	-609.1	67.1	-408.6	-389.4

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Table 1: Components of Personal Consumption in the United States

Year	Personal Consump-tion per capita, (1996 $) (A)	Index of Life Expectancy 1971=1.00 (D)	Average Family Size, Persons (E)	Index of Equivalent Income 1971=1.00 (F)	Real Personal Consump-tion per capita, (1996 $) G=A*D*F	Total Regret-table Cost Per Capita,. (1996 $) (H)	Adjusted Personal Consump-tion, (1996$) (G-H)	Index of Adjusted Personal Consump-tion 1971=1.00
1971	11,763	1.000	3.57	1.000	11,763	1,344	10,419	1.000
1972	12,334	1.001	3.53	0.994	12,282	1,423	10,860	1.042
1973	12,807	1.004	3.48	0.987	12,699	1,483	11,216	1.077
1974	12,601	1.013	3.44	0.982	12,528	1,454	11,074	1.063
1975	12,752	1.021	3.42	0.979	12,747	1,476	11,271	1.082
1976	13,340	1.025	3.39	0.975	13,333	1,548	11,785	1.131
1977	13,769	1.031	3.37	0.972	13,797	1,629	12,168	1.168
1978	14,210	1.034	3.33	0.966	14,196	1,694	12,502	1.200
1979	14,381	1.039	3.31	0.964	14,403	1,722	12,681	1.217
1980	14,163	1.037	3.29	0.961	14,105	1,689	12,415	1.192
1981	14,196	1.042	3.27	0.958	14,173	1,687	12,486	1.198
1982	14,222	1.048	3.25	0.955	14,234	1,657	12,578	1.207
1983	14,821	1.049	3.26	0.957	14,875	1,698	13,177	1.265
1984	15,450	1.051	3.24	0.954	15,482	1,791	13,691	1.314
1985	16,027	1.051	3.23	0.952	16,037	1,864	14,173	1.360
1986	16,515	1.051	3.21	0.950	16,476	1,889	14,587	1.400
1987	16,870	1.053	3.19	0.947	16,825	1,909	14,917	1.432
1988	17,399	1.053	3.17	0.944	17,302	1,958	15,344	1.473
1989	17,686	1.056	3.16	0.943	17,608	1,995	15,613	1.498
1990	17,820	1.060	3.17	0.944	17,839	2,008	15,831	1.519
1991	17,656	1.062	3.18	0.945	17,725	1,923	15,802	1.517
1992	18,028	1.066	3.17	0.944	18,143	1,946	16,197	1.555
1993	18,374	1.062	3.16	0.943	18,390	1,980	16,410	1.575
1994	18,880	1.065	3.20	0.948	19,059	2,032	17,028	1.634
1995	19,275	1.066	3.19	0.947	19,455	2,052	17,403	1.670
1996	19,730	1.070	3.20	0.948	20,023	2,084	17,938	1.722
1997	20,274	1.076	3.19	0.947	20,653	2,175	18,478	1.773
1998	21,062	1.079	3.18	0.945	21,480	2,225	19,255	1.848
1999	21,963	1.080	3.18	0.945	22,428	2,277	20,150	1.934

Sources : Self Employed Workers: Bureau of Labor Statistics, http://stats.bls.gov/webapps/legacy/cpsatab4.htm;
Average Family Size for 1999 assumed to be equal to 1998:
Census Data, http://www.census.gov/population/socdemo/hh-fam/htabHH-6.txt;
Personal consumption: Appendix Table A1; Index of Life Expectancy: Appendix Table A4;
Total Regrettable Cost Per Capita: Appendix Table A3.
Note : Index of Equivalent Income was calculated on the basis of one half rate of change of family size.

Table 2: Components of Total Consumption in the United States

Year	Adjusted Personal Consumption per capita (1996 $)	Total Gov't Real Current Expenditure Per Capita (1996 $)	Imputed Value of Leisure Per Capita With Unemployment Adjustment (1996$)	Total Consumption Flows Per Capita (1996 $)	Index 1971=1.01
1971	10,419	3,984	0.0	14,403	1.0000
1972	10,860	3,975	-53.0	14,781	1.0263
1973	11,216	3,904	-89.1	15,031	1.0436
1974	11,074	3,940	-57.1	14,956	1.0384
1975	11,271	3,973	39.0	15,283	1.0611
1976	11,785	3,941	-9.4	15,717	1.0912
1977	12,168	3,964	-81.6	16,051	1.1144
1978	12,502	4,004	-161.5	16,345	1.1348
1979	12,681	4,015	-204.2	16,492	1.1450
1980	12,415	4,042	-111.0	16,346	1.1349
1981	12,486	4,074	-53.1	16,507	1.1460
1982	12,578	4,128	-46.5	16,659	1.1567
1983	13,177	4,210	-144.2	17,243	1.1971
1984	13,691	4,270	-326.0	17,635	1.2244
1985	14,173	4,470	-417.7	18,225	1.2654
1986	14,587	4,650	-526.1	18,711	1.2991
1987	14,917	4,730	-538.2	19,108	1.3267
1988	15,344	4,733	-691.8	19,385	1.3459
1989	15,613	4,802	-789.8	19,625	1.3626
1990	15,831	4,877	-754.2	19,955	1.3854
1991	15,802	4,873	-670.4	20,004	1.3888
1992	16,197	4,834	-625.6	20,406	1.4167
1993	16,410	4,733	-729.4	20,413	1.4173
1994	17,028	4,682	-760.7	20,949	1.4545
1995	17,403	4,631	-792.2	21,242	1.4748
1996	17,938	4,620	-805.7	21,753	1.5103
1997	18,478	4,655	-932.1	22,202	1.5414
1998	19,255	4,671	-905.6	23,020	1.5983
1999	20,150	4,757	-1,011.2	23,896	1.6591

Sources : Adjusted Personal consumption: Table 1;

Total Government Current Real Expenditures per capita: Appendix Table A2.

Table 3: Stocks of Wealth in the United States

Year	Total Per Capita Net Capital Stock (1996 $)	Per Capita Depreciated Accumulated Stock GERD (1996 $)	Total Real Per Capita Value of Nat. Res. (1996 $)	Human Capital per capita (1996 $)	Per Capita Real Net Int'l Investment Position (1996 $)	Per Capita Greenhouse Gas Emis-sion Cost (1996 $)	Total Real Per Capita Wealth (1996 $)	Index 1971=1.00
1971	58,084	228	4,043	22,845	718.1	385.4	85,533	1.0000
1972	59,690	426	3,883	23,012	554.5	389.8	87,176	1.0192
1973	61,396	598	3,743	23,209	672.7	389.2	89,229	1.0432
1974	62,632	742	3,636	23,418	749.9	382.3	90,796	1.0615
1975	63,387	864	3,504	23,613	835.6	378.2	91,825	1.0736
1976	64,415	977	3,364	23,885	906.2	382.0	93,165	1.0892
1977	65,737	1,075	3,357	24,147	1,921.8	386.0	95,852	1.1207
1978	67,295	1,161	3,263	24,401	2,127.8	392.9	97,855	1.1441
1979	68,800	1,244	3,248	24,649	2,763.2	394.0	100,310	1.1728
1980	69,720	1,326	3,248	24,882	3,022.0	387.6	101,810	1.1903
1981	70,685	1,412	3,186	25,197	2,609.3	391.8	102,697	1.2007
1982	71,235	1,500	3,097	25,522	1,722.7	381.9	102,695	1.2006
1983	72,141	1,593	3,029	25,867	1,594.8	388.8	103,835	1.2140
1984	73,690	1,707	3,010	26,229	794.1	401.1	105,029	1.2279
1985	75,404	1,833	2,999	26,591	551.3	404.7	106,973	1.2507
1986	77,109	1,937	2,937	26,867	556.1	406.2	109,000	1.2744
1987	78,676	2,025	2,914	27,153	268.2	407.6	110,629	1.2934
1988	80,177	2,099	2,829	27,439	53.3	409.0	112,189	1.3116
1989	81,556	2,159	2,794	27,721	-228.1	411.5	113,590	1.3280
1990	82,628	2,217	2,781	27,978	-760.7	411.5	114,432	1.3379
1991	83,075	2,271	2,697	28,151	-1,151.4	406.6	114,635	1.3403
1992	83,616	2,305	2,648	28,325	-1,928.5	412.4	114,553	1.3393
1993	84,465	2,308	2,601	28,362	-733.4	414.3	116,589	1.3631
1994	85,544	2,307	2,557	28,423	-681.5	418.0	117,732	1.3765
1995	86,789	2,340	2,515	28,825	-1,622.4	416.4	118,431	1.3846
1996	88,337	2,400	2,474	29,091	-2,042.6	417.3	119,843	1.4011
1997	90,029	2,478	2,433	29,197	-3,938.5	421.5	119,777	1.4004
1998	92,091	2,562	2,392	29,306	-5,098.9	432.0	120,821	1.4126
1999	94,432	2,650	2,352	29,241	-5,330.4	434.1	122,911	1.4370

Sources : Total per Capita Net Capital Stock: Appendix Table A5;
Per Capita Depreciated Accumulated Stock GERD: Appendix Table A6;
Total Real per Capita Value of Natural Resources: Appendix Table A9;
Human Capital Per Capita: Appendix Table A8;
Real Net International Net Investment Position per Capita: Appendix Table A10.

Table 4: Index of Economic Equality for the United States

Year	Poverty Intensity	Gini Coefficient	Overall index of Equality
1971	-1.000	-1.000	-1.000
1972	-1.000	-1.013	-1.003
1973	-1.000	-1.003	-1.001
1974	-1.000	-0.997	-0.999
1975	-0.997	-1.003	-0.999
1976	-0.994	-1.005	-0.997
1977	-0.992	-1.015	-0.997
1978	-0.989	-1.015	-0.995
1979	-0.986	-1.020	-0.995
1980	-1.016	-1.018	-1.017
1981	-1.052	-1.025	-1.045
1982	-1.126	-1.040	-1.104
1983	-1.152	-1.045	-1.126
1984	-1.134	-1.048	-1.112
1985	-1.123	-1.058	-1.107
1986	-1.144	-1.073	-1.127
1987	-1.158	-1.076	-1.137
1988	-1.139	-1.078	-1.124
1989	-1.117	-1.088	-1.110
1990	-1.118	-1.081	-1.108
1991	-1.150	-1.081	-1.132
1992	-1.182	-1.096	-1.161
1993	-1.196	-1.146	-1.183
1994	-1.177	-1.152	-1.170
1995	-1.120	-1.136	-1.124
1996	-1.133	-1.149	-1.137
1997	-1.144	-1.159	-1.148
1998	-1.146	-1.152	-1.148
1999	-1.104	-1.154	-1.116

Sources: Poverty Rate: Appendix Table A11; GINI Coefficient: Appendix Table A10.
Note: Weights are 0.75 for Poverty Rate, 0.25 for Gini Coefficient.

Table 5: Risk imposed by unemployment in the United States

Year	Employment rate	Insured Unemployment weekly, Average, Thousands	Unemployed, Thousands	% of the unemployed claiming regular benefits	Average weekly benefits paid, Current dollars	Average weekly earnings, total, Current dollars	Average weekly benefits/ average earnings (%)	ER Index	UI coverage	UI benefits	multi-plicative
	(1)	(2)	(3)	(4) = (2)/(3)	(5)	(6)	(7) = (5)/(6)	(1)'	(4)'	(7)'	(1)'*(4)'*(7)'
1971	56.6	2,608	5,016	52.0	54.02	127.31	42.43	1.0000	1.0000	1.0000	1.0000
1972	57.0	2,192	4,882	44.9	56.76	136.90	41.46	1.0071	0.8636	0.9771	0.8498
1973	57.8	1,793	4,365	41.1	59.00	145.39	40.58	1.0212	0.7900	0.9564	0.7716
1974	57.8	2,558	5,156	49.6	64.25	154.76	41.52	1.0212	0.9542	0.9784	0.9534
1975	56.1	4,937	7,929	62.3	70.23	163.53	42.95	0.9912	1.1976	1.0121	1.2014
1976	56.8	3,846	7,406	51.9	75.16	175.45	42.84	1.0035	0.9988	1.0096	1.0119
1977	57.9	3,308	6,991	47.3	78.79	189.00	41.69	1.0230	0.9101	0.9825	0.9147
1978	59.3	2,645	6,202	42.6	83.67	203.70	41.08	1.0477	0.8202	0.9680	0.8319
1979	59.9	2,592	6,137	42.2	89.67	219.91	40.78	1.0583	0.8123	0.9610	0.8261
1980	59.2	3,837	7,637	50.2	98.95	235.10	42.09	1.0459	0.9663	0.9919	1.0025
1981	59.0	3,410	8,273	41.2	106.70	255.20	41.81	1.0424	0.7928	0.9854	0.8143
1982	57.8	4,592	10,678	43.0	119.34	267.26	44.65	1.0212	0.8271	1.0523	0.8889
1983	57.9	3,774	10,717	35.2	123.59	280.70	44.03	1.0230	0.6773	1.0376	0.7189
1984	59.5	2,560	8,539	30.0	123.47	292.86	42.16	1.0512	0.5766	0.9936	0.6023
1985	60.1	2,699	8,312	32.5	128.09	299.09	42.83	1.0618	0.6245	1.0093	0.6693
1986	60.7	2,739	8,237	33.3	135.65	304.85	44.50	1.0724	0.6395	1.0487	0.7193
1987	61.5	2,369	7,425	31.9	140.39	312.50	44.92	1.0866	0.6136	1.0588	0.7059
1988	62.3	2,135	6,701	31.9	144.74	322.02	44.95	1.1007	0.6128	1.0593	0.7145
1989	63.0	2,205	6,528	33.8	151.43	334.24	45.31	1.1131	0.6496	1.0677	0.7721
1990	62.8	2,575	7,047	36.5	161.20	345.35	46.68	1.1095	0.7028	1.1001	0.8578
1991	61.7	3,406	8,628	39.5	169.56	353.98	47.90	1.0901	0.7592	1.1289	0.9343
1992	61.5	3,348	9,613	34.8	173.38	363.61	47.68	1.0866	0.6698	1.1238	0.8179
1993	61.7	2,845	8,940	31.8	179.41	373.64	48.02	1.0901	0.6121	1.1316	0.7550
1994	62.5	2,746	7,996	34.3	181.91	385.86	47.14	1.1042	0.6605	1.1111	0.8104
1995	62.9	2,639	7,404	35.6	187.04	394.34	47.43	1.1113	0.6855	1.1178	0.8516
1996	63.2	2,656	7,236	36.7	189.27	406.61	46.55	1.1166	0.7060	1.0970	0.8648
1997	63.8	2,370	6,739	35.2	192.84	424.89	45.39	1.1272	0.6764	1.0696	0.8155
1998	64.1	2,260	6,210	36.4	200.29	442.19	45.30	1.1325	0.6999	1.0675	0.8462
1999	64.3	2,222	5,880	37.8	211.75	456.78	46.36	1.1360	0.7268	1.0925	0.9021

Sources: Economic Report of the President 2000, Statistical Tables B-36; B-39, B-42, B-45, B-47;

Unemployed: Table B-36;

Insured Unemployment, Average weekly benefits: Statistical Table B-45;

Average weekly earnings: Table B-47.

Table 6: Risk imposed by Illness in the United States

Year	Personal Disposable Income (Billions of 1996$)	Personal Medical Care Expenditures (Billions of 1996$)	% of Disposable income	Index
1971	2,745.3	315.1	11.48	-1.000
1972	2,874.3	336.3	11.70	-1.020
1973	3,072.3	361.2	11.76	-1.024
1974	3,051.9	376.0	12.32	-1.074
1975	3,108.5	396.1	12.74	-1.110
1976	3,243.5	415.1	12.80	-1.115
1977	3,360.7	435.9	12.97	-1.130
1978	3,527.5	453.0	12.84	-1.119
1979	3,628.6	471.0	12.98	-1.131
1980	3,658.0	488.0	13.34	-1.162
1981	3,741.1	512.5	13.70	-1.194
1982	3,791.7	519.3	13.70	-1.193
1983	3,906.9	539.9	13.82	-1.204
1984	4,207.6	554.8	13.19	-1.149
1985	4,347.8	576.3	13.25	-1.155
1986	4,486.6	599.3	13.36	-1.164
1987	4,582.5	631.0	13.77	-1.200
1988	4,784.1	659.9	13.79	-1.202
1989	4,906.5	678.5	13.83	-1.205
1990	5,014.2	710.9	14.18	-1.235
1991	5,033.0	734.4	14.59	-1.271
1992	5,189.3	765.4	14.75	-1.285
1993	5,261.3	775.4	14.74	-1.284
1994	5,397.2	783.1	14.51	-1.264
1995	5,539.1	797.7	14.40	-1.255
1996	5,677.7	814.4	14.34	-1.250
1997	5,854.5	835.4	14.27	-1.243
1998	6,134.1	859.8	14.02	-1.221
1999	6,331.0	881.7	13.93	-1.213

Sources: Disposable Income from Economic Report of the President 2000, Table B-32
Medical Expenses: Pre-1981 from Economic Report of the President 1997 Table B-15; 1982-1987 from Economic Report of the President 1998 Table B-17; and 1987-1999 from Economic Report of the President 2000 Table B-17. The latter is in 1996 $ and was reconciled with the older series using 1987 as a link year.

Table 7: Risk Imposed by Single Parent Poverty in the United States

Year	Divorce rate (% of legally married couples) (A)	Poverty rate (%) for single women with children under 18 from LIS (B)	Poverty gap from LIS (?)	Index of A (A')	Index of B (B')	Index of ? (? ')	Multiplicative index A'*B'*-1 (1)
1971	1.58	53.0	43.37	1.000	1.000	1.000	-1.0000
1972	1.70	53.0	43.37	1.076	1.000	1.000	-1.0759
1973	1.82	53.0	43.37	1.152	1.000	1.000	-1.1519
1974	1.93	**53.0**	**43.37**	1.222	1.000	1.000	-1.2215
1975	2.03	51.2	42.50	1.285	0.967	0.980	-1.2168
1976	2.11	49.5	41.62	1.335	0.933	0.959	-1.1960
1977	2.11	47.7	40.74	1.335	0.900	0.939	-1.1289
1978	2.19	45.9	39.86	1.386	0.867	0.919	-1.1040
1979	2.28	**44.2**	**38.98**	1.443	0.833	0.899	-1.0809
1980	2.26	45.8	39.26	1.430	0.863	0.905	-1.1180
1981	2.26	47.4	39.55	1.430	0.893	0.912	-1.1652
1982	2.17	48.9	39.83	1.373	0.923	0.918	-1.1647
1983	2.13	50.5	40.12	1.348	0.953	0.925	-1.1887
1984	2.15	52.1	40.40	1.361	0.983	0.931	-1.2464
1985	2.17	53.7	40.69	1.373	1.013	0.938	-1.3055
1986	2.12	**55.3**	**40.97**	1.342	1.043	0.945	-1.3223
1987	2.08	54.9	40.70	1.316	1.035	0.938	-1.2788
1988	2.07	54.5	40.42	1.310	1.027	0.932	-1.2544
1989	2.04	54.0	40.15	1.291	1.019	0.926	-1.2183
1990	2.09	53.6	39.87	1.323	1.011	0.919	-1.2299
1991	2.09	**53.2**	**39.60**	1.323	1.004	0.913	-1.2118
1992	2.12	51.4	39.96	1.342	0.969	0.921	-1.1975
1993	2.05	49.5	40.32	1.297	0.934	0.930	-1.1265
1994	2.05	**47.7**	**40.68**	1.297	0.899	0.938	-1.0945
1995	2.05	46.4	40.38	1.297	0.876	0.931	-1.0582
1996	2.05	**45.2**	40.07	1.297	0.853	0.924	-1.0224
1997	2.05	45.2	**39.76**	1.297	0.853	0.917	-1.0146
1998	2.05	45.2	39.76	1.297	0.853	0.917	-1.0146
1999	2.05	45.2	39.76	1.297	0.853	0.917	-1.0146

Sources:

Divorce rate for 1960-1990 are from the National Center for Health Statistics:
http://www.cdc.gov/nchswww/fastats/PDF/43-9s-t1.pdf

Divorce rate for 1991-1994 are Census Data:http://www.census.gov/prod/2/gen/96statab/vitlstat.pdf

Data for 1995-1999 assumed to be equal to 1994 data.

Table 8: Risk of Poverty Imposed by Old Age in the United States

Year	% 45-64 of Total Pop	Elderly poverty rate (2)	LIS Elderly poverty gap (% of poverty line) (3)	Poverty intensity (2*3)	Poverty Rate (2) *Index*	Poverty Intensity (2*3) *Index*
1971	20.46	32.0	28.6	0.0915	-1.000	-1.000
1972	20.44	32.0	28.6	0.0915	-1.000	-1.000
1973	20.40	32.0	28.6	0.0915	-1.000	-1.000
1974	20.35	**32.0**	**28.6**	0.0915	-1.000	-1.000
1975	20.28	31.7	28.8	0.0914	-0.990	-0.999
1976	20.18	31.4	29.1	0.0913	-0.981	-0.997
1977	20.05	31.1	29.3	0.0911	-0.971	-0.996
1978	19.90	30.8	29.6	0.0910	-0.961	-0.994
1979	19.72	**30.5**	**29.8**	0.0908	-0.952	-0.992
1980	19.54	30.1	29.6	0.0888	-0.938	-0.970
1981	19.35	29.6	29.3	0.0869	-0.925	-0.949
1982	19.15	29.2	29.1	0.0849	-0.912	-0.928
1983	18.98	28.8	28.8	0.0830	-0.899	-0.907
1984	18.85	28.4	28.6	0.0811	-0.886	-0.886
1985	18.70	28.0	28.3	0.0792	-0.873	-0.866
1986	18.56	**27.5**	**28.1**	0.0774	-0.860	-0.846
1987	18.47	26.8	27.8	0.0744	-0.837	-0.813
1988	18.56	26.1	27.4	0.0715	-0.814	-0.781
1989	18.55	25.3	27.1	0.0686	-0.791	-0.750
1990	18.52	24.6	26.7	0.0658	-0.768	-0.719
1991	18.51	**23.9**	**26.4**	0.0630	-0.745	-0.688
1992	18.93	23.3	26.1	0.0607	-0.727	-0.663
1993	19.21	22.7	25.7	0.0584	-0.708	-0.638
1994	19.53	**22.1**	**25.4**	0.0561	-0.690	-0.613
1995	19.86	22.9	26.3	0.0602	-0.715	-0.658
1996	20.23	**23.7**	27.3	0.0646	-0.739	-0.706
1997	20.69	23.7	**28.3**	0.0670	-0.739	-0.732
1998	21.17	23.7	28.3	0.0670	-0.739	-0.732
1999	21.69	23.7	28.3	0.0670	-0.739	-0.732

Source: LIS

Table 9: Index of Economic Security for the United States

Year	Index 1 Women	Index 2 Old Age	Index 3 Health	Index 4 Unemployment	Weighted Index 1 Women	Weighted Index 2 Old Age	Weighted Index 3 Health	Weighted Index 4 Unemployment	Average Weighted Index
1971	1.0000	1.0000	1.0000	1.0000	0.1754	0.0897	0.4386	0.2962	1.0000
1972	0.9241	1.0000	0.9804	0.8498	0.1583	0.0896	0.4297	0.2557	0.9332
1973	0.8481	1.0000	0.9755	0.7716	0.1418	0.0895	0.4280	0.2350	0.8943
1974	0.7785	1.0000	0.9265	0.9534	0.1269	0.0894	0.4069	0.2940	0.9172
1975	0.7832	1.0013	0.8897	1.2014	0.1241	0.0894	0.3916	0.3750	0.9801
1976	0.8040	1.0027	0.8848	1.0119	0.1245	0.0892	0.3899	0.3194	0.9229
1977	0.8711	1.0043	0.8698	0.9147	0.1313	0.0889	0.3843	0.2918	0.8962
1978	0.8960	1.0060	0.8812	0.8319	0.1309	0.0887	0.3906	0.2682	0.8785
1979	0.9191	1.0079	0.8689	0.8261	0.1312	0.0883	0.3860	0.2688	0.8744
1980	0.8820	1.0295	0.8378	1.0025	0.1240	0.0895	0.3726	0.3285	0.9146
1981	0.8348	1.0509	0.8064	0.8143	0.1171	0.0904	0.3586	0.2679	0.8340
1982	0.8353	1.0721	0.8067	0.8889	0.1137	0.0917	0.3605	0.2947	0.8605
1983	0.8113	1.0930	0.7960	0.7189	0.1091	0.0929	0.3564	0.2393	0.7977
1984	0.7536	1.1137	0.8512	0.6023	0.1005	0.0940	0.3813	0.2013	0.7771
1985	0.6945	1.1342	0.8452	0.6693	0.0912	0.0953	0.3796	0.2246	0.7907
1986	0.6777	1.1545	0.8362	0.7193	0.0890	0.0961	0.3752	0.2422	0.8025
1987	0.7212	1.1870	0.8003	0.7059	0.0934	0.0985	0.3596	0.2387	0.7902
1988	0.7456	1.2190	0.7982	0.7145	0.0956	0.1017	0.3589	0.2420	0.7982
1989	0.7817	1.2504	0.7951	0.7721	0.1005	0.1042	0.3574	0.2615	0.8236
1990	0.7701	1.2813	0.7647	0.8578	0.0976	0.1067	0.3439	0.2919	0.8401
1991	0.7882	1.3116	0.7287	0.9343	0.0988	0.1094	0.3284	0.3182	0.8548
1992	0.8025	1.3372	0.7149	0.8179	0.0996	0.1140	0.3221	0.2782	0.8139
1993	0.8735	1.3623	0.7159	0.7550	0.1083	0.1177	0.3221	0.2564	0.8046
1994	0.9055	1.3870	0.7358	0.8104	0.1126	0.1216	0.3304	0.2748	0.8393
1995	0.9418	1.3420	0.7453	0.8516	0.1171	0.1195	0.3341	0.2882	0.8588
1996	0.9776	1.2944	0.7503	0.8648	0.1193	0.1174	0.3364	0.2930	0.8662
1997	0.9854	1.2684	0.7567	0.8155	0.1192	0.1174	0.3385	0.2765	0.8517
1998	0.9854	1.2684	0.7788	0.8462	0.1191	0.1198	0.3475	0.2864	0.8728
1999	0.9854	1.2684	0.7866	0.9021	0.1172	0.1225	0.3504	0.3057	0.8959

Sources : Indexes: Tables 5,6,7,8; Weights: Table A13.

Table 10: Overall Economic Well being Index for the United States

Year	Consumption Flows 0.25	Wealth Stocks 0.25	Inequality Measures 0.25	Economic Security 0.25	Well-being Index
1971	1.0000	1.0000	1.0000	1.0000	1.0000
1972	1.0263	1.0192	0.9968	0.9332	0.9939
1973	1.0436	1.0432	0.9994	0.8943	0.9951
1974	1.0384	1.0615	1.0006	0.9172	1.0044
1975	1.0611	1.0736	1.0015	0.9801	1.0290
1976	1.0912	1.0892	1.0030	0.9229	1.0266
1977	1.1144	1.1207	1.0026	0.8962	1.0334
1978	1.1348	1.1441	1.0047	0.8785	1.0405
1979	1.1450	1.1728	1.0053	0.8744	1.0494
1980	1.1349	1.1903	0.9833	0.9146	1.0558
1981	1.1460	1.2007	0.9545	0.8340	1.0338
1982	1.1567	1.2006	0.8956	0.8605	1.0284
1983	1.1971	1.2140	0.8744	0.7977	1.0208
1984	1.2244	1.2279	0.8878	0.7771	1.0293
1985	1.2654	1.2507	0.8933	0.7907	1.0500
1986	1.2991	1.2744	0.8734	0.8025	1.0623
1987	1.3267	1.2934	0.8627	0.7902	1.0683
1988	1.3459	1.3116	0.8762	0.7982	1.0830
1989	1.3626	1.3280	0.8901	0.8236	1.1011
1990	1.3854	1.3379	0.8915	0.8401	1.1137
1991	1.3888	1.3403	0.8676	0.8548	1.1129
1992	1.4167	1.3393	0.8395	0.8139	1.1023
1993	1.4173	1.3631	0.8165	0.8046	1.1004
1994	1.4545	1.3765	0.8296	0.8393	1.1250
1995	1.4748	1.3846	0.8760	0.8588	1.1486
1996	1.5103	1.4011	0.8630	0.8662	1.1602
1997	1.5414	1.4004	0.8523	0.8517	1.1614
1998	1.5983	1.4126	0.8523	0.8728	1.1840
1999	1.6591	1.4370	0.8838	0.8959	1.2190

Sources: Tables 2,3,4,9.

Table 10b: Overall Economic Well being Index for the United States

Year	Consumption Flows 0.4	Wealth Stocks 0.1	Inequality Measures 0.25	Economic Security 0.25	Well-being Index
1971	1.0000	1.0000	1.0000	1.0000	1.0000
1972	1.0263	1.0192	0.9968	0.9332	0.9949
1973	1.0436	1.0432	0.9994	0.8943	0.9952
1974	1.0384	1.0615	1.0006	0.9172	1.0010
1975	1.0611	1.0736	1.0015	0.9801	1.0272
1976	1.0912	1.0892	1.0030	0.9229	1.0269
1977	1.1144	1.1207	1.0026	0.8962	1.0325
1978	1.1348	1.1441	1.0047	0.8785	1.0391
1979	1.1450	1.1728	1.0053	0.8744	1.0452
1980	1.1349	1.1903	0.9833	0.9146	1.0475
1981	1.1460	1.2007	0.9545	0.8340	1.0256
1982	1.1567	1.2006	0.8956	0.8605	1.0218
1983	1.1971	1.2140	0.8744	0.7977	1.0183
1984	1.2244	1.2279	0.8878	0.7771	1.0288
1985	1.2654	1.2507	0.8933	0.7907	1.0522
1986	1.2991	1.2744	0.8734	0.8025	1.0660
1987	1.3267	1.2934	0.8627	0.7902	1.0732
1988	1.3459	1.3116	0.8762	0.7982	1.0881
1989	1.3626	1.3280	0.8901	0.8236	1.1062
1990	1.3854	1.3379	0.8915	0.8401	1.1209
1991	1.3888	1.3403	0.8676	0.8548	1.1202
1992	1.4167	1.3393	0.8395	0.8139	1.1140
1993	1.4173	1.3631	0.8165	0.8046	1.1085
1994	1.4545	1.3765	0.8296	0.8393	1.1367
1995	1.4748	1.3846	0.8760	0.8588	1.1621
1996	1.5103	1.4011	0.8630	0.8662	1.1765
1997	1.5414	1.4004	0.8523	0.8517	1.1826
1998	1.5983	1.4126	0.8523	0.8728	1.2118
1999	1.6591	1.4370	0.8838	0.8959	1.2523

Sources: Tables 2,3,4,9.

Table A1: Personal Consumption on Goods and Services in the United States.

Year	Personal Consumption (billions of 1996 $)	Population (thousands)	Personal Consumption per capita (1996 $)	Index 1971=1.00
1971	2,442.7	207,661	11,763	1.000
1972	2,588.9	209,896	12,334	1.049
1973	2,713.9	211,909	12,807	1.089
1974	2,694.8	213,854	12,601	1.071
1975	2,754.0	215,973	12,752	1.084
1976	2,908.7	218,035	13,340	1.134
1977	3,032.4	220,239	13,769	1.171
1978	3,163.0	222,585	14,210	1.208
1979	3,236.5	225,055	14,381	1.223
1980	3,225.2	227,726	14,163	1.204
1981	3,264.5	229,966	14,196	1.207
1982	3,302.2	232,188	14,222	1.209
1983	3,472.6	234,307	14,821	1.260
1984	3,651.6	236,348	15,450	1.313
1985	3,821.9	238,466	16,027	1.362
1986	3,974.3	240,651	16,515	1.404
1987	4,096.0	242,804	16,870	1.434
1988	4,263.2	245,021	17,399	1.479
1989	4,374.4	247,342	17,686	1.503
1990	4,454.1	249,948	17,820	1.515
1991	4,460.6	252,639	17,656	1.501
1992	4,603.8	255,374	18,028	1.533
1993	4,741.9	258,083	18,374	1.562
1994	4,920.0	260,599	18,880	1.605
1995	5,070.1	263,044	19,275	1.639
1996	5,237.5	265,463	19,730	1.677
1997	5,433.7	268,008	20,274	1.724
1998	5,698.6	270,561	21,062	1.791
1999	5,998.7	273,131	21,963	1.867

Sources: Data for 1987-1999 are from Economic Report of the President 2000, Statistical Tables B-15, B32 (http://www.gpo.ucop.edu/catalog/erp00.html).

Data for personal consumption expenditures in 1992 dollars from 1959-1987 are from Economic Report of the President 1997, Statistical Tables B-15.

(http://www.umsl.edu/services/govdocs/erp/1997/contents.htm)

Note: Personal consumption data in 1996 dollars prior to 1987 has been calculated using $1996/$1992= 1.0716

Table A2: Government Spending, all levels: (all aggregates in millions)

Year	Real Current Expenditure (1996 $)	Population (thousands)	Real Current Expenditure Per Capita (1996 $)	Index 1971=1.00
1971	827.3	207,661	3,984	1.000
1972	834.3	209,896	3,975	0.998
1973	827.2	211,909	3,904	0.980
1974	842.5	213,854	3,940	0.989
1975	858.0	215,973	3,973	0.997
1976	859.4	218,035	3,941	0.989
1977	873.0	220,239	3,964	0.995
1978	891.3	222,585	4,004	1.005
1979	903.5	225,055	4,015	1.008
1980	920.5	227,726	4,042	1.015
1981	936.9	229,966	4,074	1.023
1982	958.6	232,188	4,128	1.036
1983	986.3	234,307	4,210	1.057
1984	1009.1	236,348	4,270	1.072
1985	1066.0	238,466	4,470	1.122
1986	1119.0	240,651	4,650	1.167
1987	1148.5	242,804	4,730	1.187
1988	1159.6	245,021	4,733	1.188
1989	1187.8	247,342	4,802	1.205
1990	1219.1	249,948	4,877	1.224
1991	1231.0	252,639	4,873	1.223
1992	1234.5	255,374	4,834	1.213
1993	1221.4	258,083	4,733	1.188
1994	1220.1	260,599	4,682	1.175
1995	1218.2	263,044	4,631	1.162
1996	1226.5	265,463	4,620	1.160
1997	1247.7	268,008	4,655	1.169
1998	1263.7	270,561	4,671	1.172
1999	1299.3	273,131	4,757	1.194

Note: Government real current expenditures does not include gross investment.

To re-base real expenditures in 1996 $ the ratio $1996/$1992=1.10104 in 1987 has been applied to values from 1960-1986

Sources: Data for government real current expenditure in 1996 $ from 1987-1999 are from Economic Report of the President 2000, Statistical Tables B-19, and for population B34 (http://www.gpo.ucop.edu/catalog/erp00.html).

Data for 1982-1987 in 1992 $ are from Economic Report of the President 1999, Statistical Tables B-31. (http://w3.access.gpo.gov/usbudget/fy2000/erp.html#erp1)

Data for 1960-1981 in 1992 $ are from Economic Report of the President 1997, Statistical Tables B-19. (http://www.umsl.edu/services/govdocs/erp/1997/contents.htm)

Table A3: Costs of Various Regrettables

Year	Population	Cost of Commuting (bil 1992 $)	Cost of Commuting Per Capita (1992 $)	Cost of Crime (bil 1992 $)	Cost of Crime Per Capita (1992 $)	Cost of House Pollution Abatement (bil 1992 $)	Cost of House Pollution Abatement Per Capita (1992 $)	Cost of Auto Accidents (bil 1992 $)	Cost of Auto Accidents Per Capita (1992 $)	Total Regrettable Cost Per Cap. (1992 $)	Total Regrettable Cost Per Cap. (1996 $)	Index 1971=1.00
1971	207,661	173.2	834.1	16.6	79.9	4.0	19.3	62.1	299.0	1232.3	1343.8	1.000
1972	209,896	182.7	870.4	17.1	81.5	4.2	20.0	69.8	332.5	1304.5	1422.5	1.059
1973	211,909	191.4	903.2	17.8	84.0	5.4	25.5	73.5	346.8	1359.5	1482.6	1.103
1974	213,854	192.1	898.3	18.6	87.0	5.4	25.3	69.1	323.1	1333.6	1454.3	1.082
1975	215,973	190.9	883.9	19.4	89.8	7.0	32.4	75.1	347.7	1353.9	1476.4	1.099
1976	218,035	203.1	931.5	20.1	92.2	7.8	35.8	78.6	360.5	1420.0	1548.5	1.152
1977	220,239	215.3	977.6	20.8	94.4	8.5	38.6	84.4	383.2	1493.8	1629.0	1.212
1978	222,585	226.2	1016.2	21.5	96.6	8.9	40.0	89.1	400.3	1553.1	1693.7	1.260
1979	225,055	235.3	1045.5	22.7	100.9	8.4	37.3	88.9	395.0	1578.7	1721.6	1.281
1980	227,726	236.9	1040.3	23.9	105.0	8.3	36.4	83.7	367.5	1549.2	1689.5	1.257
1981	229,966	242.4	1054.1	24.0	104.4	9.5	41.3	79.9	347.4	1547.2	1687.2	1.256
1982	232,188	240.3	1034.9	24.4	105.1	9.6	41.3	78.4	337.7	1519.0	1656.5	1.233
1983	234,307	249.8	1066.1	24.6	105.0	11.2	47.8	79.2	338.0	1556.9	1697.9	1.263
1984	236,348	265.4	1122.9	25.2	106.6	12.5	52.9	85.0	359.6	1642.1	1790.7	1.333
1985	238,466	276.8	1160.8	25.9	108.6	13.5	56.6	91.4	383.3	1709.3	1864.0	1.387
1986	240,651	282.4	1173.5	26.2	108.9	14.7	61.1	93.5	388.5	1732.0	1888.7	1.405
1987	242,804	290.3	1195.6	26.8	110.4	12.7	52.3	95.2	392.1	1750.4	1908.8	1.420
1988	245,021	300.6	1226.8	27.3	111.4	13.7	55.9	98.4	401.6	1795.8	1958.3	1.457
1989	247,342	311.7	1260.2	28.1	113.6	11.8	47.7	100.9	407.9	1829.5	1995.0	1.485
1990	249,948	319.7	1279.1	28.6	114.4	9.7	38.8	102.2	408.9	1841.2	2007.8	1.494
1991	252,639	312.4	1236.5	28.9	114.4	7.6	30.1	96.6	382.4	1763.4	1923.0	1.431
1992	255,374	320.4	1254.6	29.2	114.3	7.9	30.9	98.1	384.1	1784.1	1945.5	1.448
1993	258,083	330.1	1279.0	29.7	115.1	8.1	31.4	100.7	390.2	1815.7	1980.0	1.473
1994	260,599	342.4	1313.9	30.9	118.6	9.2	35.3	103.0	395.2	1863.0	2031.6	1.512
1995	263,044	350.9	1334.0	29.8	113.3	9.8	37.3	104.4	396.9	1881.4	2051.7	1.527
1996	265,463	362.1	1364.0	29.0	109.2	10.4	39.2	105.9	398.9	1911.4	2084.4	1.551
1997	268,008	374.5	1397.3	28.4	106.0	11.1	41.4	120.5	449.6	1994.3	2174.9	1.618
1998	270,561	386.0	1426.7	28.0	103.5	12.0	44.4	126.0	465.7	2040.2	2224.9	1.656
1999	273,131										2277.4	1.695

Source: "The Genuine Progress Indicator -1998 Update" by M.Anielski, J.Rowe; Redefining Progress,March 1999 (http://www.rprogress.org/pubs/pdf/gpi1998_data.pdf).
and "Why Bigger Isn't Better: The Genuine Progress Indicator - 1999 Update" by Clifford Cobb, Gary Sue Goodman, and Mathis Wackernagel. Redefining Progress, November 1999.
Note: Chaintype price index for GDP, 1996=100, 1982=91.7 ; Source: Economic Report of the President 1997, Statistical Tables B-3;
http://www.gpo.ucop.edu/catalog/erp00.html
Note: Total regrettable cost per capita data for 1999 was extrapolated on the the basis of 1993-1998 data, as a linear trend.

Table A4: Life Expectancy at Birth in the United States

Year	Life Expectancy			Index
	Male	Female	Both Sexes	1971=1.00
1971	67.4	75.0	71.1	1.000
1972	67.4	75.1	71.2	1.001
1973	67.6	75.3	71.4	1.004
1974	68.2	75.9	72.0	1.013
1975	68.8	76.6	72.6	1.021
1976	69.1	76.8	72.9	1.025
1977	69.5	77.2	73.3	1.031
1978	69.6	77.3	73.5	1.034
1979	70.0	77.8	73.9	1.039
1980	70.0	77.4	73.7	1.037
1981	70.4	77.8	74.1	1.042
1982	70.8	78.1	74.5	1.048
1983	71.0	78.1	74.6	1.049
1984	71.1	78.2	74.7	1.051
1985	71.1	78.2	74.7	1.051
1986	71.2	78.2	74.7	1.051
1987	71.4	78.3	74.9	1.053
1988	71.4	78.3	74.9	1.053
1989	71.7	78.5	75.1	1.056
1990	71.8	78.8	75.4	1.060
1991	72.0	78.9	75.5	1.062
1992	72.3	79.1	75.8	1.066
1993	72.2	78.8	75.5	1.062
1994	72.4	79.0	75.7	1.065
1995	72.5	78.9	75.8	1.066
1996	73.0	79.0	76.1	1.070
1997	73.6	79.4	76.5	1.076
1998	73.8	79.5	76.7	1.079
1999	74.0	79.6	76.8	1.080

Source: National Center for Health Statistics;
Monthly Vital Statistic Report Vol.47 No.28, December 13, 1999
(http://www.cdc.gov/nchs/fastats/lifexpec.htm)
Note: For 1998-1999 Index of Life expectancy are extrapolated based on linear trend from 1987-97.

Table A5: Net Year-End Capital Stock in the United States

Year	Population thousands	non-res. Capital Stock (Bill. 1996 $)	non-res. Capital Stock Per Capita (1996 $)	Housing Capital Stock (Bill. 1996$)	Housing Per Capita Capital Stock (1996$)	Government Owned fixed Capital (Bill. 1996$)	Government Owned fixed Capital per capita (1996$)	Durable Goods Owned by Consumers (Bill. 1996$)	Durable Goods Owned by Consumers per capita (1996$)	Total Per Capita Net Capital Stock (1996 $)	Total Per Capita Net Capital Stock Index 1971=1.00
1971	207,661	4,055.9	19,531.4	4,208.6	20,266.5	3,037.5	14,627.4	759.8	3,659	58,084.1	1.000
1972	209,896	4,229.9	20,152.2	4,394.4	20,936.0	3,092.9	14,735.2	811.6	3,867	59,690.2	1.028
1973	211,909	4,420.5	20,860.5	4,577.0	21,598.9	3,138.7	14,811.4	874.1	4,125	61,395.7	1.057
1974	213,854	4,592.7	21,475.9	4,705.1	22,001.5	3,184.4	14,890.3	911.9	4,264	62,631.9	1.078
1975	215,973	4,709.1	21,804.1	4,805.6	22,250.7	3,230.4	14,957.4	944.7	4,374	63,386.5	1.091
1976	218,035	4,831.2	22,157.7	4,944.3	22,676.6	3,273.4	15,013.3	995.8	4,567	64,414.6	1.109
1977	220,239	4,986.1	22,639.4	5,125.2	23,271.0	3,309.9	15,028.9	1,056.8	4,798	65,737.5	1.132
1978	222,585	5,184.8	23,293.4	5,320.3	23,902.2	3,354.1	15,068.8	1,119.7	5,031	67,294.9	1.159
1979	225,055	5,407.4	24,027.0	5,501.4	24,444.7	3,404.2	15,126.1	1,170.8	5,202	68,799.9	1.184
1980	227,726	5,604.7	24,611.8	5,624.1	24,696.9	3,456.3	15,177.6	1,191.7	5,233	69,719.5	1.200
1981	229,966	5,811.0	25,269.0	5,728.1	24,908.6	3,502.5	15,230.4	1,213.6	5,277	70,685.3	1.217
1982	232,188	5,967.9	25,703.0	5,796.1	24,963.1	3,545.0	15,267.6	1,230.9	5,301	71,235.1	1.226
1983	234,307	6,102.0	26,042.8	5,927.3	25,297.2	3,594.9	15,342.5	1,278.9	5,458	72,140.7	1.242
1984	236,348	6,311.9	26,706.2	6,090.0	25,767.3	3,658.4	15,478.7	1,356.2	5,738	73,690.2	1.269
1985	238,466	6,543.7	27,440.8	6,252.3	26,218.9	3,737.8	15,674.4	1,447.4	6,070	75,403.8	1.298
1986	240,651	6,731.3	27,971.0	6,446.0	26,785.8	3,826.1	15,899.0	1,552.9	6,453	77,108.9	1.328
1987	242,804	6,899.1	28,414.3	6,637.8	27,338.1	3,918.4	16,138.0	1,647.6	6,786	78,675.9	1.355
1988	245,021	7,071.3	28,859.8	6,821.9	27,842.3	4,006.1	16,350.0	1,745.9	7,125	80,177.4	1.380
1989	247,342	7,249.0	29,307.6	6,993.8	28,275.6	4,094.5	16,554.0	1,834.9	7,419	81,555.8	1.404
1990	249,948	7,418.9	29,681.7	7,142.4	28,575.5	4,192.4	16,773.0	1,899.0	7,598	82,627.8	1.423
1991	252,639	7,538.2	29,838.0	7,251.4	28,702.5	4,283.6	16,955.5	1,914.7	7,579	83,075.0	1.430
1992	255,374	7,648.8	29,951.4	7,384.2	28,915.2	4,370.6	17,114.6	1,949.7	7,635	83,615.9	1.440
1993	258,083	7,798.3	30,216.4	7,546.5	29,240.5	4,444.6	17,221.7	2,009.5	7,786	84,464.7	1.454
1994	260,599	7,973.5	30,596.6	7,720.2	29,624.9	4,511.6	17,312.6	2,087.3	8,010	85,543.9	1.473
1995	263,044	8,190.6	31,137.9	7,884.3	29,973.2	4,584.9	17,430.3	2,169.6	8,248	86,789.3	1.494
1996	265,463	8,447.5	31,821.9	8,073.6	30,413.3	4,667.7	17,583.4	2,261.5	8,519	88,337.5	1.521
1997	268,008	8,749.1	32,644.9	8,261.1	30,824.3	4,749.4	17,721.2	2,368.7	8,838	90,028.6	1.550
1998	270,561	9,099.7	33,632.6	8,474.0	31,320.0	4,834.6	17,868.8	2,508.1	9,270	92,091.5	1.585
1999	273,131	9,462.4	34,644.2	8,703.1	31,864.2	4,932.2	18,058.0	2,694.6	9,866	94,432.1	1.626

Sources: Economic Report of the President 1998, Statistical Table B34 - Population
(http://www.gpo.ucop.edu/catalog/erp98_appen_b.html). Survey of Current Business, May 1997, P.92 -Capital Stock.
Note: Data on Total per Capita Net Capital Stock for 1996-1997 were extrapolated on the basis of 1991-1995 years data as a linear trend.
Data for 1987 onwards are from www.bea.doc.gov/bea/dn/faweb/AllFATables.asp, table 9.1, and are expressed in 1996 $.
These series were reconciled with the old series using 1987 as a link year.

Table A6: Expenditures and Stocks of R&D Investment

Year	Business Enterprise Expenditures on R&D (millions of current $)	GDP Deflator, 1996=100	Business Enterprise Expenditures on R&D (millions of 1996 $)	Accumulated Stock of R&D (millions of 1996 $)	Depreciated Accumulated Stock of R&D (millions of 1996 $)	Population thousands	Net stock of R&D fixed intangible capital per capita (1996 $)	Index 1971=1.00
1971	*14,451*	30.52	47,351	47,351	47,351	207,661	228	1.000
1972	*16,375*	31.82	51,462	98,813	89,343	209,896	426	1.867
1973	*18,555*	33.60	55,224	154,037	126,699	211,909	598	2.622
1974	*21,025*	36.62	57,415	211,452	158,774	213,854	742	3.256
1975	*23,824*	40.03	59,516	270,969	186,536	215,973	864	3.788
1976	26,996	42.30	63,820	334,789	213,049	218,035	977	4.285
1977	29,825	45.02	66,248	401,037	236,687	220,239	1,075	4.713
1978	33,304	48.23	69,052	470,090	258,402	222,585	1,161	5.091
1979	38,226	52.25	73,160	543,250	279,882	225,055	1,244	5.454
1980	44,505	57.04	78,024	621,274	301,930	227,726	1,326	5.815
1981	51,810	62.37	83,069	704,343	324,613	229,966	1,412	6.191
1982	58,650	66.25	88,529	792,872	348,219	232,188	1,500	6.577
1983	65,267	68.88	94,755	887,627	373,330	234,307	1,593	6.988
1984	74,800	71.44	104,703	992,330	403,367	236,348	1,707	7.485
1985	84,239	73.69	114,315	1,106,645	437,009	238,466	1,833	8.037
1986	87,823	75.31	116,615	1,223,261	466,223	240,651	1,937	8.496
1987	92,155	77.58	118,787	1,342,048	491,765	242,804	2,025	8.882
1988	97,015	80.21	120,951	1,462,999	514,363	245,021	2,099	9.206
1989	102,055	83.27	122,559	1,585,558	534,049	247,342	2,159	9.469
1990	109,727	86.51	126,838	1,712,395	554,077	249,948	2,217	9.722
1991	116,952	89.66	130,439	1,842,835	573,701	252,639	2,271	9.959
1992	119,110	91.84	129,693	1,972,528	588,654	255,374	2,305	10.109
1993	117,399	94.05	124,826	2,097,354	595,749	258,083	2,308	10.124
1994	119,595	96.01	124,565	2,221,919	601,165	260,599	2,307	10.117
1995	132,103	98.10	134,662	2,356,581	615,593	263,044	2,340	10.263
1996	144,667	100.00	144,667	2,501,248	637,142	265,463	2,400	10.526
1997	157,539	101.95	154,526	2,655,773	664,239	268,008	2,478	10.869
1998	*167,083*	103.22	161,871	2,817,644	693,262	270,561	2,562	11.237
1999	*177,206*	104.77	169,138	2,986,782	723,747	273,131	2,650	11.621

Source: Research and Development in Industry, OECD. 1999 Edition for data 1976-1986; 2000 Edition for data 1987-1998
Values in italics are extrapolations based on the average annual growth rate of the five preceeding or following years.
The depreciated stock is based on a 20 per cent annual rate of depreciation.

Table A7: Value of Natural Resources.

Year	Population	Value of Oil (Bill. Of current $) Current Rent Method 1 (Rate of Return) (A)	Value of Gas (Bill. Of current $) Current Rent Method 1 (Rate of Return) (B)	Value of Coal (Bill. Of current $) Current Rent Method 1 (Rate of Return) (C)	Value of All Metals (Bill. Of current $) Current Rent Method 1 (Rate of Return) (D)	Value of Other Minerals (Bill. Of current $) Current Rent Method 1 (Rate of Return) (E)	SUM A+B+C+ D+E	Value of All Subsoil Assets (Bill. Of current $)	Value of All Subsoil Assets (Bill. Of 1987 $)	Value of All Subsoil Assets (Bill. Of 1992 $)	Value of All Subsoil Assets per capita (1992 $)	Value of All Subsoil Assets per capita (1996 $)
1971	207,661	55.3	15.0	15.3	56.1	12.1	153.8	152.1	640.4	771.0	3,713	4,043
1972	209,896	51.2	11.6	16.8	58.8	11.4	149.8	147.9	621.8	748.6	3,567	3,883
1973	211,909	77.9	14.0	24.9	54.3	12.6	183.7	195.7	605.1	728.5	3,438	3,743
1974	213,854	86.8	15.8	41.9	56.9	16.5	217.9	233.1	593.2	714.2	3,340	3,636
1975	215,973	104.7	21.1	61.5	66.3	20.4	274.0	277.8	577.2	694.9	3,218	3,504
1976	218,035	118.7	38.2	75.1	72.1	24.9	329.0	337.1	559.5	673.6	3,089	3,364
1977	220,239	124.1	51.7	77.5	70.2	26.8	350.3	322.6	564.0	679.0	3,083	3,357
1978	222,585	137.9	59.1	66.2	80.2	26.6	370.0	339.5	554.0	667.0	2,997	3,263
1979	225,055	192.5	77.9	83.3	42.6	29.2	425.5	398.1	557.6	671.3	2,983	3,248
1980	227,726	295.4	86.7	92.2	49.7	31.4	555.4	448.3	564.3	679.4	2,983	3,248
1981	229,966	298.3	41.3	91.9	15.2	31.7	478.4	379.4	558.9	672.9	2,926	3,186
1982	232,188	382.4	61.5	100.4	*	25.9	570.2	285.2	548.6	660.5	2,845	3,097
1983	234,307	481.6	161.6	103.2	*	28.0	774.4	600.6	541.3	651.7	2,781	3,029
1984	236,348	454.1	209.8	127.0	*	31.4	822.3	741.3	542.7	653.4	2,764	3,010
1985	238,466	332.1	140.9	134.4	*	30.3	637.7	594.4	545.5	656.8	2,754	2,999
1986	240,651	226.1	105.1	140.7	*	28.4	500.3	471.6	539.1	649.0	2,697	2,937
1987	242,804	144.7	78.6	143.0	38.5	32.8	437.6	437.5	539.8	649.9	2,677	2,914
1988	245,021	80.2	30.3	138.3	90.1	32.2	371.1	371.1	528.7	636.5	2,598	2,829
1989	247,342	91.2	24.7	134.9	125.6	32.8	409.2	409.9	527.1	634.6	2,566	2,794
1990	249,948	123.3	35.3	137.5	141.9	33.2	471.2	471.2	530.3	638.5	2,554	2,781
1991	252,639	126.8	31.1	134.4	154.5	33.9	480.7	480.6	519.7	625.7	2,477	2,697
1992	255,374									*621.1*	2,432	2,648
1993	258,083									*616.6*	2,389	2,601
1994	260,599									*612.1*	2,349	2,557
1995	263,044									*607.6*	2,310	2,515
1996	265,463									*603.2*	2,272	2,474
1997	268,008									*598.8*	2,234	2,433
1998	270,561									*594.4*	2,197	2,392
1999	273,131									*590.1*	2,160	2,352

Source: Survey of Current Business, April 1994.
Notes:
1.Metals include: iron ore, copper, lead, zinc, gold, silver and molybdenum.
Other minerals include: phosphate rock, sulfur, boron, diatomite, gypsum and potash.
2. Value of metals for 1982-1987 is negative.
3. GDP deflator for 1987 = 83.06 if 1992=100.
4. Data for 1992-1997 were extrapolated on the basis of 1986-1991 data as a linear trend.
5. Method 1, current rent method I, utilizes an estimate of a normal, or average, rate of return to investment to estimate the return to the associated capital invested in the mining industry and then derives the resource rent as a residual.
GDP deflator from Economic Report of the President 2000: 1996=100, 1992=91.84

Table A8: Estimates of the costs of Human Capital by educational attainment level

Year	Population aged 25-64	Early childhood, primary and lower secondary education, % of pop 25-64	Upper secondary education, % of pop 25-64	Non-university tertiary education, % of pop 25-64	University-level education, % of pop 25-64	Early childhood, primary and lower secondary education, thousands	Upper secondary education, thousands	Non-university tertiary education, thousands	University-level education, thousands	Human Capital: Early childhood, primary and lower secondary education (6 years), millions of 1998 $	Human Capital: Upper secondary education (6 years), millions of 1998 $	Human Capital: Non-university tertiary education (3 years), millions of 1998 $	Human Capital: University-level education (4 years), millions of 1998 $	Total Cost, millions of 1998 $	Total Population, thousands	Human Capital per capita, 1998 $	Human Capital per capita, 1996 $
1971	*94,764*	*22.2*	*58.6*	*3.5*	*15.8*	21,026	55,507	3,291	14,940	762,359	2,585,752	95,847	1,452,835	4,896,793	207,661	23,581	22,845
1972	*96,191*	*22.0*	*58.3*	*3.6*	*16.1*	21,190	56,076	3,454	15,472	768,320	2,612,225	100,593	1,504,523	4,985,662	209,896	23,753	23,012
1973	*97,640*	*21.9*	*58.0*	*3.7*	*16.4*	21,343	56,650	3,625	16,022	773,872	2,638,969	105,575	1,558,049	5,076,465	211,909	23,956	23,209
1974	*99,110*	*21.7*	*57.7*	*3.8*	*16.7*	21,484	57,230	3,804	16,592	778,985	2,665,987	110,802	1,613,480	5,169,254	213,854	24,172	23,418
1975	100,603	*21.5*	*57.5*	*4.0*	*17.1*	21,613	57,816	3,992	17,182	783,627	2,693,282	116,289	1,670,883	5,264,081	215,973	24,374	23,613
1976	*102,392*	*21.3*	*57.2*	*4.1*	*17.4*	21,785	58,564	4,201	17,841	789,884	2,728,164	122,375	1,734,976	5,375,399	218,035	24,654	23,885
1977	*104,214*	*21.1*	*56.9*	*4.2*	*17.8*	21,944	59,323	4,421	18,526	795,630	2,763,498	128,780	1,801,527	5,489,434	220,239	24,925	24,147
1978	*106,067*	*20.8*	*56.7*	*4.4*	*18.1*	22,087	60,091	4,653	19,236	800,825	2,799,290	135,520	1,870,631	5,606,265	222,585	25,187	24,401
1979	*107,954*	*20.6*	*56.4*	*4.5*	*18.5*	22,214	60,869	4,896	19,974	805,427	2,835,545	142,613	1,942,385	5,725,969	225,055	25,443	24,649
1980	109,874	*20.3*	*56.1*	*4.7*	*18.9*	22,323	61,658	5,152	20,741	809,392	2,872,269	150,077	2,016,892	5,848,630	227,726	25,683	24,882
1981	*111,952*	*20.0*	*55.9*	*4.8*	*19.3*	22,438	62,525	5,428	21,560	813,570	2,912,681	158,105	2,096,568	5,980,925	229,966	26,008	25,197
1982	*114,069*	*19.8*	*55.6*	*5.0*	*19.6*	22,534	63,405	5,719	22,412	817,022	2,953,660	166,564	2,179,392	6,116,639	232,188	26,343	25,522
1983	*116,226*	*19.5*	*55.3*	*5.2*	*20.0*	22,607	64,297	6,024	23,297	819,694	2,995,217	175,475	2,265,488	6,255,873	234,307	26,699	25,867
1984	*118,424*	*19.1*	*55.1*	*5.4*	*20.4*	22,658	65,202	6,347	24,217	821,527	3,037,358	184,862	2,354,985	6,398,732	236,348	27,073	26,229
1985	120,663	*18.8*	*54.8*	*5.5*	*20.9*	22,684	66,119	6,686	25,174	822,463	3,080,092	194,752	2,448,017	6,545,324	238,466	27,448	26,591
1986	*122,540*	*18.4*	*54.5*	*5.7*	*21.3*	22,608	66,828	7,021	26,082	819,728	3,113,137	204,495	2,536,342	6,673,702	240,651	27,732	26,867
1987	*124,446*	*18.1*	*54.3*	*5.9*	*21.7*	22,505	67,545	7,372	27,023	815,980	3,146,537	214,725	2,627,852	6,805,095	242,804	28,027	27,153
1988	*126,381*	*17.7*	*54.0*	*6.1*	*22.2*	22,372	68,270	7,741	27,998	811,160	3,180,295	225,468	2,722,665	6,939,588	245,021	28,322	27,439
1989	*128,347*	*17.3*	*53.8*	*6.3*	*22.6*	22,208	69,003	8,128	29,008	805,205	3,214,416	236,747	2,820,899	7,077,267	247,342	28,613	27,721
1990	130,343	*16.9*	*53.5*	*6.5*	*23.1*	22,010	69,743	8,535	30,055	798,050	3,248,902	248,591	2,922,676	7,218,219	249,948	28,879	27,978
1991	*131,982*	*16.5*	*53.3*	*6.8*	*23.5*	21,714	70,284	8,935	31,048	787,311	3,274,133	260,262	3,019,250	7,340,956	252,639	29,057	28,151
1992	*133,642*	16.0	53.0	7.0	24.0	21,383	70,830	9,355	32,074	775,295	3,299,560	272,482	3,119,014	7,466,351	255,374	29,237	28,325
1993	*135,323*	*15.5*	*53.0*	*7.5*	*24.0*	20,975	71,721	10,149	32,477	760,513	3,341,056	295,616	3,158,240	7,555,426	258,083	29,275	28,362
1994	*137,025*	15.0	53.0	8.0	24.0	20,554	72,623	10,962	32,886	745,236	3,383,075	319,290	3,197,960	7,645,560	260,599	29,338	28,423
1995	138,748	14.0	53.0	8.0	25.0	19,425	73,536	11,100	34,687	704,301	3,425,622	323,305	3,373,103	7,826,331	263,044	29,753	28,825
1996	*140,060*	14.0	52.0	8.0	26.0	19,608	72,831	11,205	36,416	710,963	3,392,775	326,363	3,541,206	7,971,307	265,463	30,028	29,091
1997	*141,496*	*13.8*	*51.8*	*8.2*	*26.3*	19,526	73,295	11,532	37,213	707,989	3,414,368	335,890	3,618,781	8,077,028	268,008	30,137	29,197
1998	*142,953*	13.6	51.6	8.3	26.6	19,442	73,764	11,865	38,026	704,914	3,436,212	345,595	3,697,753	8,184,474	270,561	30,250	29,306
1999	*144,483*	13.0	51.0	8.0	27.0	18,783	73,686	11,559	39,010	681,027	3,432,608	336,669	3,793,532	8,243,836	273,131	30,183	29,241

Note: Cost of Human Capital is based on 1998 data for average expenditures per student from the OECD's Education at a Glance 2001: $6043 for early childhood, primary, and lower secondary; $7764 for upper secondary; $9709 for non-university tertiary; and $24311 for university. All data in italic font were interpolated.

Sources:

Population 25-64 from World Population Prospects, The 1998 Revision, Volume II: The Sex and Age Distribution, UN, NY, 1999.

Distribution of Population 25-64 by educational attainment from Education at a Glance 1995, 1996, 1997, 1998, 2000, and 2001. Shares data for upper secondary education, and tertiary education for 1960-1991 period were extrapolated back assuming constant growth rate trend for 1992-1996 period. Figures for 1993 and 1997 are averages of the two surrounding years.

Data for primary and lower secondary education for 1960-1991 period were calculated as a residual: (100% - shares for upper secondary education, and tertiary education).

Population from Economic Report of the President 2000.

GDP implicit price deflator: 1996=100, 1998=103.22, from Economic Report of the President 2000.

Table A9: Net International Investment Position of the United States

Year	Net Int'l Investment Position (millions $) Market Value	GDP implicit price deflator 1996=100	Real Net Int'l Investment Position (mil 1996 $)	Population (thousands)	Per Capita Real Net Int'l Investment Position (1996 $)	Index 1971=1.00
1971	45,511	30.52	149,119	207,661	718	1.000
1972	37,036	31.82	116,392	209,896	555	0.772
1973	47,894	33.60	142,542	211,909	673	0.937
1974	58,731	36.62	160,380	213,854	750	1.044
1975	72,240	40.03	180,465	215,973	836	1.164
1976	83,578	42.30	197,584	218,035	906	1.262
1977	190,548	45.02	423,252	220,239	1,922	2.676
1978	228,421	48.23	473,608	222,585	2,128	2.963
1979	324,929	52.25	621,874	225,055	2,763	3.848
1980	392,547	57.04	688,196	227,726	3,022	4.208
1981	374,254	62.37	600,055	229,966	2,609	3.634
1982	264,991	66.25	399,986	232,188	1,723	2.399
1983	257,393	68.88	373,683	234,307	1,595	2.221
1984	134,088	71.44	187,693	236,348	794	1.106
1985	96,886	73.69	131,478	238,466	551	0.768
1986	100,782	75.31	133,823	240,651	556	0.774
1987	50,529	77.58	65,131	242,804	268	0.374
1988	10,466	80.21	13,048	245,021	53	0.074
1989	-46,987	83.27	-56,427	247,342	-228	-0.318
1990	-164,495	86.51	-190,146	249,948	-761	-1.059
1991	-260,819	89.66	-290,898	252,639	-1,151	-1.603
1992	-452,305	91.84	-492,492	255,374	-1,929	-2.686
1993	-178,020	94.05	-189,282	258,083	-733	-1.021
1994	-170,505	96.01	-177,591	260,599	-681	-0.949
1995	-418,648	98.10	-426,756	263,044	-1,622	-2.259
1996	-542,234	100.00	-542,234	265,463	-2,043	-2.844
1997	-1,076,134	101.95	-1,055,551	268,008	-3,939	-5.485
1998	-1,423,988	103.22	-1,379,566	270,561	-5,099	-7.101
1999	-1,525,347	104.77	-1,455,901	273,131	-5,330	-7.423

Sources:

1983-1999 - Survey of Current Business, July 2000, Table 2.

http://www.bea.doc.gov/bea/ai/0798iip.pdf

1981-1982 - Survey of Current Business, July 1996, Table 3,P.44.

1977-1980 - Survey of Current Business, June 1992, Table 3, P.49.

1973-1976 - Survey of Current Business, June 1988, Table 2,P.78.

1970-1971 - Survey of Current Business, June 1986, Table 2,P.28.

GDP Deflator - Economic Report of the President 2000, Statistical Table B-3.

Population - Economic Report of the President 2000.

Note: Net international Investment position of the United States is

with direct investment position at market value.

Table A10: Gini Coefficient for US, All Units

Year	Household Income Gini Coefficient	Family Income Gini Coefficient	Gini Ratios for Household Income 1971=1.00
1971	0.396	0.355	1.0000
1972	0.401	0.359	1.0126
1973	0.397	0.356	1.0025
1974	0.395	0.355	0.9975
1975	0.397	0.357	1.0025
1976	0.398	0.358	1.0051
1977	0.402	0.363	1.0152
1978	0.402	0.363	1.0152
1979	0.404	0.365	1.0202
1980	0.403	0.365	1.0177
1981	0.406	0.369	1.0253
1982	0.412	0.380	1.0404
1983	0.414	0.382	1.0455
1984	0.415	0.383	1.0480
1985	0.419	0.389	1.0581
1986	0.425	0.392	1.0732
1987	0.426	0.393	1.0758
1988	0.427	0.395	1.0783
1989	0.431	0.401	1.0884
1990	0.428	0.396	1.0808
1991	0.428	0.397	1.0808
1992	0.434	0.404	1.0960
1993	0.454	0.429	1.1465
1994	0.456	0.426	1.1515
1995	0.450	0.421	1.1364
1996	0.455	0.425	1.1490
1997	0.459	0.429	1.1591
1998	0.456	0.430	1.1515
1999	0.457	0.428	1.1540

Source:

US Census Bureau, www.census.gov

Historical Income Tables - Households (Table H-4) and

Historical Income Tables - Families (Table F-4)

Table A11: USA, All Persons, Poverty Intensity, 1970-1999

Years	LIS Rate	LIS Gap	EPI Rate	EPI Gap	Intensity	Index 1971=1.00
1971	17.95	34.81	*19.8*	*40.0*	0.0791	1.000
1972	17.95	34.81	*19.8*	*40.0*	0.0791	1.000
1973	17.95	34.81	*19.8*	*40.0*	0.0791	1.000
1974	**17.95**	**34.81**	*19.8*	*40.0*	0.0791	1.000
1975	17.92	34.77	*19.7*	*40.0*	0.0789	0.997
1976	17.88	34.74	*19.7*	*40.0*	0.0787	0.994
1977	17.85	34.71	*19.7*	*39.9*	0.0784	0.992
1978	17.81	34.67	*19.6*	*39.9*	0.0782	0.989
1979	**17.78**	**34.64**	*19.6*	*39.8*	0.0780	0.986
1980	17.96	34.80	19.9	40.4	0.0804	1.016
1981	18.15	34.97	20.4	40.8	0.0832	1.052
1982	18.33	35.13	21.1	42.2	0.0890	1.126
1983	18.51	35.29	21.6	42.2	0.0912	1.152
1984	18.69	35.45	21.3	42.1	0.0897	1.134
1985	18.87	35.62	21.2	41.9	0.0888	1.123
1986	**19.06**	**35.78**	21.3	42.5	0.0905	1.144
1987	18.99	35.61	21.6	42.4	0.0916	1.158
1988	18.93	35.45	21.4	42.1	0.0901	1.139
1989	18.86	35.28	21.5	41.1	0.0884	1.117
1990	18.80	35.11	21.1	41.9	0.0884	1.118
1991	**18.74**	**34.94**	21.6	42.1	0.0909	1.150
1992	18.87	35.54	22.0	42.5	0.0935	1.182
1993	19.01	36.15	22.1	42.8	0.0946	1.196
1994	**19.15**	**36.76**	21.9	42.5	0.0931	1.177
1995	18.74	35.68	21.5	41.2	0.0886	1.120
1996	18.34	34.63	21.7	41.3	0.0896	1.133
1997	**17.93**	**33.62**	21.7	41.7	0.0905	1.144
1998	17.93	33.62	21.8	41.6	0.0907	1.146
1999	17.93	33.62	21.5	40.6	0.0873	1.104

Sources: Data on Poverty rate are from LIS for 1971-1978 and Economic Policy Institute for the 1979-99 period

Note: an adjustment factor of 1.101 was applied to the pre-1979 rate estimate and 1.150 to the gap estimate to make LIS estimates consistent with the EPI estimates because of differences in definitions between the EPI and LIS estimates.

Table A12: Weights used for Economic Security Index

Year	Women & Children at Risk of Widowhood as % of total Pop	**Normalized Weight of women at risk of widowhood**	45-64 Pop as % of Total Pop	**Normalized Weight of 45-64 Pop at Risk of Elderly poverty**	% of Pop offected of risk for health	**Normalized Weight of Pop at risk for health**	WAP as % of total Pop	**Normalized Weight of WAP at risk of unemployment**	Total %
1971	39.99	**0.1754**	20.46	**0.0897**	100.00	**0.4386**	67.52	**0.2962**	227.97
1972	39.09	**0.1713**	20.44	**0.0896**	100.00	**0.4382**	68.67	**0.3009**	228.19
1973	38.10	**0.1672**	20.40	**0.0895**	100.00	**0.4388**	69.41	**0.3046**	227.91
1974	37.12	**0.1630**	20.35	**0.0894**	100.00	**0.4392**	70.20	**0.3083**	227.66
1975	36.01	**0.1585**	20.28	**0.0893**	100.00	**0.4401**	70.91	**0.3121**	227.20
1976	35.13	**0.1548**	20.18	**0.0889**	100.00	**0.4407**	71.62	**0.3156**	226.93
1977	34.11	**0.1507**	20.05	**0.0886**	100.00	**0.4418**	72.21	**0.3190**	226.37
1978	32.97	**0.1461**	19.90	**0.0882**	100.00	**0.4433**	72.74	**0.3224**	225.61
1979	32.13	**0.1427**	19.72	**0.0876**	100.00	**0.4442**	73.25	**0.3254**	225.11
1980	31.61	**0.1406**	19.54	**0.0869**	100.00	**0.4448**	73.66	**0.3277**	224.81
1981	31.54	**0.1403**	19.35	**0.0861**	100.00	**0.4447**	73.98	**0.3290**	224.87
1982	30.45	**0.1361**	19.15	**0.0856**	100.00	**0.4468**	74.19	**0.3315**	223.79
1983	30.05	**0.1345**	18.98	**0.0850**	100.00	**0.4477**	74.35	**0.3328**	223.38
1984	29.76	**0.1333**	18.85	**0.0844**	100.00	**0.4480**	74.63	**0.3343**	223.24
1985	29.24	**0.1313**	18.70	**0.0840**	100.00	**0.4491**	74.73	**0.3356**	222.67
1986	29.27	**0.1313**	18.56	**0.0833**	100.00	**0.4487**	75.04	**0.3367**	222.87
1987	28.83	**0.1295**	18.47	**0.0830**	100.00	**0.4493**	75.27	**0.3382**	222.57
1988	28.51	**0.1282**	18.56	**0.0834**	100.00	**0.4496**	75.35	**0.3388**	222.42
1989	28.60	**0.1285**	18.55	**0.0834**	100.00	**0.4494**	75.36	**0.3387**	222.51
1990	28.17	**0.1267**	18.52	**0.0833**	100.00	**0.4497**	75.68	**0.3403**	222.38
1991	27.81	**0.1253**	18.51	**0.0834**	100.00	**0.4507**	75.57	**0.3406**	221.89
1992	27.54	**0.1241**	18.93	**0.0853**	100.00	**0.4505**	75.50	**0.3401**	221.97
1993	27.57	**0.1240**	19.21	**0.0864**	100.00	**0.4499**	75.49	**0.3396**	222.27
1994	27.69	**0.1243**	19.53	**0.0877**	100.00	**0.4489**	75.52	**0.3391**	222.74
1995	27.73	**0.1243**	19.86	**0.0890**	100.00	**0.4483**	75.49	**0.3384**	223.08
1996	27.22	**0.1221**	20.23	**0.0907**	100.00	**0.4484**	75.56	**0.3388**	223.02
1997	27.05	**0.1210**	20.69	**0.0925**	100.00	**0.4474**	75.79	**0.3391**	223.53
1998	27.08	**0.1209**	21.17	**0.0944**	100.00	**0.4462**	75.85	**0.3385**	224.10
1999	26.71	**0.1190**	21.69	**0.0966**	100.00	**0.4455**	76.06	**0.3389**	224.45

Source: Married women with children under 18: http://www.census.gov/population/socdemo/hh-fam/htabFM-3.txt
Pop 45-64, WAP are from Economic Report of the President 2001,
Statistical Tables B-32, B-33 (http://w3.access.gpo.gov/usbudget/fy2001/erp.html#erp2).
Note: Married women with children under 18 includes both: women and children under 18.

Table A21: Greenhouse Gas Emissions Cost, United States

Year	US GDP, million of 1990 G-K Dollars)	World GDP, million of 1990 G-K Dollars)	US share in the world GDP, %	World CO2 Emission (millions of metric tones)	World Emission CO2 Cost, mill. of 1990$ ($20 per metric ton)	US share of World CO2 emission social cost (millions of 1990$)	Population, thousands	Emission cost per capita, 1996$
	A	B	C=A/B*100	D	E=D*20	F=C*E/100	G	H=F/G/0.8651
1971	3,178,106	14,380,257	22.10	15,664	313,273	69,235	207,661	385.39
1972	3,346,554	15,065,078	22.21	15,932	318,636	70,782	209,896	389.81
1973	3,536,622	16,059,177	22.02	**16,200**	324,000	71,353	211,909	389.22
1974	3,526,724	16,421,350	21.48	16,468	329,364	70,736	213,854	382.34
1975	3,516,825	16,657,212	21.11	16,736	334,727	70,671	215,973	378.25
1976	3,701,163	17,468,126	21.19	17,005	340,091	72,059	218,035	382.03
1977	3,868,829	18,172,272	21.29	17,273	345,455	73,546	220,239	386.01
1978	4,089,548	18,964,401	21.56	17,541	350,818	75,652	222,585	392.88
1979	4,228,647	19,636,220	21.53	17,809	356,182	76,704	225,055	393.97
1980	4,230,558	20,031,021	21.12	18,077	361,545	76,359	227,726	387.60
1981	4,336,141	20,410,793	21.24	18,345	366,909	77,947	229,966	391.81
1982	4,254,870	20,646,587	20.61	18,614	372,273	76,718	232,188	381.94
1983	4,433,129	21,240,764	20.87	18,882	377,636	78,816	234,307	388.83
1984	4,755,958	22,211,250	21.41	19,150	383,000	82,009	236,348	401.09
1985	4,940,383	22,978,964	21.50	19,418	388,364	83,497	238,466	404.74
1986	5,110,480	23,791,235	21.48	19,686	393,727	84,575	240,651	406.24
1987	5,290,129	24,657,761	21.45	19,955	399,091	85,622	242,804	407.63
1988	5,512,845	25,721,933	21.43	20,223	404,455	86,685	245,021	408.95
1989	5,703,521	26,542,996	21.49	20,491	409,818	88,061	247,342	411.55
1990	5,803,200	27,076,007	21.43	20,759	415,182	88,986	249,948	411.53
1991	5,790,784	27,407,016	21.13	21,027	420,545	88,856	252,639	406.56
1992	5,983,457	27,968,596	21.39	21,295	425,909	91,117	255,374	412.43
1993	6,124,987	28,555,388	21.45	21,564	431,273	92,506	258,083	414.33
1994	6,371,321	29,524,731	21.58	21,832	436,636	94,224	260,599	417.95
1995	6,544,370	30,527,151	21.44	**22,100**	442,000	94,755	263,044	416.40
1996	6,784,105	31,736,947	21.38	22,414	448,284	95,825	265,463	417.26
1997	7,089,655	32,987,130	21.49	22,733	454,657	97,716	268,008	421.45
1998	7,394,598	33,725,631	21.93	23,056	461,121	101,104	270,561	431.95
1999			21.93	23,384	467,676	102,561	273,131	434.06

Sources: Data on Greenhouse Gas emission in the World for 1973 and 1995 are from International Energy Agency
Data for the years between 1973 and 1995 were interpolated assuming a constant linear growth trend over the period.
This trend was extrapolated backwards and forwards outside. Data on GDP for the US and the World are from Monitoring the World Economy: A Millenial Perspective, Angus Maddison, OECD, 2001, P.275, 329.
Data for 1999 GDP share for the US assumed to be equal to data for 1998.
Recalculation into 1996$ was made with GDP IPI 1990=86.51 1996=100, Source: Economic Report of the President 2000.

Table A29: Imputed Value Of Leisure (With Unemployment Adjustment)

	Average annual number of hours worked per person	Employment over Working Age Population Ratio, %	Unemployed (thousands)	WAP (thousands)	Average Annual Number of Hours of Unemployment per Person Aged 15-64.	Annual Number of Hours Worked per Person Aged 15-64 (WAP) Adjusted for Unemployment.	General Government Current Receipts, as a Percentage of Nominal GDP.	Average Compensation per Employed Person per Hour, 1982 constant $
	A	B	C	D	E=(A*C)/D	F=(A*B)/100+E	G	H
1971	1,968.8	56.6	5,016	140,216	70.4	1,184.8	17.3	8.2
1972	1,974.1	57.0	4,882	144,126	66.9	1,192.1	17.6	8.5
1973	1,968.8	57.8	4,365	147,096	58.4	1,196.9	17.6	8.6
1974	1,947.4	57.8	5,156	150,120	66.9	1,192.8	18.3	8.3
1975	1,926.1	56.1	7,929	153,153	99.7	1,179.3	17.9	8.1
1976	1,926.1	56.8	7,406	156,150	91.4	1,186.1	17.2	8.2
1977	1,920.7	57.9	6,991	159,033	84.4	1,195.8	18.0	8.4
1978	1,910.1	59.3	6,202	161,910	73.2	1,206.3	18.0	8.4
1979	1,904.7	59.9	6,137	164,863	70.9	1,212.7	18.5	8.2
1980	1,883.4	59.2	7,637	167,745	85.7	1,200.7	18.9	7.8
1981	1,867.0	59.0	8,273	170,130	90.8	1,192.5	19.6	7.7
1982	1,862.6	57.8	10,678	172,271	115.5	1,191.5	19.1	7.7
1983	1,881.7	57.9	10,717	174,215	115.8	1,204.9	17.4	7.8
1984	1,910.5	59.5	8,539	176,383	92.5	1,229.9	17.3	7.8
1985	1,918.4	60.1	8,312	178,206	89.5	1,243.0	17.7	7.8
1986	1,926.7	60.7	8,237	180,587	87.9	1,257.2	17.5	7.8
1987	1,921.4	61.5	7,425	182,753	78.1	1,260.2	18.4	7.7
1988	1,944.9	62.3	6,701	184,613	70.6	1,281.8	18.1	7.7
1989	1,950.9	63.0	6,528	186,393	68.3	1,296.5	18.3	7.6
1990	1,942.6	62.8	7,047	189,164	72.4	1,292.3	18.0	7.5
1991	1,936.0	61.7	8,628	190,925	87.5	1,281.2	17.8	7.5
1992	1,918.9	61.5	9,613	192,805	95.7	1,275.0	17.5	7.4
1993	1,945.9	61.7	8,940	194,838	89.3	1,290.3	17.6	7.4
1994	1,945.3	62.5	7,996	196,814	79.0	1,295.4	18.1	7.4
1995	1,952.3	62.9	7,404	198,584	72.8	1,300.7	18.5	7.4
1996	1,950.6	63.2	7,236	200,591	70.4	1,302.5	18.9	7.4
1997	1,965.9	63.8	6,739	203,133	65.2	1,319.1	19.3	7.6
1998	1,956.8	64.1	6,210	205,220	59.2	1,312.7	19.9	7.8
1999	1,975.8	64.3	5,880	207,753	55.9	1,325.4	20.0	7.9

Sources: Economic Report of the President 2000, Statistical Tables B-3, B-32, B-33, B-45, B-77.

GDP implicit price deflator: 1996=100, 1982=66.51.

Note: Annual number of hours worked per person is average weekly hours worked per person multiplied by 52.

Table A29: Imputed Value Of Leisure (With Unemployment Adjustment)

	Average After Tax Compensation per Employed Person per Hour, 1982 constant $	Average Annual Number of Hours of Leisure Relative to the 1971 benchmark year adjusted for unemployment	Imputed Value of Leisure per Person Aged 15-64 Adjusted for Unemployment, 1982 constant $	WAP over Total Population Ratio, %	Imputed Value of Leisure per Capita Adjusted for Unemployment, 1996 constant $.
	I=1-(G/100)*H	J	K=H*I	L	M=L*K/100
1971	6.8	0.0	0.0	67.5	0.0
1972	7.0	-7.3	-51.3	68.7	-53.0
1973	7.0	-12.1	-85.4	69.4	-89.1
1974	6.8	-8.0	-54.1	70.2	-57.1
1975	6.7	5.5	36.6	70.9	39.0
1976	6.8	-1.3	-8.7	71.6	-9.4
1977	6.9	-11.0	-75.2	72.2	-81.6
1978	6.9	-21.4	-147.7	72.7	-161.5
1979	6.7	-27.8	-185.4	73.3	-204.2
1980	6.3	-15.9	-100.2	73.7	-111.0
1981	6.2	-7.7	-47.7	74.0	-53.1
1982	6.2	-6.7	-41.7	74.2	-46.5
1983	6.4	-20.0	-129.0	74.4	-144.2
1984	6.5	-45.0	-290.5	74.6	-326.0
1985	6.4	-58.1	-371.8	74.7	-417.7
1986	6.4	-72.4	-466.3	75.0	-526.1
1987	6.3	-75.4	-475.6	75.3	-538.2
1988	6.3	-97.0	-610.7	75.3	-691.8
1989	6.2	-111.7	-697.1	75.4	-789.8
1990	6.2	-107.5	-662.8	75.7	-754.2
1991	6.1	-96.3	-590.0	75.6	-670.4
1992	6.1	-90.2	-551.1	75.5	-625.6
1993	6.1	-105.5	-642.6	75.5	-729.4
1994	6.1	-110.5	-669.9	75.5	-760.7
1995	6.0	-115.9	-697.9	75.5	-792.2
1996	6.0	-117.7	-709.2	75.6	-805.7
1997	6.1	-134.3	-818.0	75.8	-932.1
1998	6.2	-127.9	-794.0	75.8	-905.6
1999	6.3	-140.6	-884.2	76.1	-1011.2

Figure 1
Trends in Per Capita Consumption in the United States and Canada

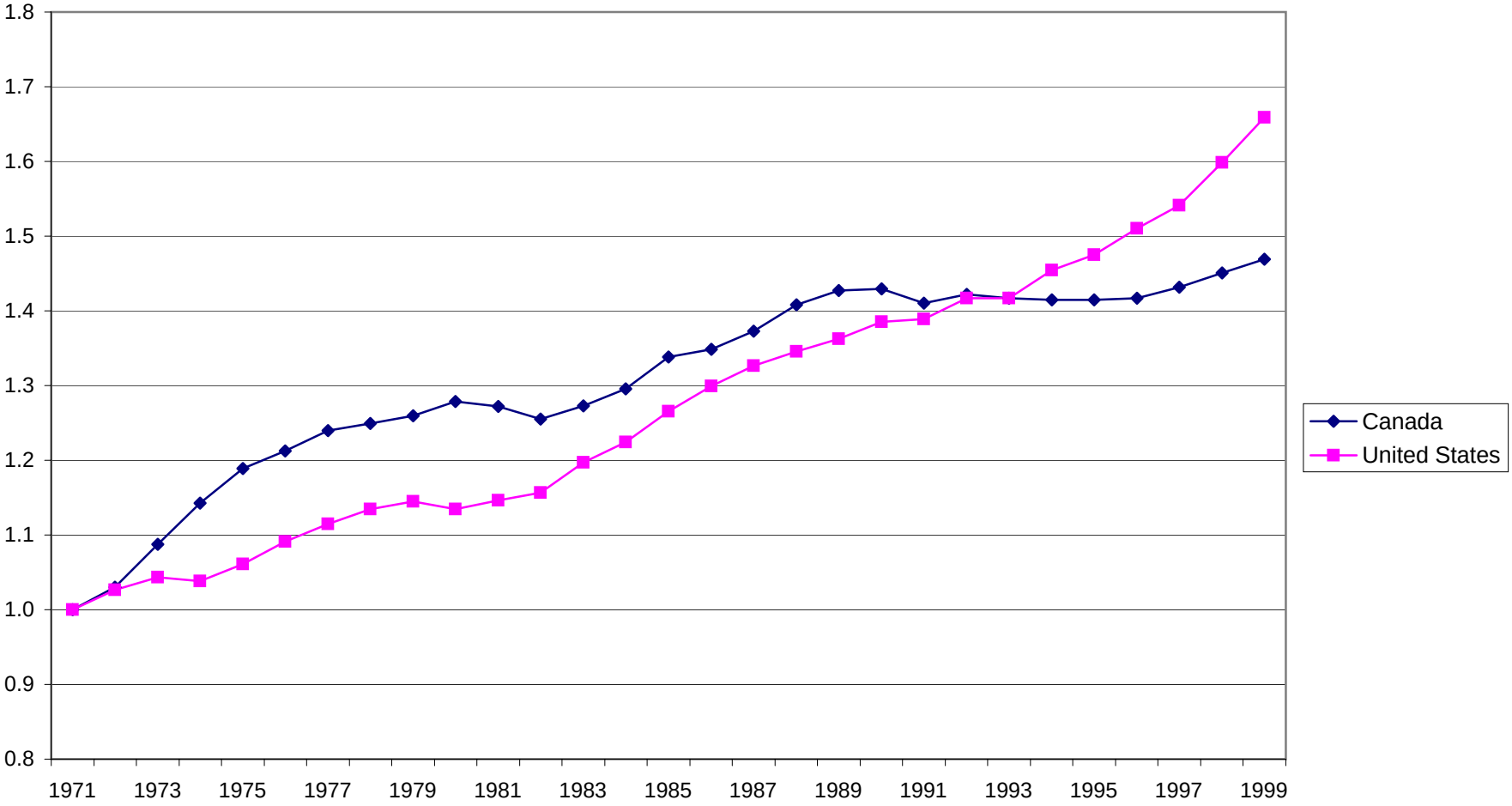


Figure 2
Trends in Per Capita Wealth Accumulation in the United States and Canada

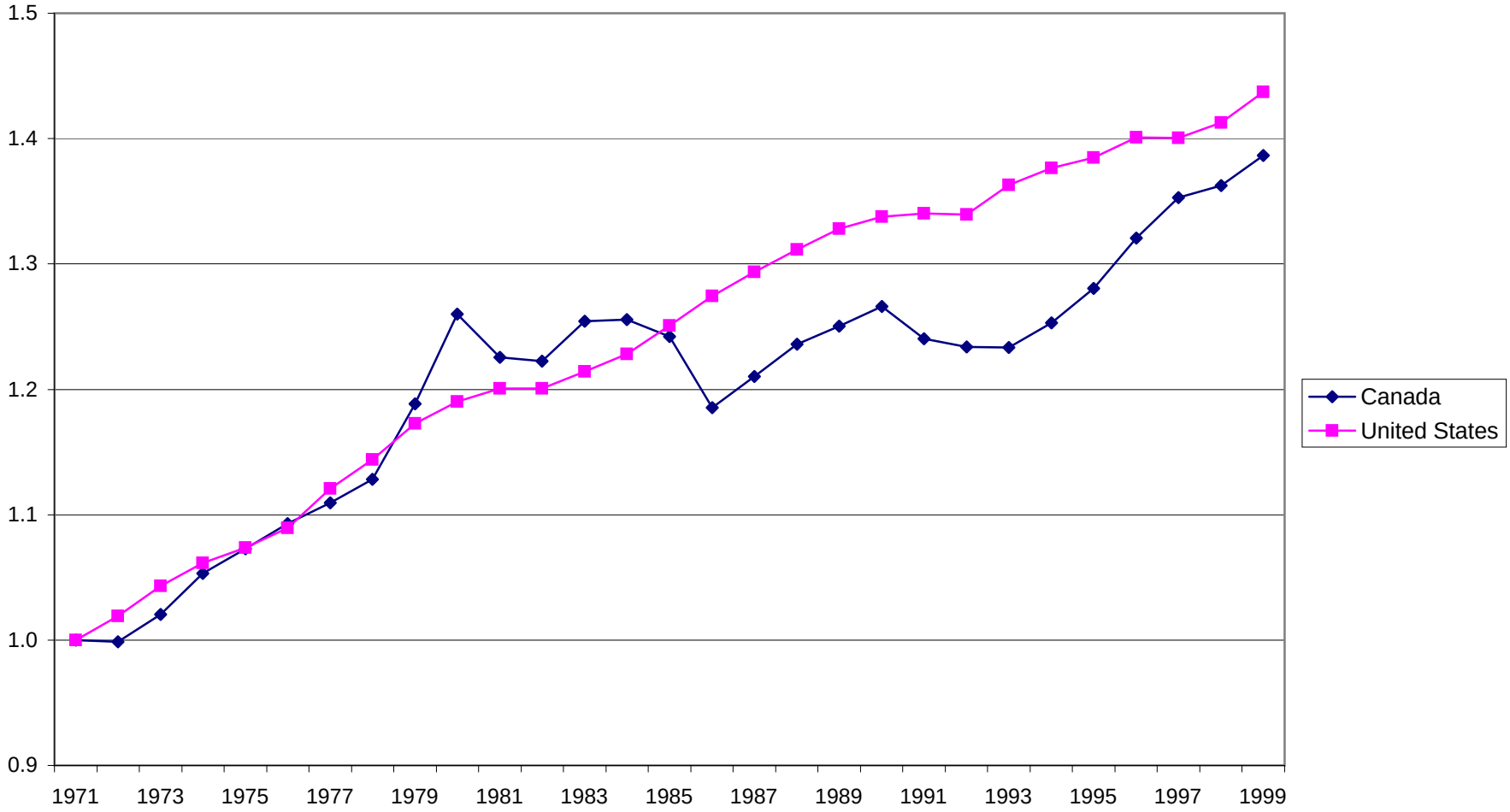


Figure 3
Trends in Income Equality in the United States and Canada

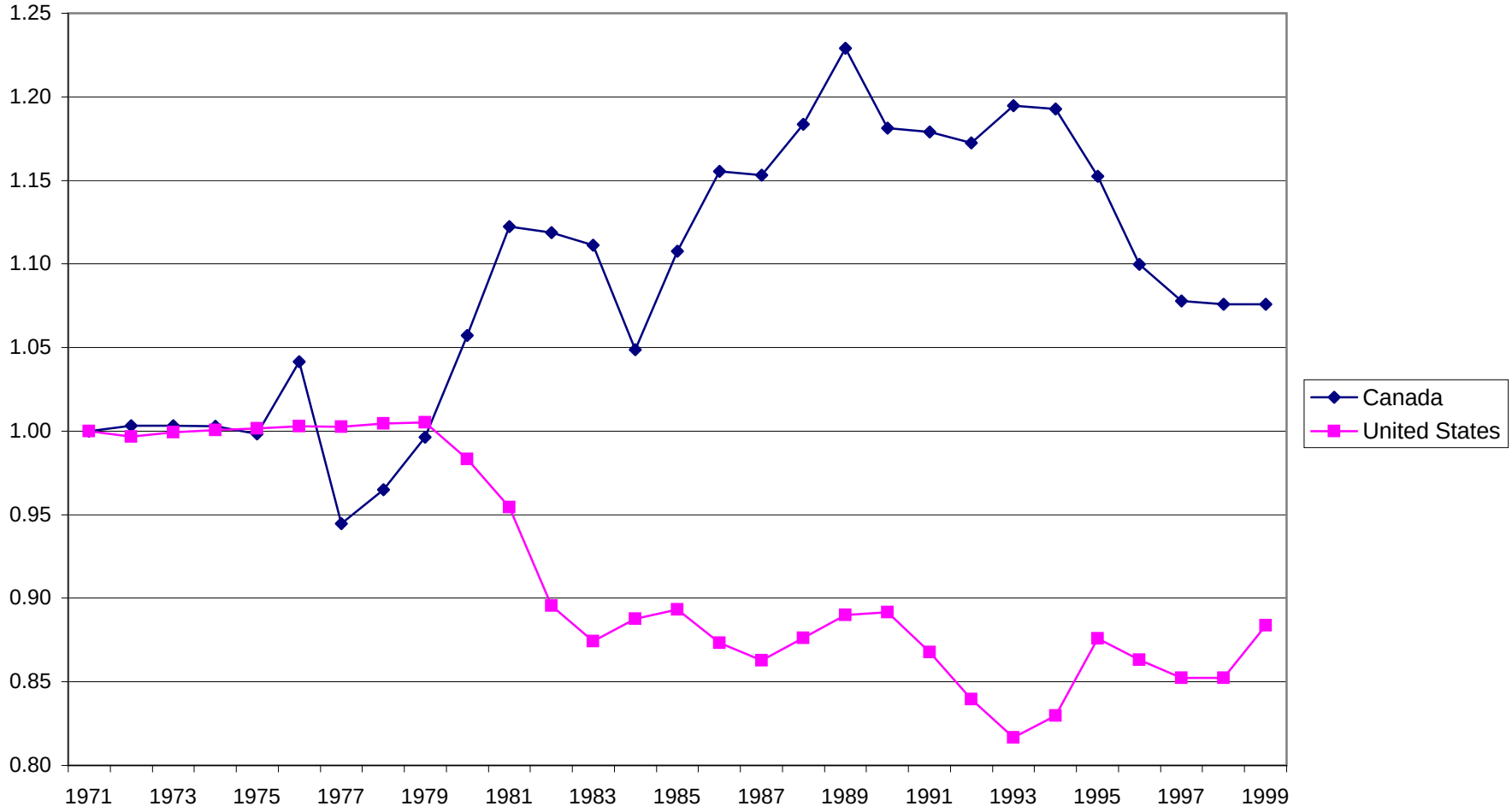


Figure 4
Trends in Economic Security in the United States and Canada

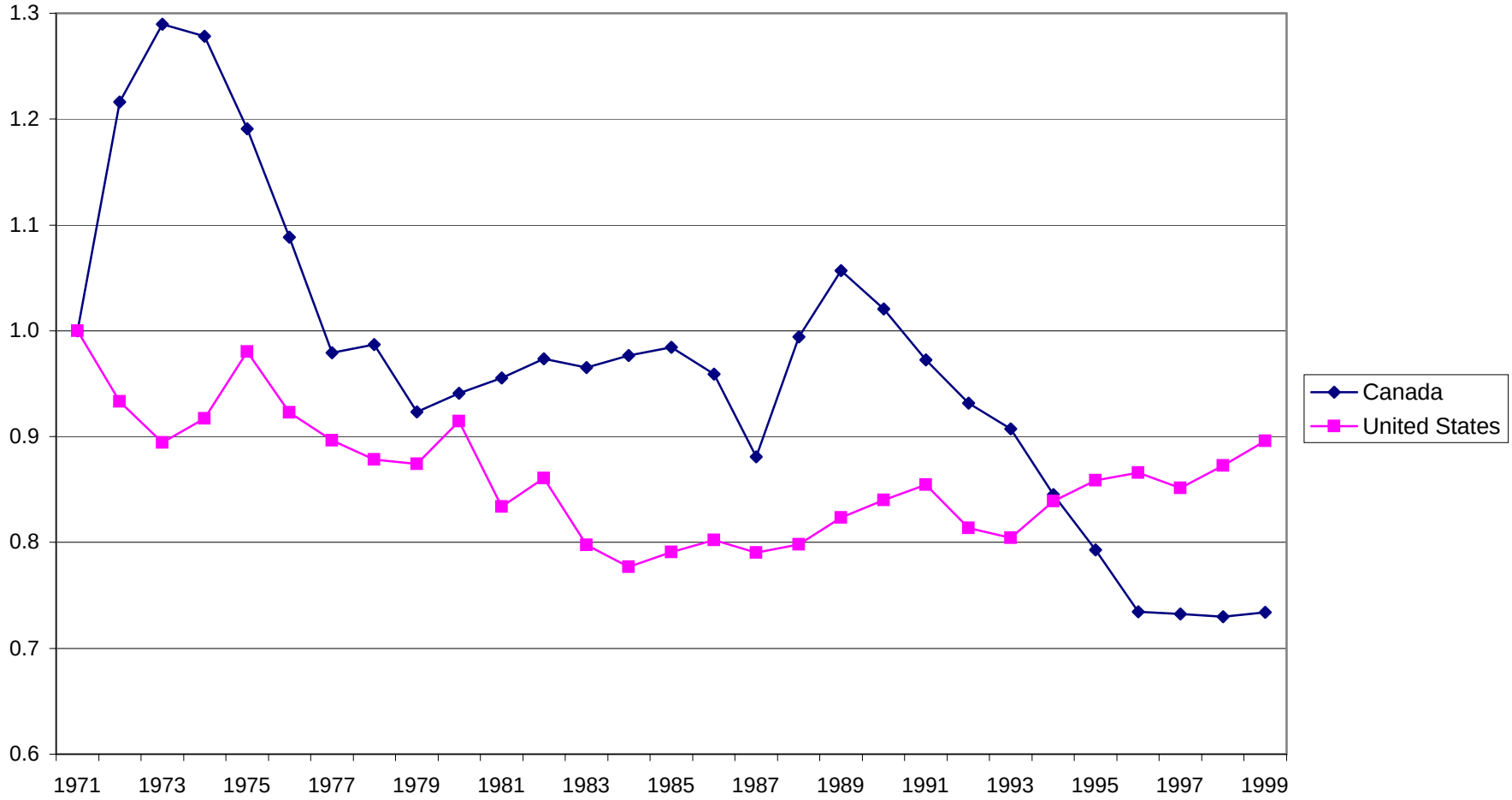


Figure 5
Trends in Economic Well-Being in the United States and Canada
(Equal Weighting of Consumption, Accumulation, Distribution and Economic Security)

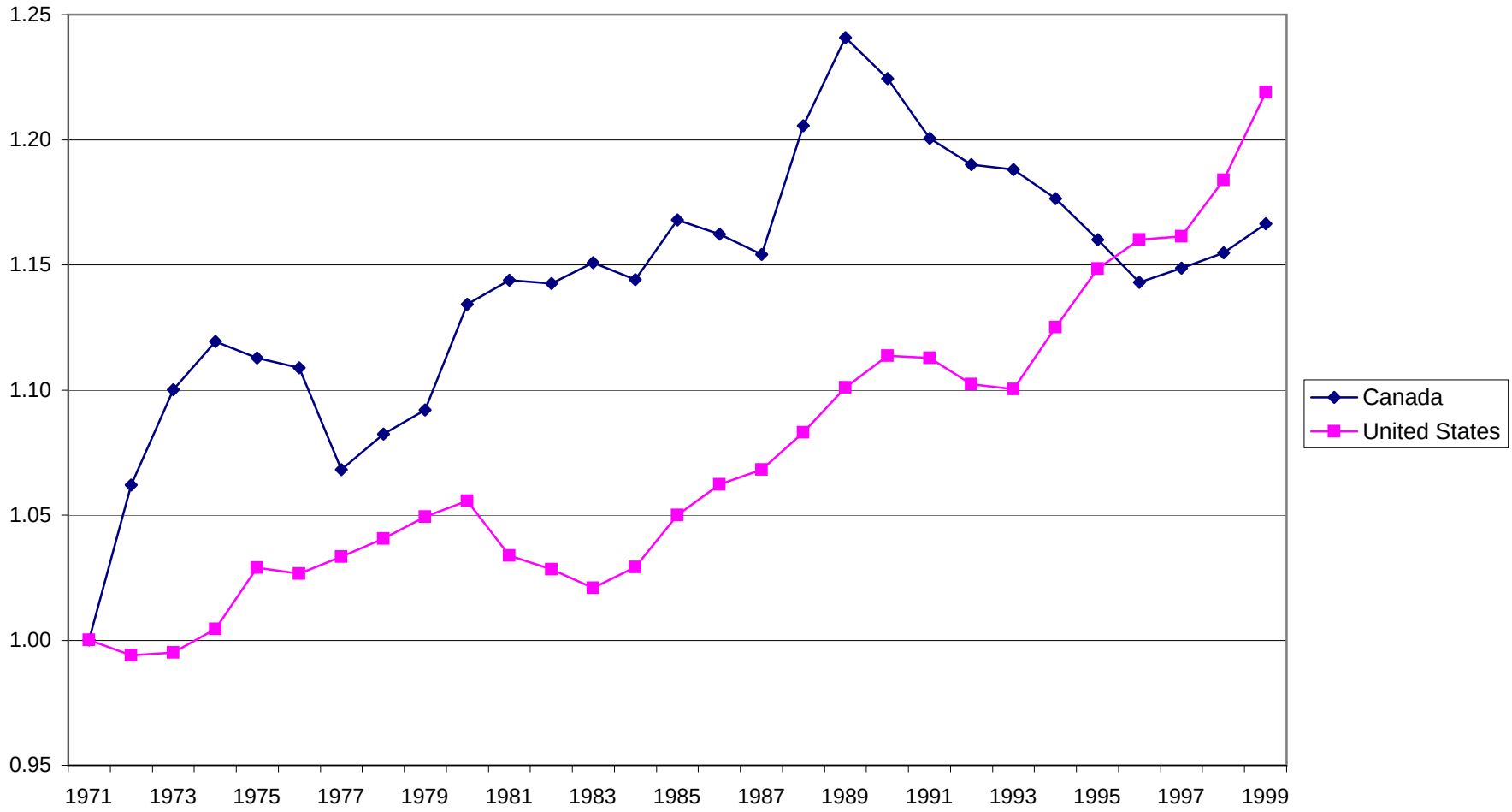
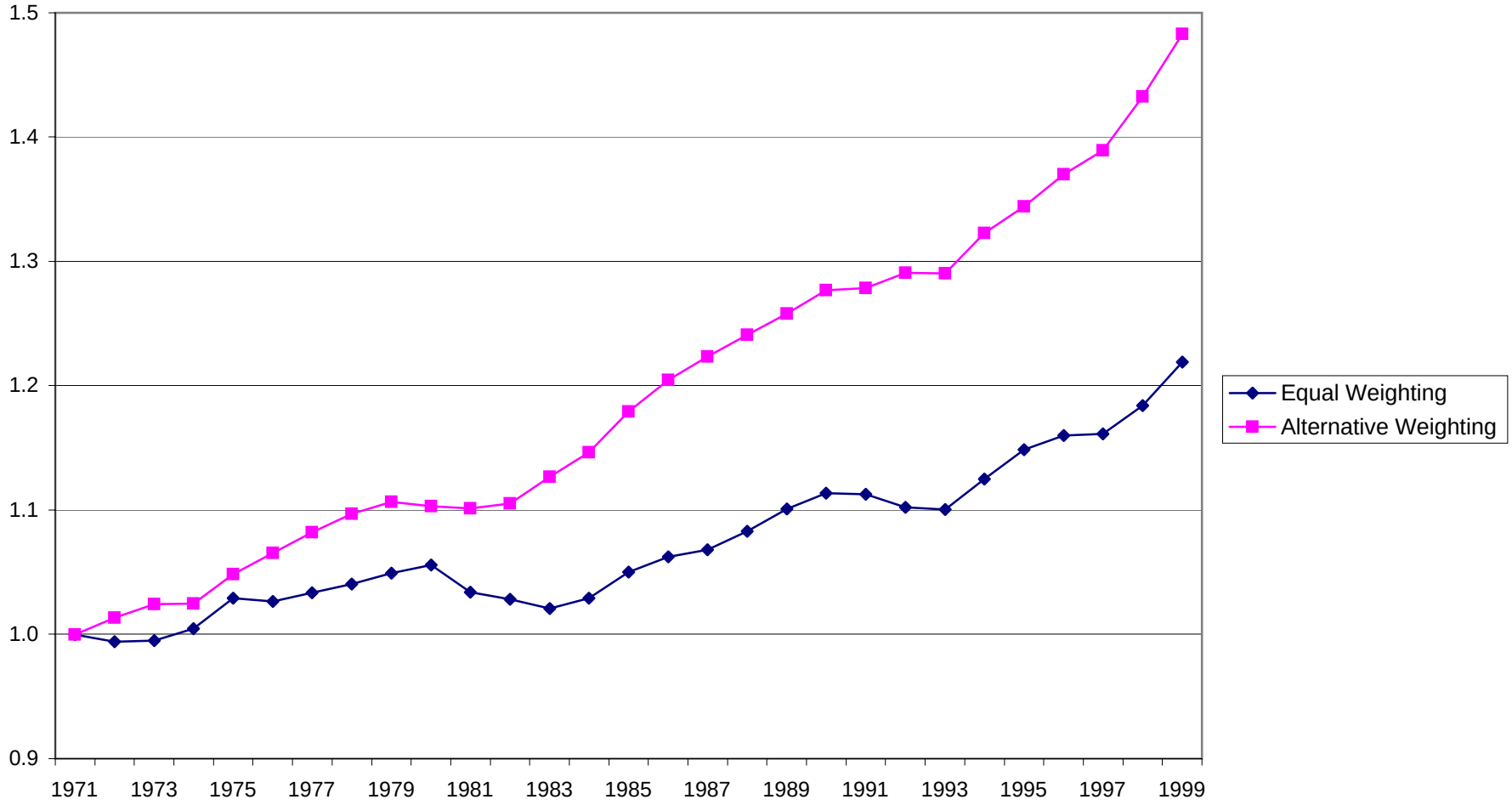
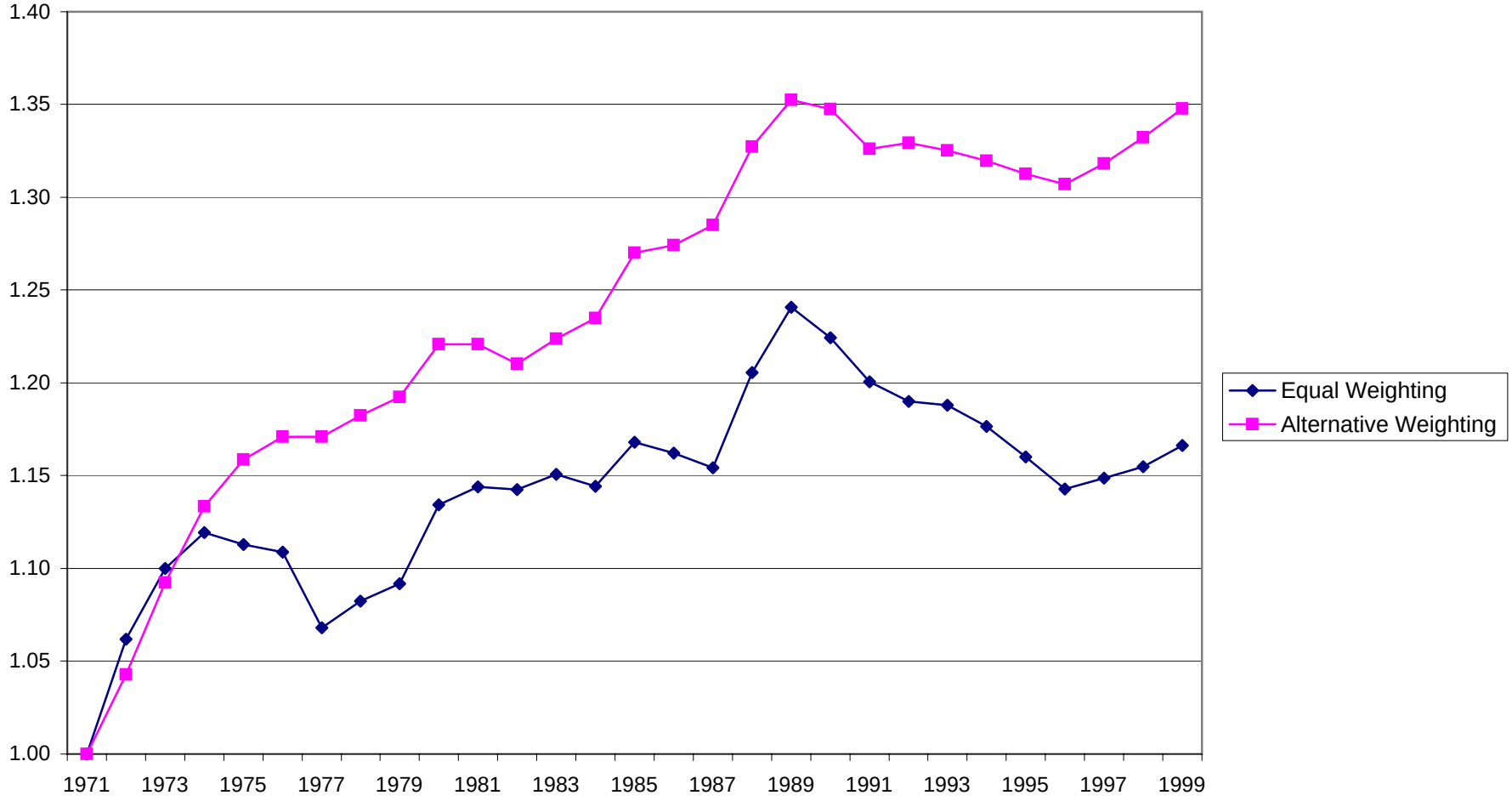


Figure 6
Trends in Economic Well-Being in the United States: Equal Weighting and Alternative Weighting



Note: Alternative Weighting = 0.7*Consumption + 0.1*Wealth + 0.1*Equality + 0.1*Security

Figure 7
Trends in Economic Well-Being in Canada: Equal Weighting and Alternative Weighting



Note: Alternative Weighting = 0.7*Consumption + 0.1*Wealth + 0.1*Equality + 0.1*Security

Figure 8
Trends in Economic Well-Being (Equal Weighting) and GDP Per Capita in the United States and Canada