



# Brown's Economic Damages Newsletter

August 2010

Volume Seven Issue 8

Brown Economic offers 5 user-friendly economic loss calculators for quick, accurate, and cost-effective damages estimates:

- Non-Pecuniary (free)
- Working Life / Life Expectancy (free)
- Present Value (free)
- Housekeeping (pay per use)
- Income Damages (pay per use)

Cara Brown, M.A., Principal  
Maureen Mallmes, B.Sc., SEMC  
Dan Clavelle, M.Ec.  
Laura Dick, B.A.  
Al-Nashina Abji, M.A.  
Cindy Ghitter  
Elda Figueira, MLIS  
J.C.H. Emery, Ph.D.  
Frank Strain, Ph.D.  
Stephen Clark, Ph.D.  
Emmanuel Yiridoe, Ph.D.

## RRSPs: Impact on after-tax loss calculations, and in fatality cases

- Modelling the RRSP contribution when estimating after-tax income (pp. 1-3)
- Statistics on RRSP contributions: trends and average contribution amounts (p. 4)
- Case law excerpt: *Palmquist v. Ziegler* [2010] (p. 5)
- Case Law excerpt: *McLaren v. McLaren estate* [2010] (p. 5)

In all cases when personal income taxes have to be deducted – for jurisdictions that mandate an after-tax basis for loss of income, in all fatality cases, and any time a tax gross-up is calculated – an assumption must be made about a taxpayer's unique deductions from income. One of the most common deductions is contributing to Canada's main tax-sheltered savings investments, **Registered Retirement Savings Plans ("RRSP")**. Below, we review some of the statistics we have on the contribution patterns of Canadians to RRSPs.

Some experts, who proceed with a simplified calculation of after-tax income, do not allow for the decedent or plaintiff to have contributed to RRSPs. This simplification heavily overstates the decedent or plaintiff's tax burden, and as a result *understates* the decedent's or plaintiff's after-tax income. The result of this, of course, is to *understate* the quantum of damages.

Not only do we allow for this assumption (if applicable) in loss of income, fatality and tax gross-up calculations, we provide a field for this variable in the *Income Damages Calculator*™ ("IDC") at [www.browneconomic.com](http://www.browneconomic.com) > Economic Calculators. The IDC yields an estimate of loss of income based on before- or after-tax income for each jurisdiction in Canada (except Quebec).

It is apparent from the data below that virtually all households with a combined gross family income above \$90,000 to \$100,000, or highly educated plaintiffs,<sup>1</sup>

<sup>1</sup> This would refer to post-secondary education. Note that from the 2006 Census, the Canadian population was split 60% / 40% between those with post-secondary education and those who ceased schooling after completing high school. (Statistics Canada, *Canadian Social Trends* no. 11-008. (Ottawa, Ontario: Statistics Canada), Summer 2010, No. 89, "Social fact sheet" Table 5, p. 53. "Post-secondary" education includes trades certificate or diploma; college, CEGEP or other non-university certificate or diploma; university certificate or diploma *below* the bachelor level; and university certificate, diploma or degree at bachelor's level or above).

choose to contribute to RRSPs. What this also means is that although there may be *some* cause to assume zero contributions while decedents or plaintiffs are young (i.e., under age group 25 to 29), this assumption should be revised in later years to reflect contributions to RRSPs, or to **Registered Pension Plans** (“RPP”).<sup>2</sup> Alternatively, *if* the forensic expert can only make a *single* assumption about this deduction from income (i.e., it cannot be changed at later ages), then it is appropriate to assume an RRSP deduction throughout, but at a lower percentage of dollar amount so as to approximate the decedent’s or plaintiff’s average contribution over his/her working lifetime (i.e., less in the early years and more in the later years).

Some experts argue that assuming RRSP contributions overstates the quantum of damages because it lowers the tax rate of the plaintiff or decedent while working but does not take into account the (possibly higher) tax rate of the plaintiff or decedent once s/he retires and withdraws the RRSPs as retirement income. The problem with this argument is that there is no guarantee that the plaintiff or decedent’s tax rate will be higher at this juncture due to RRSP withdrawals; it depends on so many different assumptions that it is, in many cases, too speculative to calculate. For instance, it depends on (a) the other sources of income in the household at retirement;<sup>3</sup> (b) how the spouses divide the income to report for tax purposes; (c) the rate of wealth accumulation of the household’s RRSPs and other savings; and (d) the rate of withdrawal from the savings portfolio, to name a few of the main variables. It is also going to vary according to each individual pensioner’s non-refundable tax credits, which change after retirement. In particular, it is very difficult to forecast the wealth accumulation in an individual’s portfolio due to the different choices people make about investing their retirement income, and the management fees they pay if a third party manages their portfolio.

Thus, to simply argue that *no* RRSP deduction should be taken into account does not accord with the reality of most Canadians in terms of their savings behavior and the data collected by the *Longitudinal Administrative Databank* (“LAD”). The LAD of Statistics Canada used taxfiler data from a 20% sample of T1 tax records for a 22-year period ending in 2004 to provide measures of RPP coverage, varying by age and sex, and individuals’ contributions to RRSPs.<sup>4</sup>

If an expert insists that the RRSP contributions should not be assumed simply because the evidence prior to the incident date is that s/he did not contribute (or *did* contribute but subsequently withdrew some or all of the

---

<sup>2</sup> Even if it is argued that the plaintiff or decedent in question would not have contributed to RRSPs, it could still be true that s/he would contribute to RPPs – like 37% of the Canadian working population. The RRSP deduction can be used as a crude approximation of the effect on taxable income if the plaintiff or decedent would have contributed to an RPP (or the employer contributed on their behalf).

<sup>3</sup> These sources can include Canada Pension Plan (“CPP”) retirement benefits (some amount to a maximum of \$11,210 in 2010 per year, depending on contribution history); Old Age Security (“OAS”) benefits (a maximum of \$6,259 in 2010, but clawed back once income exceeds \$66,733, and zero once income exceeds \$108,214); private pension benefits from company or government employment; investment income; rental income; etc. The non-refundable credits change too after age 65: the age credit and pension credit become applicable, and so could the disability credit or medical expense credits.

<sup>4</sup> R. Morissette and Y. Ostrovsky, “Pensions and retirement savings of families”, *Perspectives in Labour and Income* [Statistics Canada: Winter 2007], p. 47; T. Wannell, “Public pensions and work”, *Perspectives in Labour and Income* [Statistics Canada: Autumn 2007], p. 39.

contributions), then the better alternative to simply assuming a zero deduction for RRSP contributions is to try to project the total RRSP portfolio the plaintiff or decedent would have accumulated by retirement, and calculate the loss accordingly in the post-retirement period.<sup>5</sup> In other words, the only way to justify a zero RRSP contribution rate during the **working years** (unless the plaintiff's history or demographic characteristics make it unlikely s/he would have contributed to RRSPs or RPPs) is to model the loss of retirement income from making the RRSP contributions in the **retirement years**. This method circumvents the problem of forecasting tax rates due to RRSP contributions during the working years. The difficulty with this exercise, however, aside from being cost prohibitive on most files, is the myriad assumptions the forensic economist would have to make. We have discussed some of these already above:

- (a) the rate of wealth accumulation (i.e., rate of return/interest) inside the RRSP portfolio;<sup>6</sup>
- (b) the diversification strategy adopted by the RRSP portfolio owner;
- (c) the performance and fee schedule of the fund manager, if managed by a third party;
- (d) the rate of withdrawal from the RRSP portfolio after retirement;
- (e) the fund owner's other sources of income,<sup>7</sup> especially if the RRSP portfolio value is to be valued after taxes; and
- (f) the life expectancy of the RRSP fund owner.

These theoretical projections *can* be done – many fund managers do them for their clients when advising them of how much to save for retirement while they are working. The difficulty one can see simply from reviewing the variables one has to forecast is that the results can vary radically – since we know at a minimum that the rate of return and the diversification strategy used by the fund manager are going to vary considerably year after year.

Moreover, even when we attempt to do these “retirement portfolio” calculations, our findings in the majority of cases is that the *increase* to any award for loss of income or a family's loss of dependency on income during the **retirement years** (in the form of discounting the annual amounts that will be paid from RRSP portfolio) is far greater than the increase in the award for simply assuming RRSP deductions during the **working years**.<sup>8</sup> In other words, not only does the assumption for RRSP contributions *simplify* the quantum exercise considerably more than making assumptions about (a) to (f) above; it provides a *conservative* approach compared to extrapolating out the plaintiff or decedent's RRSP portfolio after retirement, *and* the RRSP contribution assumption is corroborated by actual taxfiler data in Canada. The latter is what comes next in this newsletter edition.

---

<sup>5</sup> This would still require a RRSP contribution during the working years, but it would be matched with an RRSP withdrawal during the retirement years – and hence the impact on the tax rates would be captured throughout the plaintiff or decedent's life expectancy

<sup>6</sup> Some experts argue that this is a non-factor because the forensic expert should simply assume the same discount rate used to calculate the loss of income, dependency and tax gross-up awards. However, because we assume a discount rate that has lower risk (in order to safeguard the plaintiff's award) and because we do not use the rates earned by portfolio managers, I do not believe this is a reasonable assumption in most cases.

<sup>7</sup> Even if the RRSP portfolio is not valued on an after-tax basis, the employee's other sources of retirement income will influence his/her decision about saving. As a simple example, an employee who benefits from a company pension plan or group savings plan may choose to save less in his/her RRSP portfolio, as some of their savings are done elsewhere.

<sup>8</sup> For instance, using a 5% RRSP contribution rate with a 30-year-old male worker, and assuming retirement at age 63, a family's dependency award would increase by \$21,000 to \$45,000, depending on the rate of wealth accumulation in the RRSP (3.5% to 6.0%).

## Statistics about RRSP contributions in Canada

In 2005, 6 in 10 families held RRSPs, a proportion that increases with age (68% of 45-54 year olds have RRSPs), income (89% of families with after-tax income of \$85,000 and over have RRSPs), education (73% of university-degree holders have RRSPs) and net worth quintile (87% of the top 20% of net worth individuals have RRSPs).<sup>9</sup>

Lower-income individuals are much less likely to contribute to an RRSP. 4% to 27% of taxfilers in the lowest, second, and third income deciles between 1993 and 2001 contributed to RRSPs, compared to 90 to 95% of taxfilers in the ninth and highest income deciles.<sup>10</sup>

In comparison to RRSP participation, private or government pension plans only cover 37% of the Canadian working population<sup>11</sup> but this coverage increases with age, marital status (for young women and men) and, until 1997, decreased with de-unionization and employment shifts to low-coverage industries.<sup>12</sup>

Average contributions in 2004 to RRSPs varied by gender and age: husbands between the ages 35 to 54 contributed \$2600 versus husbands aged 25 to 34, who contributed \$1600; wives between the ages 35 to 54 contributed \$1200 versus wives aged 25 to 34, who contributed \$800. These contribution rates are across *all* income levels in 2004, however. When we analyze husbands between ages 35 and 54, we see that those in the top 20% of earnings in 2004 contributed \$12,000 to RPPs / RRSPs, ten times higher than those in the bottom 20% of earnings in 2004 (they contributed \$1,300 to RPPs / RRSPs).<sup>13</sup>

Only 26% of taxfilers withdrew contributions from 1993 to 2001,<sup>14</sup> but it took three years after withdrawing to repay the amount, and only one-quarter of the withdrawers did so. After 5 years, the proportion of “repayees” increased to 33%. Interestingly, almost half of RRSP holders withdrew from their RRSPs in more than one year. Only a quarter of them removed funds in three of the 9 years from 1993 to 2001.

---

<sup>9</sup> W. Pyper, "RRSP Investments", *Perspectives in Labour and Income* [Statistics Canada: Spring 2008], p. 49 and Table 1.

<sup>10</sup> P. Giles and K. Maser, "Using RRSPs before retirement", *Perspectives in Labour and Income* [Statistics Canada: Spring 2005], Table 1.

<sup>11</sup> P. Gougeon, "Shifting pensions", *Perspectives in Labour and Income* [Statistics Canada: Summer 2009], Table 1.

<sup>12</sup> R. Morissette and Y. Ostrovsky, "Pensions and retirement savings of families", *Perspectives in Labour and Income* [Statistics Canada: Winter 2007], Table 3 and Chart C.

<sup>13</sup> R. Morissette and Y. Ostrovsky, "Pensions and retirement savings of families", *Perspectives in Labour and Income* [Statistics Canada: Winter 2007], Tables 8 and 9.

<sup>14</sup> P. Giles and K. Maser, "Using RRSPs before retirement", *Perspectives in Labour and Income* [Statistics Canada: Spring 2005], Table 1, Charts A and B.

Two recent cases, decided in Alberta, accepted the evidence of Cara Brown regarding many different economic assumptions. The excerpts from these cases can be read at:

[www.browneconomic.com](http://www.browneconomic.com) > Products & Services > BEC Court Testimony

Click on the case citation on the left-hand menu to read detailed excerpts from the judgments. The recent cases are:

***Palmquist v. Ziegler, 2010 ABQB 337***: fatality case involving a family breadwinner with a spouse and three children. Justice Read made determinations as to which economist's assumption she would accept, then directed that calculations be undertaken using these assumptions. In this case, Read J. accepted Ms. Brown's assumptions with respect to Mr. Palmquist's income as of the date of trial (\$81,568);<sup>15</sup> industry-specific productivity growth from Informetrica's forecasts; the real discount rate; unemployment contingency; disability contingency, retirement age; divorce contingency; remarriage contingency; housekeeping hours; health contingency for housekeeping; children's age of independence; and tax gross-up strategy (assuming interest income only).<sup>16</sup> Damages for the family were ultimately assessed at more than \$1 million, not including special damages or legislated amounts. Justice Read determined that CPP survivorship benefits should **not** be deducted from the family's losses, and that the tax gross-up should be based on the entire claim, not the WCB subrogated amount.

***McLaren v. McLaren estate, 2010 ABQB 471***: injury case involving a woman who had been training with an accounting firm to obtain her CGA certification. The judge determined losses for only some of the pre-trial time period; and then determined an annual loss ongoing in the future, based on a -20% impairment in earning capacity,<sup>17</sup> which Brown Economic calculated in present value terms upon the judgment being issued. In doing so, Sisson J. accepted Ms. Brown's statistics regarding the earning capacity of an accounting professional who is not injured (para. [302]); Ms. McLaren's annual earning capacity as an injured accounting professional based on her income in 2006, 2007 and 2008 (para. [300]); and assumptions with regard to the real discount rate (para. [312]). Sisson, J. awarded amounts for past and future housekeeping losses, based on modifications to the calculations by Brown Economic (paras. [330] and [334])<sup>18</sup> and for psychological treatment based on Brown Economic's calculations (para. [352]) as well as chiropractic treatment for 5 years in the future, once per month (para. [359]). Brown Economic calculated the tax gross-up based on Sisson, J.'s adoption of Ms. McLaren's annual employment income as estimated by Brown Economic, and further assumptions about her retirement income from CPP and OAS. The total award came to almost \$400,000<sup>19</sup> plus \$173,455 in non-pecuniary damages; then reduced by 25% for liability on the part of the plaintiff (para. [6]). Sisson, J.'s award was based on his finding of the plaintiff suffering chronic pain and PTSD and a whole body impairment of 24%. Sisson, J. also found that "the plaintiff will not be able to work full-time on a regularly scheduled basis" (para. [156]), presumably the rationale for the finding of a 20% loss of earning capacity.

<sup>15</sup> The decedent's income level was modified by both experts at trial due to additional information from the decedent's employer that was provided during the trial.

<sup>16</sup> The one assumption that Justice Read did not agree with was our assumption of a 5% annual RRSP contribution rate for the 29-year-old decedent, which appeared to be mainly due to Mr. Palmquist's decision to withdraw his RRSP contributions in 2000 and 2001. This may have been related to the birth of the Palmquist family's twins in 2002. On one hand, this may have been prudent, given the research we now have on the slow repayment rate for Canadians who withdraw from their RRSPs (only 25 to 33% repay the amounts in 3 to 5 years, respectively). On the other hand, a better assumption for us to have made might have been to assume 0% RRSP contributions until age 40, and assume a 5% contribution rate to RRSP thereafter. We have modified our software to allow contribution rates that vary by age.

<sup>17</sup> Interestingly, the -20% impairment that Sisson, J. used to assess Ms. McLaren's annual loss of earning capacity is consistent with the -21% "mild" impairment for females based on the 2001 PALS ("Participation and Limitation Activity Survey") calculated in C.L. Brown and J.C.H. Emery, "The Impact of Disability on Earnings and Labour Force Participation in Canada: Evidence from the 2001 PALS and from Canadian Case Law", *Journal of Legal Economics*, Vol. 16, no. 2, April 2010; p. 19 and Table 6, p. 46.

<sup>18</sup> Sisson, J. noted in para. [330] that the amounts Brown Economic had calculated for Ms. McLaren's loss of housekeeping capacity were based on replacement services at 2 hours per week; he then awarded Ms. McLaren loss of housekeeping using 1 hour per week in para. [334].

<sup>19</sup> This includes an amount of \$37,500 for the tax gross-up, which Sisson, J. directed Brown Economic Consulting to calculate in para. [406] from the assumptions in the judgment.

## UPDATING NON-PECUNIARY AWARDS FOR INFLATION (JULY 2010, CANADA)

Year of Accident/ Year of Settlement or Trial	"Inflationary" Factors*	Non-Pecuniary Damages - Sample Awards				
		\$10,000	\$25,000	\$50,000	\$75,000	\$100,000
July 2009-July 2010	1.010	\$10,096	\$25,240	\$50,481	\$75,721	\$100,962
Avg. 2008-July 2010	1.014	\$10,139	\$25,347	\$50,694	\$76,040	\$101,387
Avg. 2007-July 2010	1.036	\$10,361	\$25,902	\$51,803	\$77,705	\$103,607
Avg. 2006-July 2010	1.058	\$10,582	\$26,455	\$52,910	\$79,364	\$105,819
Avg. 2005-July 2010	1.079	\$10,794	\$26,984	\$53,968	\$80,952	\$107,936
Avg. 2004-July 2010	1.103	\$11,033	\$27,582	\$55,164	\$82,747	\$110,329
Avg. 2003-July 2010	1.124	\$11,238	\$28,095	\$56,190	\$84,285	\$112,380
Avg. 2002-July 2010	1.155	\$11,548	\$28,870	\$57,741	\$86,611	\$115,482
Avg. 2001-July 2010	1.181	\$11,809	\$29,523	\$59,046	\$88,569	\$118,092
Avg. 2000-July 2010	1.211	\$12,106	\$30,266	\$60,532	\$90,797	\$121,063
Avg. 1999-July 2010	1.244	\$12,436	\$31,090	\$62,181	\$93,271	\$124,362
Avg. 1998-July 2010	1.265	\$12,651	\$31,629	\$63,257	\$94,886	\$126,515
Avg. 1997-July 2010	1.278	\$12,777	\$31,944	\$63,887	\$95,831	\$127,775
Avg. 1996-July 2010	1.298	\$12,984	\$32,461	\$64,922	\$97,383	\$129,844
Avg. 1995-July 2010	1.319	\$13,189	\$32,973	\$65,945	\$98,918	\$131,890
Avg. 1994-July 2010	1.347	\$13,472	\$33,680	\$67,361	\$101,041	\$134,722
Avg. 1993-July 2010	1.349	\$13,494	\$33,736	\$67,471	\$101,207	\$134,942
Avg. 1992-July 2010	1.375	\$13,746	\$34,366	\$68,732	\$103,098	\$137,464
Avg. 1991-July 2010	1.395	\$13,951	\$34,877	\$69,754	\$104,630	\$139,507
Avg. 1990-July 2010	1.474	\$14,736	\$36,840	\$73,679	\$110,519	\$147,358
Avg. 1989-July 2010	1.544	\$15,441	\$38,603	\$77,206	\$115,810	\$154,413
Avg. 1988-July 2010	1.621	\$16,211	\$40,527	\$81,054	\$121,581	\$162,109
Avg. 1987-July 2010	<b>1.686</b>	\$16,862	\$42,155	<b>\$84,309</b>	\$126,464	\$168,619
Avg. 1986-July 2010	1.760	\$17,597	\$43,992	\$87,984	\$131,976	\$175,968
Avg. 1985-July 2010	1.833	\$18,334	\$45,836	\$91,672	\$137,508	\$183,344
Avg. 1984-July 2010	1.906	\$19,061	\$47,652	\$95,304	\$142,956	\$190,607
Avg. 1983-July 2010	1.988	\$19,881	\$49,703	\$99,406	\$149,109	\$198,812
Avg. 1982-July 2010	2.105	\$21,048	\$52,620	\$105,241	\$157,861	\$210,481
Avg. 1981-July 2010	2.331	\$23,313	\$58,283	\$116,566	\$174,849	\$233,131
Avg. 1980-July 2010	2.623	\$26,225	\$65,563	\$131,127	\$196,690	\$262,253
Avg. 1979-July 2010	2.888	\$28,882	\$72,205	\$144,410	\$216,615	\$288,819
Jan. 1978-July 2010	<b>3.290</b>	\$32,897	\$82,244	\$164,487	\$246,731	<b>\$328,974</b>

\$84,309= \$50,000 x 1.686 represents the dollar equivalent in July 2010 of \$50,000 based on inflation increases since 1987. Similarly, \$328,974 (= \$100,000 x 3.290) represents the dollar equivalent in July 2010 of \$100,000 in 1978 based on inflationary increases since the month of January 1978.

\* Source: Statistics Canada, Consumer Price Index, monthly CPI release, rolling average (except for Jan. 1978).

Consumer Price Index		Unemployment Rate	
From July 2009 to July 2010* (rates of inflation)		For the month of July 2010	
Canada**	1.8%	Canada:	8.0%
Vancouver:	2.5%	Vancouver:	7.7%
Toronto:	3.1%	Toronto:	9.8%
Edmonton:	1.4%	Edmonton:	7.1%
Calgary:	1.4%	Calgary:	6.7%
Halifax:	1.6%	Halifax:	6.2%
St. John's, NF:	2.1%	St. John's, NF:	7.7%
Saint John, NB:	1.5%	Saint John, NB:	8.3%
Charlottetown:	0.9%	Charlottetown (PEI):	10.8%

\* Using month-over-month indices. Source: Statistics Canada  
 \*\* 12 month rolling average up to July 2010 is 1.0% (see table above).



### Brown Economic Consulting Inc.

#### HEAD OFFICE

#216, 5718-1A Street South West  
Calgary, AB T2H 0E8  
T 403.571.0115 F 403.571.0932

#907, 1128 Sunset Drive  
Kelowna, B.C. V1Y 9W7  
Toll 1.800.301.8801

1791 Barrington St., Suite 300  
Halifax, NS B3J 3R7  
Toll 1.800.301.8801

Email [help@browneconomic.com](mailto:help@browneconomic.com)  
Web [www.browneconomic.com](http://www.browneconomic.com)