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Without- and With-accident income:

Total Compensation

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Without- and With-accident Income: Total Compensation

In the sections below, I provide notes that I used to discuss the different sources of earnings data experts can rely on to estimate an individual's earning stream, and other sources, usually benefits, that make up an individual's total compensation.

1 Sources of Earnings Data

When doing a loss of income calculation, we need to estimate both the without- and with-accident income streams. That is, we need to determine what the individual would have earned, had the accident not occurred, and what that individual will earn now, despite the injuries.

1.1 Average of past income

We can look at an average of the individual's past income, both before and after the accident. If they have a well-established income stream prior to the accident, then assuming that they would have continued to earn the same level of income that had been achieved prior to the accident is usually a reasonable representation of what they will earn in the future. Similarly, if they have an established income stream after the accident, it is a good indicator of what they are capable of earning, despite their injuries.

However, there is a downside to relying on a average of past income, as it may not account for future promotional wage growth. Also, it may reflect earnings during a boom time in the economy or a slower time (recession) during the economy. For example, if in the oil industry, relying on earnings during the 2010-2015 time frame, although we have 6 years, it may overstate the without-accident earnings since this was during a boom in the oil industry. Similarly, relying on average earnings for the 2015-2020 time frame may understate due to the significant decline in the oil industry.

1.2 Census data

Another source of earnings data is the Canadian Census. This source is the single most reliable source of earnings data in Canada. It provides earnings data for specific occupations, age categories, gender, and education.

Census data if very useful when an individual has just completed their education and are started a career; or only has been working for a few years in an occupation; or has changed occupations during their work. It is also useful when an individual does not have a well-established career (income) path, as in the case with younger

individuals. In the with-accident scenarios, it is often the case that the injured party needs to retrain, so to estimate the earnings stream we can look at census data for individuals within the same occupation, and the same level of education.

The census data can also provide a baseline comparison when considering an individual's average of their past income. It can help us determine if the individual's earnings are consistent with what statistical averages would suggest, or if they are above- or below-average.

1.3 Salary grids / Collective bargaining agreements

Certain occupations have their salaries and/or wage rates specified by a collective agreement. Two examples of such occupations are teachers and nurses.

The collective agreements and salary grids are a useful source of earnings data as it exactly sets out how an individual's earnings will progress. For example, the teacher's salaries are specified for the first year of teaching through the tenth year of teaching – at which time they reach the top of the salary grid. Since teachers do not tend to receive overtime pay or shift differentials, if the school division the individual is going to work for is known, then we know exactly how the salary will progress with experience.

Another example of an occupation with a salary grid is nursing. As you gain experience, the wage rate increases such that after nine years of experience, the top of the salary grid is reached. However, with jobs like nursing, the salary grid reflects the *base* wage rate. A nurse's wage if often higher than the base rate due to things like overtime, shift premiums, and education premiums. However, the base wage rate is still useful when estimating the income of a nurse.

First, if the individual has an established income stream as a nurse, the base wage rate, and the reported employment income, can be used to determine "straight-time equivalent hours" (STE). The STE hours are the number of hours a person would have to work, at their *base* hourly wage, in order to earn the same income they earned after receiving shift premiums, overtime hours, education premiums, lump-sum pay-outs, and so forth. The STE hours, and the base wage rate can then be used to estimate a future income stream.

Second, if there is not an established career, the base wage rates can be used to estimate a wage inflation index, and this index, specific to the nursing occupation, can be applied against the census data (which is reported in 2015 dollars), to determine an income stream, in combination with the census data.

2 Other sources that make up total compensation

In addition to money paid to an employee, an individual may also receive benefits as part of their total compensation for employment. These sources should also be taken into consideration when calculating the income streams for a loss of income assessment. These are usually included under the heading "fringe benefits".

2.1 Insurance

Extended health, disability, dental, life. This is a benefits package that an employer provides to an employee, and is usually valued at approximately 2.5 to 3.5 percent of earnings, and we usually include the value of insurance as a percentage of income.

2.2 Car allowance

The employer may provide compensation for vehicle use, or provide a company car. This is usually a taxable benefit, and the value of the benefit is already included in the reported T4 earnings (box 34 of the T4 slip).

2.3 RRSP matching

This benefit arises when the employer makes contributions to an RRSP, matching the employee's contribution to a certain percentage. This is also usually a taxable benefit, and already included in the reported T4 earnings (box 40 of the T4 slip).

2.4 Stock/security options

This benefit is offered as an offer to purchase shares of the company, at some specified price. The individual may then choose to sell these shares, once they've vested, in order to realize a profit on the sold shares. If this option has been exercised in the past, then the net value of the sale is usually a taxable benefit and already reported in the T4 earnings (box 38 on the T4 slip). In this particular case, the cost of the stock option needs to be deducted in order to determine the net value of the sale. The cost is reported in box 41 of the T4 slip. For example, suppose the option to purchase 10 shares is offered at $5 per share. Once it vests, it is sold at a market value of $10 per share. The $100 (= $10 × 10 shares) would be reported as T4 earnings, but the cost of the option $50 (= $5 × 10 shares), which is reported in box 41, would need to be deducted.

There are also cases in which the stock options have no value. For example, suppose the option to purchase 10 shares is offered at $5 per share. Once it vests, the market value of the share is only $2.50 per share. In this case, the cost to purchase the option ($50) is more than what would be received for selling it ($25), so the option has no value.

Stock options do not seem to be that common, and when estimating the value of potential future stock options, we usually include the value of a percentage of income.

2.5 Employer-funded pensions

There are two types of employer-funded pensions. A defined-contribution and define-benefit.

Defined contribution

A defined contribution plan is simply whatever is contributed on the individual's behalf is what is received out. If the employer contributes 10 percent of earnings, then the value of the employer-funded pension benefit in each year is 10 percent. This is included as a percentage of income.

Defined benefit

A defined benefit pension plan is when both the employer and employee make contributions to the plan, and upon retirement, a formula is used to calculate the pension benefit. Examples of a defined benefit pension plan are the Local Authorities Pension Plan (LAPP), the Alberta Teacher's Retirement Fund (ATRF), police forces, and so forth.

The value of the defined benefit pension plan can be captured in two ways. First, the value of the employer's contribution can be included as a percentage of income. Thus, the employee will receive the employer contribution as part of their loss of income. The amount that the employer would have contributed on their behalf can be invested in a private pension plan. Upon retirement, the reduced with-accident pension plus the top-up from the private plan investment, will equal the without-accident pension, thus ending the loss.

A second method to capture the value of the employer-funded pension is to actually calculate the without- and with-accident pension streams upon retirement, and compare the two to determine the loss of income.

2.6 CPP pension

It is assumed that the premiums an employee pays into the Canada Pension Plan (CPP), are roughly equivalent to what that individual will receive as a retirement pension. It seems logical that if an individual is earning less than they would have, had they not been injured, they will not be contributing as much to the pension plan. As a result, the with-accident retirement benefit will be less than in the without-accident scenario. This may not be the case.

For example, if the individual is receiving CPP disability, and will continue to receive disability until age 65, the CPP retirement benefit may not be impacted as all of the years on disability are ignored when calculating the benefit.

Second, if the individual would have earned, and will earn, an income at least as much as the yearly maximum pensionable earnings, then the contributions (and resulting retirement pension) will be the same in both the without- and with-accident scenario.

However, if there is a difference between the without- and with-accident CPP contributions, then it is reasonable to include a percentage of income to reflect the difference in premiums. As an example, suppose in the without-accident scenario, an individual would have earned $100,000, and after being injured, they earn $45,000. The CPP contribution in the without-accident scenario would be $3,166 (the maximum) but in the with-accident scenario would be $2,262. This is a difference of approximately $921 per year. In this particular case, it could be reasonable to include a 3 percent contingency in the without-accident scenario and a 5 percent contingency in the with-accident scenario to reflect the difference.