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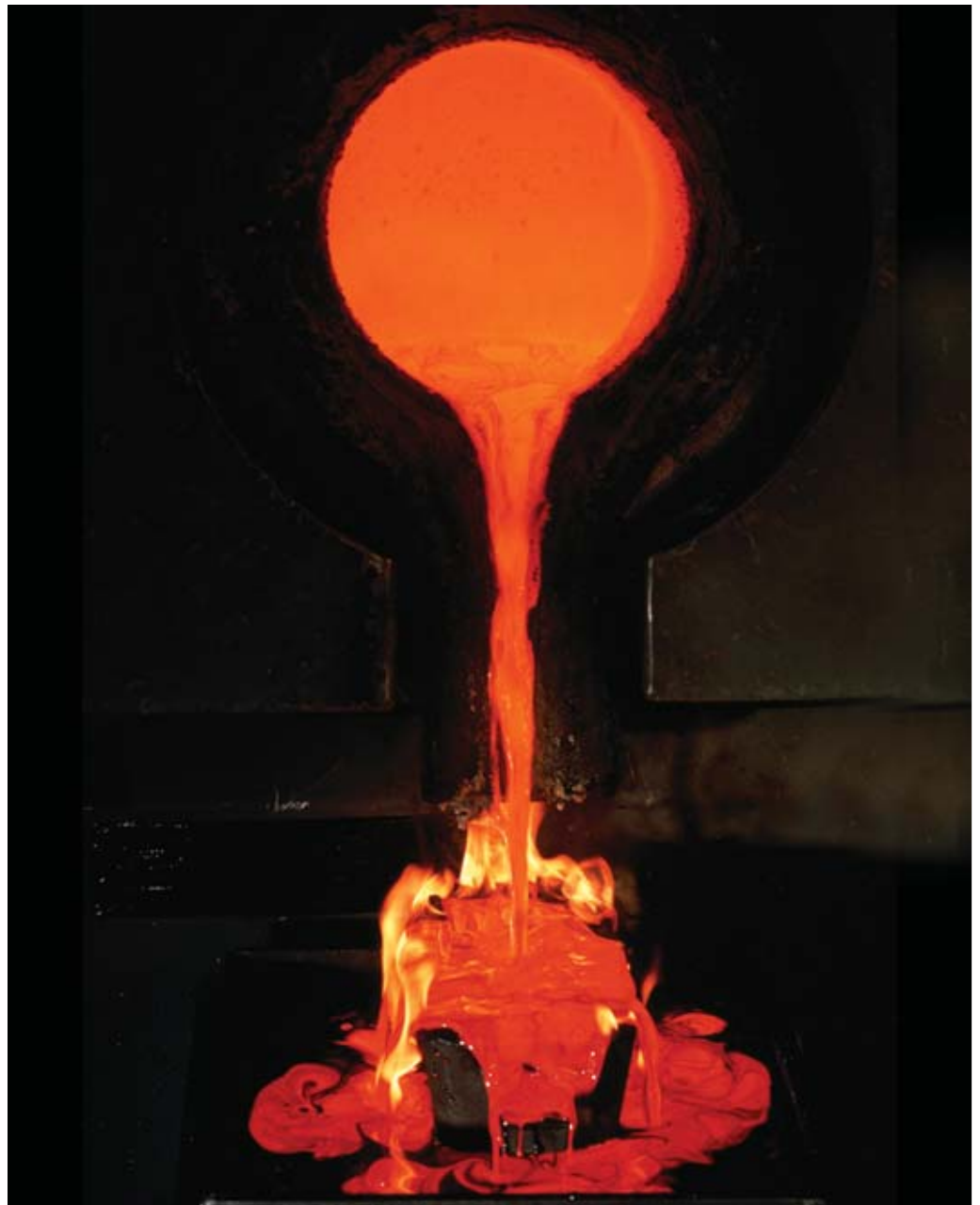
ON LABOUR AND INCOME

SEPTEMBER 2004

Vol. 5, No. 9

■ THE SANDWICH
GENERATION

■ WEALTH INEQUALITY
BY PROVINCE



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.	not available for a specific reference period
...	not applicable
p	preliminary
r	revised
x	confidential
E	use with caution
F	too unreliable to be published

Highlights

In this issue

■ The sandwich generation

- In 2002, about 27% of those aged 45 to 64 with unmarried children in the home were also caring for a senior. More than 8 in 10 of these individuals worked, causing some to reduce or shift their hours or to lose income.
- Sandwiched workers were more likely to feel generally stressed—about 70% compared with about 61% of workers with no child-care or elder-care responsibilities. However, almost all (95%) felt satisfied with life in general—about the same percentage as those with fewer caregiving responsibilities.
- Women were more likely than men to be sandwiched and, on average, provided more hours of elder care per month (29 versus 13).
- The effects of providing elder care increase with time spent. For example, one-half of those spending more than eight hours per month (high-intensity caregivers) had to change their social activities, and over a third had to change their work schedule.

■ Wealth inequality by province

- In all provinces, wealth was more unequally distributed than income. In 1999, families in the top income decile held the most wealth, ranging from 42% in Nova Scotia to 52% in Alberta. In seven provinces, families in the top income decile had mean wealth of more than one million dollars.
- Quebec, Ontario, Alberta and British Columbia, with 85% of all families and 88% of total family wealth, accounted for 93% of wealth inequality in Canada.
- In six provinces, homeownership status explained more of provincial wealth inequality than did income; the reverse was true in Newfoundland and Labrador, New Brunswick, Quebec, and Alberta.
- The relative contribution to total wealth inequality of families in rented dwellings or those with incomes under \$25,000 was almost insignificant. On the other hand, more than half of total wealth inequality in Ontario and British Columbia was accounted for by families with incomes of \$100,000 or more.
- Among families in most of the eastern provinces, employer pension plan coverage played an important role in accounting for wealth inequality, whereas for families in the western provinces, business ownership drove inequality.

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The sandwich generation

Cara Williams

For many people, balancing home and work can be a chore. Those with children and working full time may find life particularly hectic—scheduling children’s activities, planning for family time, and still allowing time for themselves. For some, life is further complicated by providing care to aging parents or other relatives. These are the sandwich generation—individuals caught between the often conflicting demands of caring for children and caring for seniors.

While the overall number in the sandwich generation is relatively small, the ranks are likely to grow. One reason is the aging of the baby boomers, which will result in a much larger proportion of seniors in the population. Indeed, population projections indicate that by 2026, 1 in 5 Canadians will be 65 or older, up from 1 in 8 in 2001. Another factor is lower fertility rates, which may mean fewer adults to care for the elderly. A third is the delay in family formation (marriage and childbirth), resulting in older family members requiring care when children are still part of the household. Indeed, delayed marriage, postponement of children, and decreased fertility rates coupled with increased life expect-

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ancy means that the average married couple may have more living parents than children (Preston 1984).

The personal and financial sacrifices made by members of the sandwich generation have been highlighted in the media (Anderson 1999; Immen 2004; Kleiman 2002). At the same time, some analysts have indicated that the sandwich generation is small and that the negative consequences are overlaid (Fredriksen and Scharlach 1999). Others think that most care of seniors by family members is better defined as ‘helping’ and that intensive caregiving is very limited (Rosenthal and Stone 1999). To date, however, little empirical data exist for Canada. This article uses the 2002 General Social Survey (GSS) to examine care of the elderly by persons aged 45 to 64 with children still at home. The analysis focuses on types of care, time spent, effects on the individual from both a work and personal standpoint, and resources that could benefit caregivers (see *Data source and definitions*).

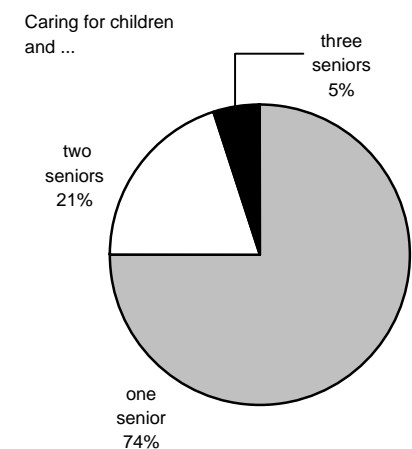
Balancing care of children and seniors is not a new phenomenon

Providing care to elderly relatives is not new, and until quite recently families played a pivotal role in this regard (Ward-Griffin and Marshall 2003). It was not unusual to find three generations in one household,

with the primary caregiving done by the middle-aged woman in the home. While some striking similarities exist between past and present caregiving, one crucial difference is evident: Today, the majority of working-age, non-senior women engage in paid work and are not full-time homemakers. However, while parents have seen child-care services evolve, little formal support has been established for the growing number of middle-aged men and women caring for seniors.¹

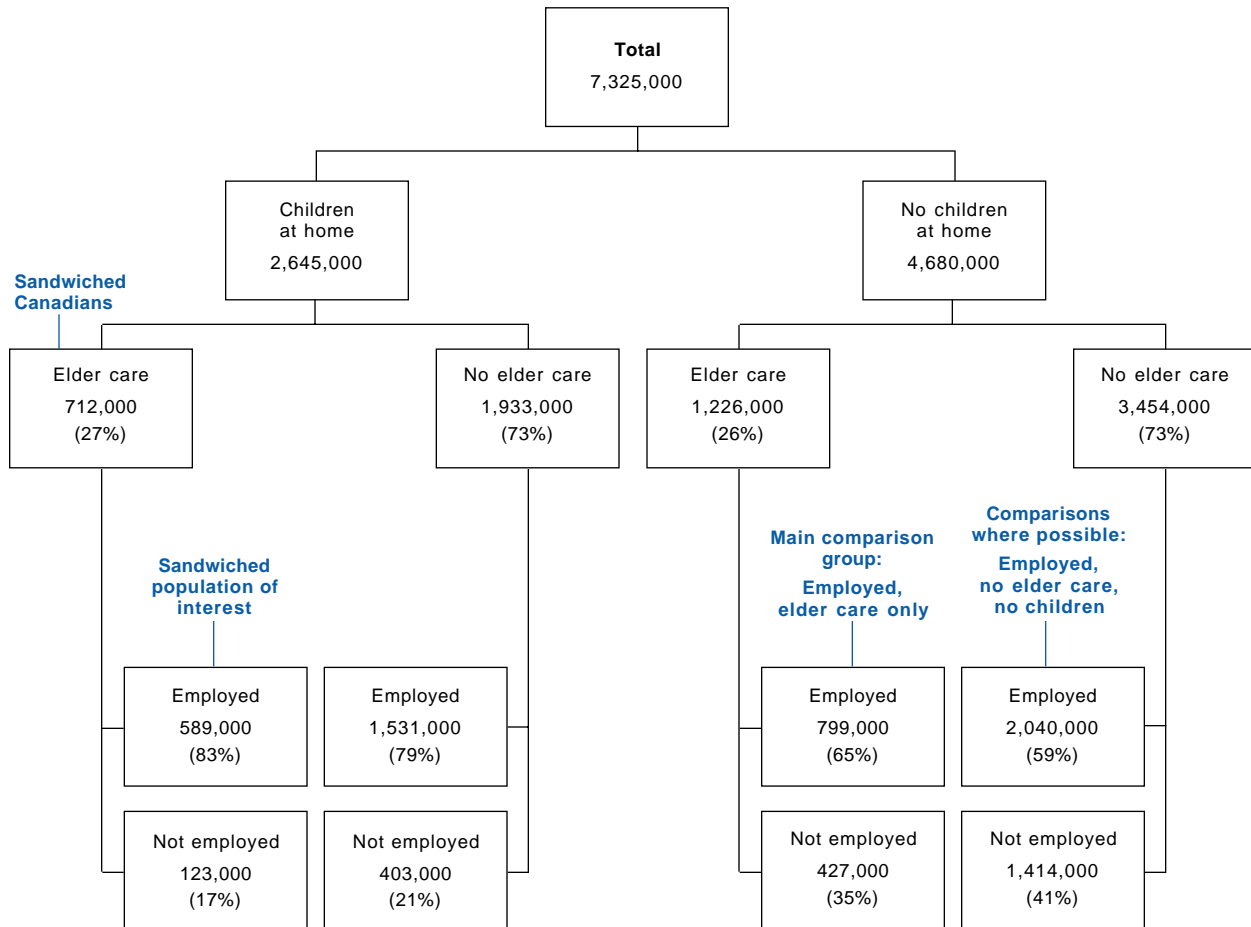
So how are families coping? Research has shown that women spend more time on child care and housework, while men spend more time at paid

Chart: One-quarter of those sandwiched care for more than one senior.



Source: General Social Survey, 2002

Figure: Population aged 45 to 64



Source: General Social Survey, 2002
 Note: Percentages may not add to 100 due to rounding.

work. But what happens when elder care enters the mix? Who is more likely to be on call, men or women? Or is the responsibility shared?

Almost 3 in 10 are sandwiched

According to the 2002 GSS, about 2.6 million people between 45 and 64 had children under 25 living with them. Of these, about 302,000 were lone parents and the remainder lived with a spouse. About 27% also performed some type of elder care. These individuals make up the sandwich generation (Figure).

The vast majority of individuals provided elder care for their parents or parents-in-law. About 25% was directed toward other relatives, friends, neighbours or co-workers (data not shown).

Some sandwiches are thinly spread

For some, caring for both children and elderly relatives can be stressful, particularly for those with young or multiple children. The situation may become even more complicated with more than one elderly person to care for (Chart).

Table 1: Effects of elder care on health and well-being

	Employed		
	Sandwiched	Elders only	Neither
Overall health		%	
Excellent/very good	74.3	73.5	73.4
Good	21.7	21.2	20.9
Fair/poor	4.0	5.1	5.0
Stress level			
Very/somewhat	70.1	64.1	61.0
Not very	21.3	25.4	26.3
Not at all	7.2	9.9	10.2
Don't know/no opinion	F	F	F
Job, family balance			
Very satisfied	21.0	28.1	28.5
Satisfied	60.8	56.9	56.7
Neither/no opinion	4.8	5.1	4.4
Dissatisfied	10.7	7.8	8.0
Very dissatisfied	F	F	F
Satisfaction with life			
Very satisfied	34.4	32.2	29.2
Satisfied	60.5	62.4	64.6
No opinion	F	F	F
Not very satisfied	3.4 ^E	4.0	2.9
Not at all satisfied	F	F	F

Source: General Social Survey, 2002

Notes: Percentages may not add to 100 due to some non-response. Shading indicates significant difference from the sandwiched group.

The vast majority of those with children and caring for an elderly person were employed—more than 8 in 10 stated that their main activity in the last 12 months was working. This compares with only 65% of individuals who provided elder care but had no children at home. Balancing work and family can be tough. However, the GSS showed that most people (82%) who worked while providing both child care and elder care were generally satisfied with the balance they had struck (Table 1).

Caring for an elderly person could lead to a change in work hours, refusal of a job offer, or a reduction in income. About 1 in 7 sandwiched workers reduced their hours over the previous 12 months, 20% shifted their work hours, and 10% lost income (Table 2).

Sandwiched workers have been portrayed as unable to meet their other responsibilities because of caring for a senior (Immen 2004). However, results here show that only slightly more than 1 in 10 workers aged

45 to 64 who were caring for an elderly person, either with or without children at home, had difficulty meeting their other responsibilities.

Types of care

The 2002 GSS looked at the number of hours spent per month on four elder-care activities: care inside the home (housework, meal preparation), care outside the home (yard work, outside home maintenance), transportation (driving to appointments, for groceries), and personal care (bathing, dressing). The survey found that although the incidence of providing care was similar, sandwiched workers spent an average of 19.6 hours per month on these activities while those with no children at home spent 26.4 hours—almost 7 hours more (Table 3). The two groups spent a similar amount of time on the job—41.7 hours per week for sandwiched workers and 40.8 for workers with no children at home.

Intensity of care

While two caregivers may spend similar amounts of time helping a senior, the tasks may differ. For example, one care receiver may need help only with outside chores such as mowing the lawn, while another may require assistance with daily living, such as bathing, dressing or feeding. Hours spent provides an indicator of intensity. Sandwiched workers spending 8 hours or less per month on elder care can be considered low-intensity caregivers, while those spending more can be considered high-intensity caregivers. Effects on the individual differ significantly based on these groupings.

Table 2: Work-related effects

	Employed	
	Sandwiched	Elders only
		%
Work hours shifted	20.2	23.0
Work hours reduced	15.5	18.4
Income reduced	10.2	9.1

Source: General Social Survey, 2002

Table 3: Incidence and time spent caring for seniors

	Employed					
	Sandwiched			Elders only		
	Both sexes	Men	Women	Both sexes	Men	Women
	%					
In-home care	36.2	35.4	64.6	39.4	34.2	65.8
Outside chores	43.6	69.0	31.0	34.7	67.5	32.5
Transportation assistance	33.3	64.6	35.4	31.1	53.9	46.1
Personal care	15.5	21.5	78.5	15.6	29.8	70.2
	hours					
Average time per month	19.6	12.5	29.0	26.4	19.7	33.1
In-home care	25.1	15.1	30.6	31.6	21.9	36.6
Outside chores	6.5	6.9	5.7	11.7	12.3	10.4
Transportation assistance	8.0	7.8	8.3	7.1	7.5	6.6
Personal care	13.0	12.6	13.1	17.5	17.9	17.4

Source: General Social Survey, 2002

Notes: Percentages will not add to 100 due to multiple responses. Shading indicates significant difference.

about 32%. The amount of time devoted to elder care also varied by sex. Working women with children at home and caring for an older person spent twice as many hours per month as their male counterparts (29 versus 13). This may be due in part to the type of care performed. For example, outside home maintenance was most often done by men (69%). The same was true for transportation assistance—65% was done by men. Conversely, women were more likely than men to provide personal care (79% versus 22%), and in-home care such as food preparation and clean-up (65%). This pattern held true for those who provided elder care only (Table 3).

Not surprisingly, those in the high-intensity group were more likely to experience health effects. Indeed, 76% felt stressed compared with 67% of their low-intensity counterparts (Table 4). About 9% of the low-intensity group had their sleep patterns affected, and 7% their general health, compared with 22% and 23% respectively in the high-intensity group (Table 5). About one-half of those in the high-intensity group had to change their social activities, and 43% their holiday plans. These individuals were also much more likely than their low-intensity counterparts to feel constantly stressed (20% versus 9%).

The high-intensity group were also much more likely to experience work-related problems. They were three times as likely to shift their work hours, and more than twice as likely to reduce their work hours or to experience a reduction in income.

Women more involved in caregiving

Women shoulder much of the child-care responsibility within two-parent households, even when both parents are in the labour force (Silver 2000). This also holds true for elder care, both in terms of the likelihood of providing care and in performing the most intensive tasks such as bathing, dressing and cooking (Ward and Spitze 1998; Marks 1998).

Of the approximately 1.3 million men aged 45 to 64 with unmarried children at home, about 25% were engaged in elder care. For women, the percentage was

Table 4: Effects of caring for seniors by intensity

	Employed and sandwiched		
	Total	Low intensity*	High intensity*
	%		
Health			
Excellent/very good	74.3	75.7	71.7
Good	21.7	20.8	23.4
Fair/poor	4.0	3.5 ^E	4.9 ^E
Stress			
Very/somewhat	70.1	66.7	76.3
Not very	21.3	22.6	18.8
Not at all	7.2	8.6 ^E	4.6 ^E
Don't know/no opinion	F	F	F
Job, family balance			
Very satisfied	21.0	22.9	17.8
Satisfied	60.8	60.7	61.0
Neither/no opinion	4.8	4.7 ^E	5.4 ^E
Dissatisfied	10.7	9.9	12.3
Very dissatisfied	F	F	F
Satisfaction with life			
Very satisfied	34.4	37.9	28.1
Satisfied	60.5	56.5	67.9
No opinion	F	F	F
Dissatisfied	3.4 ^E	3.9 ^E	F
Very dissatisfied	F	F	F

Source: General Social Survey, 2002

* Low intensity: 8 hours or less of elder care per month; high intensity: more than 8 hours per month.

Notes: Percentages may not add to 100 due to some non-response. Shading indicates significant difference from the low-intensity, sandwiched group.

Table 5: Effects on personal life for employed, sandwiched 45 to 64 year-olds.

	Low intensity*	High intensity*
Almost always feel		%
No time for self	5.4 ^E	15.5 ^E
Stressed between helping others and work or family responsibilities	8.8 ^E	19.5
Helping someone is giving back what you received from them	50.4	48.4
Angry when helping person	F	F
Helping is giving back what life has given you	60.2	64.7
Wish someone else would take over helping	F	F
Relationship with senior strengthened	69.0	71.5
Should be doing more	24.6	22.2
Could do a better job	10.8	9.9 ^E
Caregiving has resulted in		
Affected health	6.6 ^E	22.6
Changed sleep patterns	8.5 ^E	21.7
Extra expenses	32.2	55.1
Change in social activities	27.6	49.9
Change in holidays	16.9	42.6
Postponement of education	F	F
Care receiver moving closer	6.5 ^E	10.4 ^E
Caregiver moving in with care receiver	F	5.9 ^E
Effects on work		
Promotion turned down	F	F
Work hours shifted	11.4	35.4
Work hours reduced	9.6	25.6
Income reduced	6.4 ^E	16.8
Overall burden		
None	60.4	36.9
Little/moderate	33.6	56.4
Quite a bit/extreme	3.2 ^E	5.9 ^E

Source: General Social Survey, 2002

* Low intensity: 8 hours or less of elder care per month; high intensity: more than 8 hours per month.

Notes: Percentages may not add to 100 due to some non-response. Shading indicates significant difference from the low-intensity, sandwiched group.

Consequences on personal life

Two schools of thought have emerged with respect to the personal consequences of caring simultaneously for seniors and children. Some research indicates that such people feel no more rushed or stressed than anyone else since the negative aspects of caregiving are balanced by increased self-esteem (Centre on Aging n.d.). Conversely, the two roles may lead to overload, poor health, increased stress, and an inability to find a balance in life (Marks 1998; Centre on Aging n.d.). Another factor is the emotional difficulty many adult children have in caring for their aging parents. This situa-

tion can be stressful for both caregiver and care receiver, especially as failing health necessitates more care (Miller 1981).

The 2002 GSS supports both schools of thought. For example, sandwiched workers were significantly more likely to feel stressed (70%) than either those who provided elder care only (64%) or those with no child-care or elder-care responsibilities (61%) (Table 1). However, although stressed, 95% of sandwiched workers felt satisfied with life in general—virtually the same proportion as those with fewer responsibilities.

For many, caregiving has positive aspects. More than 60% of caregivers felt they were giving back some of what life had given them, and 70% felt their relationship with the elderly person was strengthened (Table 6). While caregiving can be difficult to integrate with other obligations and responsibilities, only about 5% felt it to be an extreme burden.

However, caregiving often leaves little time for social activities or holidays. More than a third found it necessary to curtail social activities, and a quarter had to change holiday plans. Often a call for help can come in the night and the caregiver must leave the house to provide assistance. Some 13% experienced a change in sleep patterns, and the same percentage felt their health affected in some way. While 1 in 10 sandwiched workers lost income, 4 in 10 incurred extra expenses such as renting medical equipment or purchasing cell phones.

The caregiver's wish list

Those busy balancing children, work and elder care expressed a desire for support. Some wishes could be met by workplace

Table 6: Effects on personal life of providing care to seniors

	Employed	
	Sandwiched	Elders only
Almost always feel		%
No time for self	9.1	8.3
Stressed between helping and work or family responsibilities	12.7	11.4
Helping someone is giving back what you received from them	49.7	56.0
Angry when helping person	F	F
Helping is giving back what life has given you	61.9	67.1
Wish someone else would take over helping	2.8 ^E	2.8 ^E
Relationship with senior strengthened	69.9	70.3
Should be doing more	23.8	21.5
Could do a better job	10.5	11.4
Caregiving has resulted in		
Affected health	12.5	12.8
Changed sleep patterns	13.3	15.7
Extra expenses	40.6	39.6
Change in social activities	35.7	35.7
Change in holidays	26.3	24.3
Postponement of education	3.3 ^E	3.7 ^E
Care receiver moving closer	7.9	8.1
Caregiver moving in with care receiver	2.6 ^E	2.8 ^E
Overall burden		
None	51.8	54.5
Little/moderate	41.9	38.6
Quite a bit/extreme	4.2	5.5

Source: General Social Survey, 2002

Notes: Percentages may not add to 100 due to multiple responses or non-response. Shading indicates significant difference.

the needs of either the care recipients or caregivers. Some focus group research indicates that caregivers may try to hide their caregiving responsibilities, fearing that they are career-limiting. Also, workplace culture may not support the use of such programs even when offered (Wagner 2003).

The caregiver's wish list was very similar for all individuals providing elder care, whether they had children at home or not. For example, both groups were equally likely to want compensation or tax breaks, information on long-term illnesses or disabilities, or counselling (Table 7). However, some differences were evident. Of those working, individuals with children were more likely than those caring for an elderly person only to feel they could do a better job if respite care was available (52% versus 46%). The former were also more likely to want flexible work or study arrangements (46% versus 36%).

programs, others by government policy. Workplace support includes flexible hours, ability to telework, and information about community resources and health and aging in general (Wagner 2003). However, despite concern about possible job absence and the associated costs and productivity loss, elder-care programs are less likely than child-care programs to be available—and even if offered they are not often used (Wagner 2003). The 1999 Workplace and Employee Survey (which excludes public administration) found that 7% of employees (802,700 individuals) had access to child-care services but only 78,800 (just under 10%) made use of them. While fewer employees had access to elder care (394,300), the take-up rate was only slightly higher—about 13% (data not shown).

Some research shows that low utilization rates are common with workplace elder-care services for several reasons. Programs often do not adequately meet

Table 7: Caregiver's wish list

	Employed	
	Sandwiched	Elders only
		%
Respite care	52.3	45.8
Flexible work or study arrangements	46.2	36.4
Information on long-term disabilities	42.6	39.0
Information on caregiving	42.3	37.3
Financial compensation or tax breaks	35.9	34.8
Counselling	27.6	24.0
Other	11.9	9.9

Source: General Social Survey, 2002

Note: Shading indicates significant difference.

Data source and definitions

The data source for this article is the 2002 General Social Survey (GSS) on social support and aging (Cycle 16). The target population is all persons aged 45 and over as of December 31, 2001 in private households in the 10 provinces. Data were collected between February and December 2002. The sample was selected from respondents to the 2001 Canadian Community Health Survey.

For this article, the population of interest was 45 to 64 year-olds caring for children and seniors simultaneously. Individuals were considered **sandwiched** if they provided elder care to someone over 65 and had single children less than 25 living at home. **Sandwiched workers** had a paid job or business as their main activity in the previous 12 months.

This article focuses on the caregiving modules in the survey. These include types of care given to seniors, hours spent, and effects. Caregiving in the form of emotional support was not included. Four types of activities were identified. **Personal care** included assistance with bathing, toileting, care of toenails/fingernails, brushing teeth, hair care, and dressing. **Care inside the home** included meal preparation and clean-up, housecleaning, laundry, and sewing. **Care outside the home** included house maintenance and outdoor work. **Transportation care** included shopping for groceries or other necessities, providing transportation, or doing a senior's banking or bill-paying.

Data limitations

While there are undoubtedly individuals under 45 who are sandwiched, they were not included in the population surveyed in Cycle 16. It has been suggested that younger caregivers may be likely to feel more negative effects from caregiving because their children are younger. However, some research has shown that the 45-to-64 age group is the most likely to be providing care to aging parents (Wisensale 1992). In order to determine if age of children had an effect on responses, data from Cycle 16 were run examining sandwiched workers with children under 15. Results indicated that there was no difference between those with younger children and the population of interest. Additionally, just over 10% (81,000 weighted count) of sandwiched workers were not asked impact of caregiving questions if the person for whom they provided care had died during the previous 12 months. For this reason, it is possible that there may be some bias in the impact of care responses. Finally, since only those providing elder care were asked impact of care questions, it is not possible to compare them with the general 45 to 64-year old population. Thus the major comparison group was 45 to 64 year-olds who provided elder care but had no children at home. Where data are available (Table 1), comparisons with individuals not providing elder care and having no children at home have been made.

Summary

In 2002, about 712,000 Canadians aged 45 to 64 were caught between the responsibilities of raising children and caring for seniors. For more than 8 in 10 of these

individuals, paid work was added to the load. The latter found that caring for a senior affected their work arrangements: 15% had to reduce their hours, 20% had to change their schedules, and 10% experienced a reduction in income. Not surprisingly, these individuals also felt the burden in terms of their health and social life.

However, not all consequences of caregiving are negative. More than 60% of those working and caring for an older person while still having children at home felt that caring for a senior was simply giving back what they had received, and 70% stated that the relationship was strengthened. While these individuals were just as likely as other workers to be satisfied with their work-home balance, they were much more likely to feel generally stressed. They were also significantly more likely to wish for flexible work arrangements or respite care to enable them to be better caregivers.

Those who spent more than eight hours a month on elder care were more likely than those spending eight or less to feel the effects. Of the high-intensity caregivers, half had to change their social activities, and about 35% had to change their work schedule.

Perspectives

Note

1 In addition to the 2002 General Social Survey, which covers only those aged 45 to 64, the Census reveals the recent growth of those in the sandwich generation aged between 25 and 64—slightly more than 2 million individuals in 2001, up from 1.7 million in 1996. In the Census, a sandwiched person is defined as looking after children 15 and under while providing care to a senior.

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The sandwich generation

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Wealth inequality by province

Raj K. Chawla

This article is adapted from *Interprovincial wealth inequality in Canada*, a paper presented at the 28th General Conference of the International Association for Research in Income and Wealth, held in Cork, Ireland, August 23-27, 2004.

Income is a major indicator of the economic well-being of families. But income measures only short-term inflows that affect current consumption and saving. Wealth, on the other hand, measures the surplus accumulated by families and thus provides a better indicator of long-term well-being. Wealth may be targeted toward long-term goals such as retirement, but it can also help families cope with income interruptions or handle unexpected expenditures.

Income is widely available from survey and administrative sources. Wealth, on the other hand, is much harder to measure and, as such, has been the focus of only infrequent surveys (see *Data source and definitions*).

Wealth has many components, some of which are measured more easily than others. The main division is between marketable components, which can be sold or transferred, and non-marketable assets, which have value only for those who hold them. Some marketable assets such as savings accounts, tax-deferred savings plans, stocks, bonds and mutual funds are readily measured. Others such as real estate, durable goods or business equity are seldom traded, and so their value must be estimated. The principal non-marketable asset is an employer pension plan. Employees or their survivors may draw benefits according to the plan, but its present value is not a tradable commodity and is complicated to estimate. After all assets are valued and summed, debt must be subtracted to arrive at a final measure of wealth.

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This article explores the levels and components of wealth inequality in Canada. Many studies have detailed the effects of regional diversity on the distribution of income (Alasia 2003; Finnie 1998; Melvin 1987; Wilkinson et al. 2003; Beach 1996), so the main focus here is provincial variation in the distribution of wealth. Although wealth inequality is undoubtedly related to differing income patterns across the country, it also reflects patterns in the components of wealth: high residential property values in British Columbia, high rates of farm assets on the Prairies, greater pension assets in Ontario, and so on. As such, a multilevel decomposition technique is used to untangle the different effects. This technique highlights some aspects of wealth distribution that are relatively consistent across the country and others that are more specific to certain provinces and family characteristics.

Two in 10 families have virtually no wealth

Since income and wealth are strongly associated, one would expect families with higher incomes to have more wealth.¹ Indeed, several similarities in the provincial distribution of family wealth by pre-tax income deciles are apparent (Table 1).² First, families in the lowest decile had negative wealth. These families had more debts than assets, as in the case of younger or older families with small incomes, or families with businesses with negative net income.³ Families in the lowest two deciles held virtually no wealth.

Second, as expected, the share of wealth held by families rose as they moved up the income ladder. Those in the third and fourth deciles together held between 2% and 4% of all wealth; those in the top decile held the most, ranging from 42% in Nova Scotia to 52% in Alberta.

In seven provinces, families in the top income decile had mean wealth of more than one million dollars (the highest being \$1.5 million in British Columbia). The gap in mean wealth between the top and bottom deciles was largest in British Columbia (\$1.6 million), about 2.5 times that in Newfoundland and Labrador.

Wealth inequality by province

Table 1: Family wealth by income decile

	Canada	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
	%										
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Lowest	-0.3	-1.2	-0.3	-0.2	-0.4	-0.3	-0.2	-0.2	-0.3	-0.2	-0.2
Second	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.1
Third	0.8	1.5	0.8	1.3	1.1	0.7	0.9	1.1	1.2	0.9	0.5
Fourth	2.0	2.9	1.9	2.8	2.4	1.8	2.1	2.4	2.5	2.1	1.5
Fifth	3.4	4.3	3.5	4.5	3.9	3.2	3.8	4.0	4.4	3.6	3.1
Sixth	5.5	6.0	5.3	6.6	5.6	5.1	5.8	6.3	6.5	5.4	5.5
Seventh	8.1	8.5	7.9	9.3	7.9	7.9	8.6	8.9	9.0	7.6	8.2
Eighth	12.1	11.6	12.5	13.7	11.8	11.5	12.9	12.4	13.3	10.8	12.2
Ninth	18.8	17.7	19.9	19.7	18.7	18.3	19.1	18.6	20.1	17.3	18.3
Highest	49.4	48.5	48.3	42.0	48.8	51.6	46.8	46.2	43.0	52.3	50.8
	\$										
Mean wealth											
Lowest decile	-6,700	-15,100	-5,900	-4,300	-6,900	-9,300	-6,200	-5,500	-6,200	-4,300	-7,600
Highest decile	1,320,900	611,500	1,029,300	845,900	846,000	1,184,800	1,386,700	1,084,100	1,067,000	1,422,800	1,542,600
	%										
Mean income											
Lowest decile	6,200	6,900	8,000	6,300	6,900	5,700	7,600	7,600	5,000	6,200	4,000
Highest decile	151,200	115,000	121,500	119,000	106,200	137,000	163,500	134,100	126,300	172,700	146,300
	%										
Families	100.0	1.6	0.4	3.1	2.5	25.5	36.7	3.7	3.3	9.5	13.8
Total wealth	100.0	0.8	0.4	2.3	1.8	21.0	40.6	3.1	3.2	10.3	16.5
Total income	100.0	1.3	0.4	2.6	2.0	23.0	40.9	3.4	2.9	10.2	13.5
	\$										
Mean wealth	249,300	125,400	214,400	182,200	179,400	205,200	276,200	212,100	242,700	272,100	298,100
Median wealth	109,200	65,300	90,500	100,300	84,900	79,500	132,900	106,500	131,400	122,000	127,200
Mean income	49,800	39,600	42,000	41,400	40,500	44,800	55,400	46,100	43,200	53,700	48,600
Median income	39,600	32,300	33,000	34,000	32,300	35,300	45,100	37,300	34,400	43,500	40,100
	Theil's T (total)										
Wealth	0.865	0.748	0.755	0.634	0.767	0.918	0.761	0.826	0.647	0.990	0.984
Pre-tax income	0.314	0.266	0.269	0.272	0.240	0.334	0.301	0.283	0.277	0.325	0.308

Source: Survey of Financial Security, 1999

On the other hand, the gap in mean income was much smaller, ranging from \$166,000 in Alberta to \$108,000 in Newfoundland and Labrador. Thus income is more equally distributed than wealth.

Theil's T statistic is a measure of inequality and can be used to decompose total inequality into 'between group' (for example, provinces) and 'within group.' It shows that income inequality was between 32% and 42% of wealth inequality.⁴ Wealth was much

more unequally distributed among families in Alberta, British Columbia, and Quebec than in Ontario. Nova Scotia had the most equal distribution.⁵

Interprovincial differences account for little of total wealth inequality

Of total wealth inequality in Canada, 98% was attributable to inequality within provinces. The factors affecting family wealth inequality within provinces

Wealth inequality by province

include homeownership status, business equity, financial asset components, employer pension plan savings, and mortgage and consumer debt.

Ontario, with 37% of all families and 41% of total family wealth, accounted for 41% of total wealth inequality, followed by British Columbia (14% of families and 16% of wealth) at 22%. Shares for Quebec and Alberta were 17% and 13% respectively. These four provinces, with 85% of all families and 88% of total family wealth, accounted for 93% of overall wealth inequality.

Wealth inequality by family characteristics

Besides financial assets and business equity, differences in income and homeownership contribute to family wealth inequality. As mentioned earlier, income and wealth are strongly associated, so any variation in family income is likely to result in a variation in wealth, both between and within income groups (Table 1).⁶

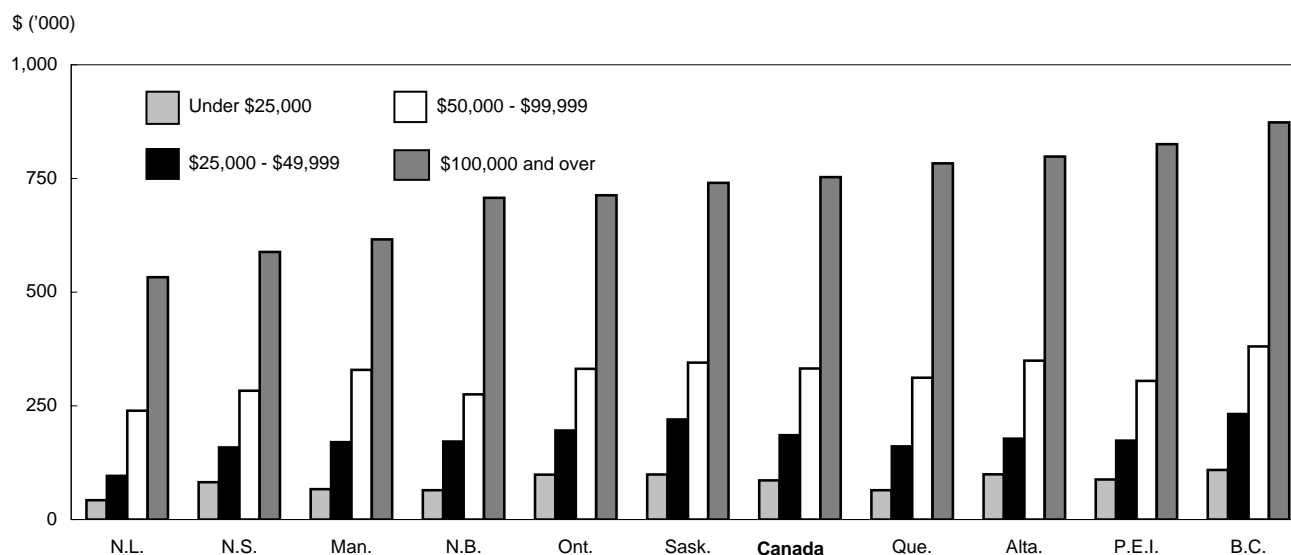
For instance, the gap in mean wealth between families with incomes under \$25,000 and those with \$100,000 or more was \$491,000 in Newfoundland and Labrador (lowest mean wealth) compared with \$764,000 in British Columbia (highest). On the other hand, the

interprovincial range of mean wealth within income groups was \$67,000 for families with incomes under \$25,000 and \$340,000 for those with incomes of \$100,000 or more (Chart).

These within-income-group ranges show that family wealth across provinces is affected by other factors in addition to income, such as homeownership status, family type, and life-cycle stage. Within provinces, for example, from 20% to 34% of wealth inequality was explained by wealth differences between income groups, and from 16% to 38% by differences between homeownership groups (renter, owner with a mortgage, owner without a mortgage) (Table 2). Income and homeownership explained relatively more of the inequality than other characteristics such as business ownership, age of the major income recipient (used as proxy for life-cycle stage), or coverage in an employer pension plan.

However, given the high correlations between family income, homeownership, age of major income recipient, business ownership, and coverage under an employer pension plan, their individual explanatory powers cannot be added to derive the total inequality coefficient. To overcome this multicollinearity, it is

Chart: Regardless of income, families in British Columbia had the highest mean wealth.



Source: Survey of Financial Security, 1999

necessary to recalculate the explanatory powers of between and within groups by classifying data by such characteristics taken together. The resulting between group's overall explanatory power is then split by each of the characteristics considered. To maintain statistical reliability, only a limited number of characteristics can be used at a time. The following discussion is based on income, homeownership and business ownership.⁷

Homeownership accounts for much of wealth inequality

More than half (53%) of wealth inequality in Ontario was explained by between-group inequality and the rest (47%) by within-group inequality (Table 3). The overall explanatory power of 53% could be decomposed into 15% for income, 28% for homeownership, 4% for business ownership, and 6% for their interaction. This decomposition shows that variation in wealth by homeownership explained more of the wealth inequality in Ontario than did variation by income group. A similar situation prevailed in Prince Edward Island, Nova Scotia, Manitoba, Saskatchewan, and British Columbia.

Variation by homeownership can be attributed not only to rates of ownership but also to wealth differences between renters, owners without a mortgage, and owners with a mortgage. The wealth of homeowners may, in turn, be influenced by local real estate values. In Newfoundland and Labrador, New Brunswick, Quebec, and Alberta, differences in wealth by income group were more important than homeownership. Business ownership remained in third place—with an explanatory power relatively higher for families in Alberta and Prince Edward Island.

With the ranking of family characteristics affecting wealth inequality across provinces established, one question remains unanswered: How is total wealth inequality distributed by levels of these characteristics? For example, in Quebec, income explained more than homeownership. Did the wealth of families in different income strata contribute equally to this inequality? In fact, the variation in wealth among families with incomes under \$25,000 accounted for less than 1% of wealth inequality in Quebec, compared with 44% for those with incomes between \$50,000 and \$99,999 and 45% for those with incomes of \$100,000 or more

Table 2: Wealth inequality by selected family characteristics*

	Canada	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Total inequality (Theil's T)	0.865	0.748	0.755	0.634	0.767	0.918	0.761	0.826	0.647	0.990	0.984
Pre-tax income						%					
Between groups	23.4	34.3	27.7	23.8	23.7	29.2	21.2	26.4	23.5	20.4	19.8
Within groups	76.6	65.7	72.3	76.2	76.3	70.8	78.8	73.6	76.5	79.6	80.2
Homeownership											
Between groups	29.0	15.9	35.2	17.1	21.8	27.4	37.5	30.0	29.8	19.6	30.5
Within groups	71.0	84.1	64.8	82.9	78.2	72.6	62.5	70.0	70.2	80.4	69.5
Age of major income recipient											
Between groups	10.5	6.5	8.3	11.7	10.7	11.7	13.0	6.5	8.4	5.0	11.9
Within groups	89.5	93.5	91.7	88.3	89.3	88.3	87.0	93.5	91.6	95.0	88.1
Employer pension plan											
Between groups	4.2	11.4	5.0	10.2	10.1	4.5	6.1	2.3	2.3	3.6	1.1
Within groups	95.8	88.6	95.0	89.8	89.9	95.5	93.9	97.7	97.7	96.4	98.9
Business ownership											
Between groups	10.5	6.5	16.1	7.8	18.7	13.8	6.6	9.6	14.1	16.8	9.8
Within groups	89.5	93.5	83.9	92.2	81.3	86.2	93.4	90.4	85.9	83.2	90.2

Source: Survey of Financial Security, 1999

*Excludes families with negative or zero wealth.

Table 3: Decomposition of wealth inequality*

	Canada	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Total inequality (Theil's T)	0.865	0.748	0.755	0.634	0.767	0.918	0.761	0.826	0.647	0.990	0.984
	%										
Between groups	49.0	49.2	65.9	41.8	51.0	54.7	52.8	53.4	54.2	45.6	51.5
Income	18.0	46.5	17.8	10.4	20.7	21.3	14.9	16.8	14.5	16.5	11.7
Homeownership	20.5	11.2	27.9	13.9	18.5	17.2	28.1	21.5	22.9	13.7	24.5
Business ownership	5.1	3.7	10.4	4.2	8.9	8.3	3.5	5.5	7.9	11.5	7.2
Interaction term	5.4	-12.2	9.8	13.3	2.9	7.9	6.3	9.6	8.9	3.9	8.1
Within groups	51.0	50.8	34.1	58.2	49.0	45.3	47.2	46.6	45.8	54.4	48.5

Source: Survey of Financial Security, 1999

* Excludes families with negative or zero wealth.

Data source and definitions

The analysis is based on the Survey of Financial Security (SFS), conducted between May and July 1999. The sample consisted of 23,000 dwellings from the 10 provinces—21,000 from a regular area sample and 2,000 from 'high-income' geographic areas. A high-income household was one with total income of at least \$200,000 or investment income of at least \$50,000. Excluded were persons living on Indian reserves, members of the armed forces, and those living in institutions such as prisons, hospitals, and homes for seniors. The SFS interview questionnaire (Catalogue no. 13F0026MIE-01001) is available free on the Statistics Canada Web site at www.statcan.ca/cgi-bin/downpub/research.cgi. For more details about the survey, see *The assets and debts of Canadians: An overview of the results of the Survey of Financial Security* (Statistics Canada Catalogue no. 13-595-XIE).

The survey collected information on the socio-demographic and labour force characteristics of persons aged 15 years and over, as well as the assets and debts of their families at the time of the survey. For 85% of survey respondents, income for 1998 was compiled from authorized linkage to tax records; income information for the remaining 15% was collected in person. Collection was by personal interview, although respondents could also complete the questionnaire themselves. Financial data were sought from the family member most knowledgeable about the family's finances. Proxy response was accepted. The overall response rate was 76%.

With the exception of savings in employer pension plans, missing data on components of assets and debts used to compile wealth estimates were imputed mostly by a hot deck procedure. Accrued savings in pension plans, on the other hand, were estimated through a termination valuation approach from information collected on years in the labour force, coverage under pension plan(s), contributions made, and benefits received. A detailed description

of the methodology used to estimate such savings can be found in *Survey of Financial Security: Methodology for estimating the value of employer pension plan benefits* (Statistics Canada catalogue no. 13F0026MIE-01003). Empirical data included in this paper are based on a sample of 15,933 families, including 1,143 from the high-income sample.

Family: Refers to economic families and unattached individuals. An economic family is a group of persons sharing a common dwelling and related by blood, marriage (including common law) or adoption. An unattached individual is a person living alone or with unrelated persons.

Major income recipient: The person in the family with the highest income before tax. If two persons had exactly the same income, the older was treated as the major income recipient.

Tenure: Refers to the homeownership status of a family at the time of the survey. A family may be living in a rented dwelling or in an owned dwelling, with or without a mortgage.

Pre-tax family income: Sum of incomes of family members aged 15 or over received from all sources during the calendar year 1998. Sources include wages and salaries, net income from self-employment, investment income, government transfers, retirement pension income, and alimony. Excluded are income in kind, tax refunds, and inheritances.

Wealth: Total assets less total debt. It is based on marketable assets that are in direct control of families. It does not include the accrued value of savings held in employer pension plans or future claims on publicly funded, income-security programs. Nor does it include any potential returns on human capital (employment income or ability to generate investment income).

Wealth inequality by province

(Table 4). The corresponding shares in Alberta were 1%, 49% and 46%. More than half of wealth inequality in Ontario and British Columbia was attributable to families with incomes of \$100,000 or more.

The relative contribution to total wealth inequality of families in rented dwellings was almost insignificant provincially, whereas the largest contribution was made by families living in mortgage-free homes. Similarly, families with a major income recipient aged 45 to 64 held the largest share of inequality, varying between 72% and 35% for eight provinces. The two provinces showing a different pattern were Newfoundland and Labrador, where elderly families had the highest contribution (50%), and Alberta, where younger families (major income recipient under 45) accounted for 45%.

Shares of total inequality by business ownership showed quite a contrast. In Alberta, where families had a higher rate of business ownership as well as a higher

proportion of wealth in terms of business equity, the variability in holdings of families with a business accounted for 90% of provincial wealth inequality—compared with 57% in Ontario.

On the other hand, the variation in wealth of families with an employer pension plan accounted for 72% of wealth inequality in Newfoundland and Labrador compared with just 31% in British Columbia. Among families in most of the eastern provinces, coverage under such plans played an important role in accounting for wealth inequality, whereas for families in the western provinces, business ownership drove inequality.

Conclusion

Provincial economies differ considerably. These differences are in turn primarily responsible for the variation in family income across the country. However,

Table 4: Share of provincial wealth inequality by selected family characteristics*

	Canada	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Total wealth inequality	100.0	0.1	0.3	0.8	0.9	Share (%) 17.4	40.6	2.3	2.3	12.9	22.3
Pre-tax income						Distribution (%)					
Under \$25,000	1.8	-5.8	3.1	6.5	-2.6	0.6	1.6	-3.3	0.7	1.3	4.8
\$25,000 - \$49,999	8.3	5.0	17.2	11.5	32.7	10.3	7.0	8.1	17.5	3.7	8.4
\$50,000 - \$99,999	39.1	59.1	24.8	45.5	38.9	44.2	34.0	56.6	42.6	49.1	33.1
\$100,000 and over	50.9	41.8	54.9	36.5	31.1	44.9	57.4	38.6	39.2	45.9	53.7
Homeownership status											
Renter	-0.5	-3.5	-4.8	8.6	0.1	5.7	-5.2	-2.1	-5.8	1.3	0.5
Owner											
Without mortgage	78.8	81.1	103.3	74.1	87.2	76.2	84.8	91.7	91.4	53.9	84.0
With mortgage	21.7	22.5	1.4	17.3	12.8	18.0	20.4	10.4	14.4	44.8	15.5
Age of major income recipient											
Under 45	16.0	7.4	9.4	1.2	16.5	12.8	7.1	31.4	17.9	44.9	16.9
45 to 64	60.6	42.8	64.7	67.2	68.0	72.0	63.5	44.8	56.8	35.0	61.8
65 and over	23.4	49.8	25.9	31.6	15.4	15.1	29.4	23.8	25.3	20.1	21.3
Employer pension plan											
No	43.9	28.5	50.8	28.7	30.9	47.3	30.9	52.0	44.8	38.6	69.2
Yes	56.1	71.6	49.2	71.3	69.1	52.7	69.1	48.0	55.2	61.4	30.8
Business ownership											
No	33.2	62.1	26.0	55.7	33.5	32.9	42.9	35.0	25.8	10.3	27.0
Yes	66.8	37.9	74.0	44.4	66.5	67.1	57.1	65.0	74.2	89.7	73.0

Source: Survey of Financial Security, 1999

* Excludes families with negative or zero wealth.

the province with the highest mean income is not necessarily the province with the highest mean wealth. Other factors besides income influence family wealth. These include homeownership status, home values, financial assets, business ownership, other real estate, vehicles, coverage under employer pension plans, and possession of other durable goods.

Provincially, wealth was more unequally distributed than income and concentrated among families in the top income decile. Also, it was more unequally distributed in three provinces—Quebec, Alberta, and British Columbia.

Four provinces (Quebec, Ontario, Alberta and British Columbia) accounted for 93% of overall wealth inequality in Canada. A multilevel decomposition of wealth inequality by family characteristics such as income, homeownership, and business ownership showed that in six provinces, homeownership ranked higher than income in explaining inequality, whereas income led in the other four. Business ownership ranked third in all provinces.

The prevalence of income and wealth inequality is not new and occurs in almost all countries. However, the approaches to redistribution vary. For instance, Canada has a progressive income tax system, which allows the use of taxes and government transfers to reduce income inequality. Intergenerational wealth transfers, however, are generally taxed as income for the recipient. Canada has no direct wealth tax. However, income earned on financial assets is taxed, and municipalities levy property taxes on homes and other real estate.

On the other hand, the Canadian income tax system encourages personal savings and investment in a variety of tax-deferred savings plans.⁸ The objective of such incentives is to encourage families to save more for long-term goals such as retirement or children's education. However, families with higher incomes are more likely to use such tax-deferred plans since they are able to put money aside.⁹ Although such incentives may increase wealth inequality, investments in these tax-deferred plans must be converted into income at a later date and would be subject to taxation at the recipient's highest marginal rate.

Finally, some results indicate that family characteristics may be the strongest generator of wealth inequality. Renters and low-income earners tend to have compressed wealth distributions, as well as low average wealth. Homeowners and high-income earners, on the

other hand, have not only higher average levels of wealth, but also greater variation in wealth. Excluding home equity, homeowners still have more than six times the mean wealth of renters.

Perspectives

■ Notes

1 Wealth usually rises with income. However, since wealth is accumulated over the life cycle, families with lower incomes during retirement may have much greater wealth than their younger counterparts with relatively higher incomes.

2 Tax exemptions based on a taxpayer's demographic situation (marital status, age, number of dependants), business status and investments made may affect the post-tax incomes of families across Canada. Pre-tax incomes, on the other hand, reflect the family's total income in a given year and are used for ranking families by decile groups.

3 In Newfoundland and Labrador, where mean income was lowest, 9% of families had negative or zero wealth, compared with 6% in Ontario and Alberta—provinces with relatively higher levels of incomes (Table 1).

4 Details can be found in Theil (1967), chapter 4; Allison (1978), and Bourguignon (1979). For its illustrative use, see Schwarz (1996), Cardoso (1997), Zyblock and Tyrrell (1997), and Frick and Grabka (2003). Also see Cowell (1985) for multilevel decomposition of Theil's Index.

5 In this paper, wealth inequality was studied using only Theil's coefficient because of its additive and decompositional properties. Other measures of inequality, including the Gini coefficient, log of variance of wealth, and coefficient of skewness were also used, but for brevity are not included here. A summary table containing results of these measures is available from the author.

6 Some of this high-income, high-wealth situation may be embedded in the diversity of provincial economies, resulting in varying incomes for their residents. Compared with Ontario (100), the index of mean wealth varied between 46 (Newfoundland and Labrador) and 108 (British Columbia). However, when mean wealth of families across provinces was recalculated on the assumption that Ontario's distribution of income prevailed in all other provinces, the gap in indices of mean wealth fell to 53 points. This shows that even if the distribution of income were the same across provinces, mean wealth of families in different provinces would still vary.

7 Even though the methodology allows a multilevel decomposition, it is still necessary to restrict the number of characteristics that can be used at a time in order to maintain the statistical reliability of conclusions. The use of five characteristics would have meant classifying families in each province into 144 cells—income (4), homeownership

(3), age of major income recipient (3), business ownership (2), and coverage under a pension plan (2). This would have meant splitting the sample of 15,933 families into 1,440 (144x10) cells. Although only the results of income•homeownership•business ownership are shown here, outcomes of other combinations can be made available upon request.

8 These include registered retirement savings plans, registered retirement income funds, registered homeownership savings plans, and registered education savings plans. Also, reduced tax rates apply for investment income and dividends incomes and capital gains (after exhausting the lifetime exemption of \$100,000 and \$500,000 for qualified small business corporations and qualified farm property).

9 For example, of all taxfilers aged 25 to 64, only 4% of those with income under \$10,000 contributed to registered retirement savings plans in 1999, compared with 74% of those with income between \$60,000 and \$79,999, and 78% with income of \$80,000 and more. The Canadian Education Savings Grant program has recently introduced greater savings incentives for low- and middle-income contributors in the form of higher contribution match rates.

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