

“A Streamlined Method for Calculating the Adjustment for Neutralizing Adverse Tax  
Consequences of a Lump Sum Award in Employment Cases”

Michael Nieswiadomy  
Department of Economics  
University of North Texas  
1155 Union Circle #311457  
Denton, TX 76203-5017  
940-565-2244  
[michael.nieswiadomy@unt.edu](mailto:michael.nieswiadomy@unt.edu)

&

Thomas Loudat  
46-281 Auna St.  
Kaneohe, HI 96744-4110  
808-235-0578  
[tomloud@earthlink.net](mailto:tomloud@earthlink.net)

November 4, 2016

“A Streamlined Method for Calculating the Adjustment for Neutralizing Adverse Tax  
Consequences of a Lump Sum Award in Employment Cases”

Abstract

This paper provides a method to perform “gross-up” calculations to determine an award amount when estimated losses are taxable income such as in employment (e.g., wrongful termination, discrimination) cases. The main difficulty in making damage calculations in employment cases is the simultaneity problem wherein the award amount is a function of the income taxes paid and the income taxes paid are a function of the award amount (and other income received in the year in which the award is received). This paper makes two broad improvements. First, it extends the existing literature by providing “gross-up” calculations in the context of several real world issues: spousal income, other income, Social Security and Medicare taxes, and attorney fees. Second, it presents a streamlined estimation process which uses several innovative spreadsheet functions (i.e., Goal Seek, VLOOKUP, and a macro) to rapidly iterate to a solution in a user-friendly fashion. An example calculation is provided to show how state and federal income taxes, as well as Social Security and Medicare taxes, are accounted for. The deductibility of attorney fees is factored into the calculation. This efficient spreadsheet method can be adapted easily for use by a forensic economist in typical employment award “gross-up” calculations.

“A Streamlined Method for Calculating the Adjustment for Neutralizing the Adverse Tax  
Consequence of a Lump Sum Award in Employment Cases”

I. Introduction

Adjusting for the adverse effects of federal income taxes in employment cases has received considerable attention in the forensic economics literature (Goodwill and Paul, 1988; Benich, 1991, 1996; Markowski and Cross, 1991a, 1991b; Bowles and Lewis, 1996; Lewis and Bowles, 1996; Ben-Zion, 2000; Rodgers, 2003). Prior to 1996 there was some ambiguity in the treatment of taxes in litigation involving employment law. However, the Small Business Job Protection Act of 1996 (Public Law No. 104-88, Sec. 1605 (REPEAL OF EXCLUSION FOR PUNITIVE DAMAGES AND FOR DAMAGES NOT ATTRIBUTABLE TO PHYSICAL INJURIES OR SICKNESS); 26 U.S.C. §104(a)(2)) resolved this issue by codifying that damages not resulting from a personal physical injury are subject to federal income taxes<sup>1</sup>. Thus taxes are levied on awards for back pay and front pay in employment cases. If no adjustment is made for the tax consequences, the plaintiff will not be made whole by the award. Rodgers (2003) notes that there are two causes of this problem. First, because these awards are often required to be presented in after tax dollars, the taxation of the award causes the income to be taxed twice. Second, because federal tax rates are progressive, taxing the award of back pay and front pay when received in a lump sum in one tax year causes the plaintiff to pay higher taxes on the lost income than they would have paid if they had received the income yearly. This increase in federal tax liability has been termed the “adverse tax consequence” (Ben-Zion, 2000).

---

<sup>1</sup> The law clearly relates to employment cases since it states “For purposes of paragraph (2), emotional distress shall not be treated as a physical injury or physical sickness.”

Besides usual loss estimation issues (e.g., base earnings, mitigating earnings, wage growth rates, discount rates (Tucek, 2012), worklife expectancy (Foster & Skoog, 2004; Skoog et al., 2011)) involved in personal injury cases, employment cases may require the expert to calculate an award amount such that after deducting Federal and State income taxes the resultant difference is the estimated loss amount. This calculation has been referred to as an award “gross-up” to account for the adverse tax consequences of an award in employment cases (Ireland, 2010; Ben-Zion, 2000).

The “gross-up” calculation is not straightforward. The calculation must consider: both federal and state (if applicable) income taxes and their progressive rate structure; the deductibility of state income taxes in some state jurisdictions; payroll taxes; and other income that may be received during the year in which an award is received. The "gross-up" calculation can be even more cumbersome when the forensic economist estimates alternative loss scenarios.

The purpose of this paper is to provide an innovative method to perform “gross-up” calculations to determine an award amount when estimated losses are taxable income. This paper makes two broad improvements. First, it extends the existing literature by addressing several real world issues: spousal income, other income, Social Security and Medicare taxes, and attorney fees. Second, it presents a streamlined estimation process which uses several innovative spreadsheet functions (i.e. Goal Seek, VLOOKUP, and a macro) to rapidly iterate to a solution in a user-friendly fashion. In Section II, we outline the conceptual framework for the "gross-up" calculation. In Section III, we demonstrate, using an example case, the use of spreadsheet internal routines to solve for a tax-adjusted award amount for back pay. In Section IV, we use the model for gross-up calculations for varying years of possible future lost earnings. In Section V, we conclude the paper.

## II. Conceptual Framework

The conceptual framework is the following.

$$\text{EAGU} = \text{ATL} + \text{TFGU} + \text{TSGU} + \text{TPGU}$$

Where:

EAGU = the “gross-up” employment award amount

ATL = the estimated after-tax loss amount

TFGU = the "gross-up" federal income tax amount

TSGU = the "gross-up" state income tax amount (if applicable)

TPGU = the "gross-up" payroll (i.e., Social Security and Medicare) tax amount.

All tax amounts are determined by the “gross-up” award amount, which in turn is determined by the tax amounts. We overcome this simultaneity problem as follows.

$$\text{ATL}' = \text{EAGU} - (\text{TFGU} + \text{TSGU} + \text{TPGU})$$

Where:

ATL' = calculated after-tax amount

EAGU = a “gross-up” value solved via an Excel Goal Seek process.

For this calculation, EAGU is a value and all taxes are variables so that after their deduction from the value EAGU, what results is:  $\text{ATL}' = \text{ATL}$ . We demonstrate the calculation of all values in Section III.

State Taxes (TS): Conceptually, State income taxes are also a function of State taxable income (TIS) (received during the year the award is received). The calculation of TIS, however, depends on the jurisdiction. We use Hawaii as an example, where

$$\text{TIS} = \text{EAGU} + \text{MI} + \text{SI} + \text{OI} - \text{AI} - \text{PE} - \text{SID} - \text{TS}$$

Where:

- TIS = state taxable income (in the year the employment award is received)
- EAGU = the “gross-up” employment award amount
- MI = any plaintiff mitigating income (in the year of the award)
- SI = spousal income (in the year of the award)
- OI = other income (e.g., interest, dividends) (in the year of the award)
- AI = any adjustments to income (e.g., deductible attorney fees)<sup>2</sup>
- PE = the personal exemption deduction (different than the Federal)
- SID = the standard or estimated itemized deduction (different than the Federal)
- TS = any state income taxes (if federal AGI is less than \$200,000<sup>3</sup>).

Once State taxable income is determined, it is a straightforward spreadsheet calculation to determine the State income tax amount (TS).

Federal Taxes (TF): Conceptually, Federal income taxes are a function of Federal taxable income (TIF) (received during the year the award is received) determined as follows.

$$\text{TIF} = \text{EAGU} + \text{MI} + \text{SI} + \text{OI} - \text{AI} - \text{PE} - \text{SID} - \text{TS}$$

Where:

- TIF = Federal taxable income (in the year the employment award is received)
- EAGU = the “gross-up” employment award amount
- MI = any plaintiff mitigating income (in the year of the award)
- SI = spousal income (in the year of the award)

---

<sup>2</sup> An important adjustment to gross income is the deduction of attorney fees “above the line.” See 26 U.S. Code § 62(a)(20). See Erickson and Mirsky (2010).

<sup>3</sup> Hawaii has a unique tax provision that allows deduction of state income taxes paid in that year, such as income taxes withheld, if joint Federal Adjusted Gross Income (AGI) is less than \$200,000 for singles or married couples. Since in most cases the AGI (from all sources including the employment award) will be greater than \$200,000, this deduction will generally not apply. See State of Hawaii (2014, p. 18).

- OI = other income (e.g., interest, dividends) (in the year of the award)
- AI = any adjustments to income (e.g., deductible attorney fees)
- PE = the personal exemption deduction
- SID = the estimated itemized or standard deduction
- TS = any state income taxes.

Once Federal taxable income is determined, it is a straightforward spreadsheet calculation to determine the Federal income tax amount (TF).

Payroll Taxes (TP): Conceptually, payroll taxes (TP) are a function of the employment award amount (EAGU). The calculation of TP is as follows.

$$TP = (EAGU - AF) \times (SS + M)$$

Where:

- EAGU = the “gross-up” employment award amount
- AF = attorney’s fees<sup>4</sup>
- SS = the social security tax rate (6.2%) subject to the earnings maximum
- M = the Medicare tax rate (1.45%) + the additional Medicare tax rate of 0.9% for the amount of married filing jointly income over \$250,000 (or over \$200,000 if single) + Net Investment Income Tax rate (discussed below)

### III. Using Spreadsheet Routines for Back Pay Gross-up in an Example Case

After-tax Loss (ATL) example: We formulate the following example plaintiff.

- A married,<sup>5</sup> college educated, 55 year old male who lost his job in Hawaii at age 53 due to age discrimination;

---

<sup>4</sup> Attorney fees (as a part of the award) are not treated as wages and are not subject to FICA/Medicare tax withholding. Rev. Rul. 80-364, 1980-2 C.B. 294. See Erickson and Mirsky (2010).

<sup>5</sup> Ben-Zion (2000) and Rodgers (2003) note that modeling married couples requires additional calculations so our use of a married couple demonstrates model generality.

- Plaintiff consistently earned \$75,000 per year from 2011-2013 and is projected to have earned \$75,000 per year adjusted for overall economy-wide wage growth and the age-earnings wage growth for a college educated male.
- June 1, 2014 plaintiff lost his job and was unable to find employment until November 1, 2016, the date of the trial.
- The new job's start pay is \$50,000 annually with economy-wide and age-earnings changes thereafter to retirement at 65.
- Plaintiff receives nontaxable fringe benefits in both jobs.
- Plaintiff's wife is 55 years old and earns \$60,000 per year with economy-wide and age-earnings changes.
- The family has \$20,000 in other income (e.g., interest and dividends).
- The tax jurisdiction requires the calculation of lost income after subtracting state<sup>6</sup> and federal income taxes, and Social Security and Medicare taxes; and effective income tax rates (in real 2016 \$) remain the same in future years.<sup>7</sup>
- The family will have \$10,000 in federal itemized deductions in 2016.
- The family will use the \$4,400 standard deduction for Hawaii.
- The plaintiff will pay 30%<sup>8</sup> in attorney fees on the gross-up award.

---

<sup>6</sup> The average effective tax rates for the U.S. and Hawaii which are used to determine the after tax lost past and future income, are shown in Appendices A and B, respectively. We are assuming the jurisdiction requires that the damages be presented in after tax amounts, but this may not be required in every place. Federal courts require that the damages be expressed in after tax amounts. For the year 2016 (in which the award will be received), we use the 2016 federal tax rate schedule. At the time of this writing the Hawaii 2016 income tax rates were not available. For our example, we use Hawaii's 2015 income tax rate schedule.

<sup>7</sup> For the 2016 income tax calculations, is assumed that the couple takes the standard deduction of \$4,400 for Hawaii and it is assumed that they use \$10,000 in itemized deductions for the U.S. tax returns. Personal exemptions are not considered since they are phased out at higher income levels.

<sup>8</sup> The attorney fee can be set to any percentage in the spreadsheet.

We calculate after-tax losses (ATL) for alternative periods. These include: cumulative past losses, and alternative cumulative future ATL amounts for our example. The mitigating income is calculated in a separate table (not shown).<sup>9</sup> The net (after subtracting mitigating income) after-tax lost earnings are used to calculate the tax-adjusted (grossed-up) awards.

In Table 1, we calculate the gross-up for a past-lost earnings of \$135,468.<sup>10</sup> The "gross-up" employment award (EAGU) equals \$204,836.<sup>11</sup> In Table 1's spreadsheet, this "gross-up" amount links from the earnings award (EAGU) calculation in Table 3a.<sup>12</sup> In Table 2, we show the cumulative past plus future net losses and the tax-adjusted amounts.<sup>13</sup>

Award Amount (EAGU) Determination

We determine State and Federal taxable income before calculating their respective income tax amounts. In Table 3a, we calculate taxable income for our example as follows.

TIS or TIF (state; federal)	=	\$224,381; \$201,763	=
EAGU (state; federal)	=	\$204,836; \$204,836	+
MI (2016 husband's income)	=	\$7,265 <sup>14</sup>	+
SI (2016 wife's income)	=	\$58,131 <sup>15</sup>	+
OI (both state & federal)	=	\$20,000 other income (e.g., interest and dividends)	-
AI (30% attorney fees)	=	\$61,451	-
SID (state, federal)	=	\$4,400, \$10,000 (Hawaii standard deduction, federal itemized deduction)	-

<sup>9</sup> For the sake of brevity, the entire spreadsheets for calculating past lost earnings and future lost earnings are not shown. They are available upon request.

<sup>10</sup> Shown in our spreadsheet in cell T272 in Table 1.

<sup>11</sup> Shown in our spreadsheet in cell T273 in Table 1.

<sup>12</sup> The link is to E346 in our Table 3a spreadsheet (the EAGU calculation table).

<sup>13</sup> In our spreadsheet in Table 2 these are in cells T295 to T305 and U295 to U305, respectively.

<sup>14</sup> This is the husband's expected mitigating income from Nov. 1 to Dec. 31, 2016, as shown in Table 3a, cell K356.

<sup>15</sup> This is the wife's expected income for Jan. 1, 2016 through Dec. 31, 2016, as shown in Table 3a, cell K357

TS = \$17,018 (state income tax deducted on federal tax return)

The determination of payroll taxes (TP) factors into the calculation of the maximum Social Security taxable earnings (\$118,500) and payroll taxes paid on earned income for the tax year. We also include the 0.9% Additional Medicare Tax on the married couple's wages above \$250,000 (or \$200,000 for single). We also include the 3.8% Net Investment Income Tax (NIIT, sometimes called the Medicare Contribution Tax) on investment income (e.g., \$20,000 in our example) if the married couple's modified adjusted gross income is over \$250,000 (or over \$200,000 for a single person).<sup>16</sup>

The calculation process of the "gross-up" employment award (EAGU) is the same for all loss periods. Using the past loss period of our example to demonstrate this process, one can observe from Table 3a the following.

EAGU = \$204,836

TS = \$17,018 calculated via the 2015 Hawaii income tax schedule<sup>17</sup>

---

<sup>16</sup> Structurally this is as follows using an IF command:

-IF(EAGU - attorney fees + 2016 husband's earned income <= 118500, (EAGU - attorney fees) \* 0.0765, 0.0765 \* (118500 - 2016 earned income) + 0.0145 \* (EAGU - attorney fees - 118500)) - IF(EAGU - attorney fees + 2016 husband's earned income + 2016 wife's earned income > 250000, 0.009 \* (EAGU - attorney fees + 2016 husband's earned income + 2016 wife's earned income - 250000), 0) - IF(EAGU - attorney fees + 2016 husband's earned income + 2016 wife's earned income + other income > 250000, 0.038 \* (min(other income, EAGU - attorney fees + 2016 husband's earned income + 2016 wife's earned income + other income - 250000), 0)

In our spreadsheet in Table 3a in cell E349, this formula is:

=-IF(E346+K359+K356 <= 118500, (E346+K359)\*0.0765, 0.0765\*(118500-K356)+0.0145\*(E346+K359-118500))-IF(E346+K359+K356+K357 > 250000, 0.009\*(E346+K359+K356+K357-250000), 0) - IF(E346+K359+K357+K358 > 250000, 0.038\*MIN(K358, E346+K359+K356+K357+K358-250000), 0)

The result is =0.0765\*(118500 - 7265) + 0.0145\*(204836 - 61451 - 118500) = \$8,870. Note that the Additional Medicare Tax and NIIT do not apply here because the income was not above the respective thresholds.

<sup>17</sup> Once State taxable income (TIS) is determined, the state income tax amount is calculated from the rate schedule using a VLOOKUP command structured as follows:

Lookup the "tax amount at min. of bracket" corresponding to the lower bound of the "Taxable Income" bracket which contains TIS amount + (TIS - the lookup value of lower bound of the "Taxable Income" bracket corresponding to TIS) x the VLOOKUP marginal tax rate corresponding to the TIS amount.

In our example spreadsheet, the Table 3a TS in cell E348 refers to cell K362, which is the VLOOKUP value per the VLOOKUP structure described from the State Income Tax rate schedule in cells N343 to Q354. In Table 3a, the formula in cell K362 is =-(VLOOKUP(K361, \$N\$343:\$Q\$354, 3) + (K361 - VLOOKUP(K361, \$N\$343:\$Q\$354, 1)) \* VLOOKUP(K361, \$N\$343:\$Q\$354, 4)). The first part of the VLOOKUP

TF = \$43,479 calculated via the 2016 Federal income tax schedule<sup>18</sup>

The after-tax<sup>19</sup> loss (ATL) for the past loss period shown in Table 1<sup>20</sup> becomes the value solved to obtain after-tax award (ATL') via a GOAL SEEK<sup>21</sup> function to determine the “gross-up” employment award value (EAGU). Using this command, the EAGU value causing the difference between ATL and ATL' to be \$0 is the EAGU value after which deducting TF, TS & TP results in the ATL.<sup>22</sup> To reemphasize, after the plaintiff receives a gross-up award of \$204,836, he will pay \$43,479 in federal income taxes, \$17,018 in Hawaii state income taxes, and \$8,870 in Social Security and Medicare taxes, for a total of \$69,368 in taxes. After subtracting \$69,368 in taxes from the gross-up employment award of \$204,836, the plaintiff will receive an

---

formula yields \$6,427 and the second part of the VLOOKUP formula yields \$10,591 ( $=\$224,381 - \$96,000) * 0.0825$ ). The two parts sum to \$17,018.

<sup>18</sup> Once taxable income (TIF) is determined, the federal income tax is calculated from the rate schedule using a VLOOKUP command structured similarly to the one used for the state tax amount as follows: In our example spreadsheet, the Table 3a TF in cell E347 refers to cell K365, which is the VLOOKUP value per the VLOOKUP structure described from the Federal Income Tax rate schedule in cells I345 to L351.

In Table 3a, the formula in cell K365 is  $=\text{VLOOKUP}(K364, \$I\$345:\$L\$351, 3) + (K364 - \text{VLOOKUP}(K364, \$I\$345:\$L\$351, 1)) * \text{VLOOKUP}(K364, \$I\$345:\$L\$351, 4)$ . The first part of the VLOOKUP formula yields \$29,518 and the second part of the VLOOKUP formula yields \$13,962 ( $= (\$201,763 - \$151,900) * 0.28$ ). The two parts sum to \$43,479.

<sup>19</sup> There is a subtle difference in the way we calculate taxes on the stream of lost earnings (past and future) and the taxes in the year the award is received. In Tables 1 and 2, we calculate the taxes on past and future earnings for the spouse and the plaintiff (but for the alleged employment violation) and the taxes on the mitigating earnings for the plaintiff plus the spouse's income using the effective tax rates from Statistics of Income from the Department of the Treasury as shown in Appendix A (or Appendix B for Hawaii). We use these effective tax rates to estimate what the future effective tax rates will be for the couple as their adjusted gross income changes over time. For the year in which the award is received, we assume that the forensic economist can determine the spouse's income, other income and the deductions that will be taken that year and thus we use the current tax table as shown in Table 3a (2016 for federal taxes and 2015 for Hawaiian taxes).

<sup>20</sup> This is cell E352 in Table 3a of our example spreadsheet.

<sup>21</sup> Goal Seek is a very useful and efficient utility in Microsoft Excel that allows the user to solve problems that don't have closed-form solutions. The user can request Goal Seek to change an input value in a formula until it returns a desired output. It iterates to a solution quickly by adjusting the input value upwards and downwards until the result is within a narrow range of the desired output. It allows the user to achieve the desired result of a formula in a cell very quickly compared to several seconds or minutes that it would take to manually adjust the value in an input cell. Goal Seek is found under the “Data” tab, then under the “What-If Analysis” tab.

<sup>22</sup> Using our example, structurally the GOALSEEK command is specified as follows:

Set cell: E354 (Note: Cell E354 = ATL' (cell E352) minus ATL (the value in cell E353 specified as the after tax loss amount and refers to cell T272)

To value: 0

By changing cell: EAGU (cell E346). The final result is EAGU = \$204,836.

after-tax award of \$135,468 which is equal exactly to the after-tax loss amount. Thus the plaintiff will be made whole.<sup>23</sup>

#### IV. Gross-Up Calculations for Varying Years of Front Pay Loss: A Macro for Repeated Use of Goal Seek

The number of years that a court may allow for an earnings loss in an employment case can vary. The forensic economist can provide a range of front pay losses (say from one to ten years) from which the court can choose. The economist can also provide the tax adjusted cumulative award for each year using the same calculation process outlined in Section III that can be automated using a spreadsheet Macro<sup>24</sup> in Table 3b to facilitate multiple calculations.<sup>25</sup> The resulting cumulative (including past losses) gross-up amounts for ages 55 to 65 are shown in cells U295 to U305 in Table 2.

---

<sup>23</sup> Bear in mind that since the plaintiff must pay his/her attorney, the plaintiff will not receive the full amount of the after tax loss. Generally the attorney fees are not compensable. We are not attempting to compensate the plaintiff for the cost of the attorney. But we are accounting for the fact that the attorney fees are deductible from the employment award.

<sup>24</sup> A Macro is a small program in Excel that can be used to perform repetitive steps. Macros are written in Visual Basic for Applications (VBA), but the user does not need to be a VBA programmer to create a Macro. A Macro can be created by asking Excel to “Record” mouse and keypad strokes. The Macro feature can be found under the “View” tab. Once the Macro has been recorded and named with a “Shortcut,” such as Ctrl “L”, it can easily be repeated by hitting Ctrl “L”.

<sup>25</sup> Table 3b is constructed to look for the total loss for each age in Table 2 and place the loss amount two columns to the right of the age in Table 3b. For example, the formula in cell E381 is =VLOOKUP(B374,\$B\$295:\$U\$305,19). The 19<sup>th</sup> column in Table 2 is column T. It looks for age 55 (the content of cell B374 which finds age 55 in cell B295 in Table 2), and finds the estimated loss value 19 columns over, in T295. The total cumulative of back pay and a partial year of front pay loss is \$138,802. The correct tax adjusted amount is \$209,267 shown in cell U295, which links from E374. To expedite the process of calculating the tax adjusted amount for each age from 55 to 65 years old, a Macro that repeats this Goal Seek command at each future age is used, as follows:

```
Sub Macro1()  
' Macro1 Macro  
' repeat goal seek  
' Keyboard Shortcut: Ctrl+l  
    ActiveCell.GoalSeek Goal:=0, ChangingCell:=ActiveCell.Offset(-8, 0).Range( _  
        "A1")  
    ActiveCell.Offset(29, 0).Range("A1").Select  
End Sub
```

## V. Conclusions

An FE needs to calculate a tax adjusted (gross-up) award to offset adverse tax consequences from receiving a lump sum award in employment cases if a plaintiff is to be made economically whole. This calculation becomes complicated because an additional payment which is made to the plaintiff to handle the adverse tax consequences of receiving the award causes an additional tax liability, which then requires an additional payment, and so on.

We present a method that facilitates making the tax “gross-up” calculation for a range of possible back pay and future loss amounts. The method calculates all tax amounts including Federal and State income taxes and payroll taxes (and accounts for the deductibility of attorney fees) required to make a plaintiff economically whole in the sense of receiving an FE estimated loss amount after deducting gross-up taxes. The method uses common spreadsheet functions and formulas and thus its use is readily available and usable by the typical FE.

Our method accounts for both federal income taxes and state income taxes, payroll taxes and attorney fees in the tax gross-up process. Note that the plaintiff will pay less Social Security taxes if a lump sum award is received in one year (and is larger than Social Security maximum taxable wage) rather than spread out over several years. This is referred to as a “gross-down” calculation by Ireland (2000). But we subtract Social Security taxes when we calculate the lost past and future earnings each year. So there is no need for a “gross-down” calculation. We do subtract Social Security taxes in our “gross-up” calculations as described in the paper so that the plaintiff does ultimately receive the amount that makes the plaintiff whole. We do not consider the possible loss of some years of credited Social Security earnings.

The federal circuits are not in agreement on whether “gross-up” tax adjustments should be allowed. (See Ireland (2000) for a discussion). A forensic economist should consult the retaining

attorney on the permissibility of the tax adjustment calculation and, if so, whether it can be presented in court or in a post-trial hearing before a judge.

Appendix A: U.S. Average Tax Rate as a Percent of Adjusted Gross Income for  
Married Persons Filing Jointly, 2013

Adjusted Gross Income	Average Tax Rate
\$1 under \$5,000	0.9%
\$5,000 under \$10,000	0.9%
\$10,000 under \$15,000	0.9%
\$15,000 under \$20,000	0.9%
\$20,000 under \$25,000	0.9%
\$25,000 under \$30,000	1.9%
\$30,000 under \$40,000	3.3%
\$40,000 under \$50,000	4.4%
\$50,000 under \$75,000	6.1%
\$75,000 under \$100,000	7.8%
\$100,000 under \$200,000	11.8%
\$200,000 under \$500,000	19.2%
\$500,000 under \$1,000,000	25.9%
\$1,000,000 or more	28.3%

Source: U.S. Department of the Treasury, Internal Revenue Service, SOI Tax Stats - Individual Statistical Tables by Size of Adjusted Gross Income, Publication 1304, Table 1.2—All.

<http://www.irs.gov/uac/SOI-Tax-Stats---Individual-Statistical-Tables-by-Filing-Status>

Average tax rate calculations made by authors by dividing total tax liability by total adjusted gross income for married persons for each tax bracket.

Appendix B: Hawaiian Average Tax Rates as a Percent of Adjusted Gross Income for  
Joint Filers, 2013

Hawaii Adjusted Gross Income		Average Tax Rate
\$0 Under	\$5,000	0.0%
\$5,000 "	\$10,000	0.2%
\$10,000 "	\$20,000	0.8%
\$20,000 "	\$30,000	1.9%
\$30,000 "	\$40,000	2.8%
\$40,000 "	\$50,000	3.4%
\$50,000 "	\$75,000	4.1%
\$75,000 "	\$100,000	4.7%
\$100,000 "	\$150,000	5.2%
\$150,000 "	\$200,000	5.7%
\$200,000 "	\$300,000	6.6%
\$300,000 and over		7.8%

Source: Tax Research and Planning Office, Department of Taxation, State of Hawaii. 2015. Hawaii Individual Income Tax Statistics; Tax Year 2013. Department of Taxation, State of Hawaii. December 2015. Average tax rate calculations made by authors by dividing total tax liability by total adjusted gross income for married persons for each tax bracket.

## References

- Benich, Joseph J. 1991. Determination of Tax-adjusted Lost Income Awards: Comment 1(2) *Journal of Legal Economics*. 1(2): 99-100.
- Benich, Joseph J. 1996. Alternative Approaches to Tax Adjustments in Appraising Economic Loss: Comment. *Journal of Legal Economics*. 6(2): 91-93.
- Ben-Zion, Barry. 2000. Neutralizing the Adverse Tax Consequence of a Lump-Sum Award in Employment Cases. *Journal of Forensic Economics*. 13(3): 233-244.
- Bowles, Tyler J. and W. Cris Lewis. 1996. Taxation and Damage Awards: Current Law and Implications. *Litigation Economics Digest*. 2(1): 73-77.
- Erickson, Elizabeth and Ira B. Mirsky. 2010. The Tax Consequences of Settlement Agreements. *Compensation & Benefits Review*. 42(5): 426-431.
- Foster, Edward M. and Gary R. Skoog. 2004. "The Markov assumption for worklife expectancy," *Journal of Forensic Economics* 17(2): 167-183.
- Goodwill, Randall and Chris Paul. 1988. The Consideration of Progressive Taxes in Present Value Calculations for Personal Injury and Wrongful Death Cases. *Journal of Forensic Economics*, May, 1(2): 83-91.
- Ireland, Thomas R. 2010. Tax Consequences of Lump Sum Awards in Wrongful Termination Cases. *Journal of Legal Economics*. 17(1): 51-73.
- Lewis, W. Cris, and Tyler J. Bowles. 1996. Alternative Approaches to Tax Adjustments in Appraising Economic Loss. *Journal of Legal Economics*. 6(1): 27-38.
- Markowski, Edward P. and Edward M. Cross. 1991a. Determination of Tax-adjusted Lost Income Awards. *Journal of Legal Economics* 1(1): 11-18

- Markowski, Edward P. and Edward M. Cross. 1991b. Determination of Tax-adjusted Lost Income Awards: Reply. *Journal of Legal Economics* 1(3): 103-104.
- Rodgers, James D. 2003. Handling Taxes in Employment Law Cases. *Journal of Forensic Economics* 16(2): 225-256.
- Skoog, Gary R., James E. Ciecka and Kurt V. Krueger. 2011. The Markov Process Model of Labor Force Activity: Extended Tables of Central Tendency, Shape, Percentile Points, and Bootstrap Standard Errors, *Journal of Forensic Economics* 22(2): 165-229.
- State of Hawaii. 2014. *Hawaii Resident Income Tax Forms and Instructions*.
- Tax Research and Planning Office, Department of Taxation, State of Hawaii. 2015. *Hawaii Individual Income Tax Statistics; Tax Year 2013*. Department of Taxation, State of Hawaii. December.
- Tucek, David. 2012. Historical Net Discount Rates - An Update Through 2011 *Journal of Legal Economics*, 2012, 18(1): 89-111.
- U.S. Department of the Treasury, Internal Revenue Service, SOI Tax Stats - Individual Statistical Tables by Size of Adjusted Gross Income, Table 1.2—All. <http://www.irs.gov/uac/SOI-Tax-Stats---Individual-Statistical-Tables-by-Filing-Status>. Publication 1304.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
257	Table 1 Expected Past Earnings of John Doe																				
258																					
259																					
260																					
261																					
262																					
263																					
264																					
265			Potential	U.S. Weekly	Age-	Worklife	Expected	Spouse's	Total Family	Fed + HI	HI AGI	U.S. AGI	Social	After Tax	Fringe	Fraction	Total	Mitigating	Lost		
266	Year	Age	Earnings	Wage	Earnings	Probability	Taxable	Exp. Tax.	Exp. Tax.	Income	Average	Average	Security	(Inc.+S.S.)	Benefits	of year	Family Inc.	Total Family	Income		
267				Growth	Growth		Income	Income	Income	Taxes	Tax Rate	Tax Rate	Tax	Family Inc.			+ Fringes	Income	Income		
268	06/01/14	53.41																			
269	12/31/14	54.00	\$75,000		-0.77%	0.97071	\$72,803	\$60,000	\$132,803	\$22,603	5.18%	11.84%	\$10,159	\$100,041	\$10,268	58.32%	\$64,328	\$28,778	\$35,550		
270	12/31/15	55.00	\$75,942	2.05%	-0.77%	0.92481	\$70,232	\$60,000	\$130,232	\$22,165	5.18%	11.84%	\$9,963	\$98,104	\$9,792	100.00%	\$107,897	\$51,778	\$56,118		
271	11/01/16	55.83	\$76,739	2.05%	-0.77%	0.88634	\$68,017	\$58,188	\$126,205	\$21,480	5.18%	11.84%	\$9,655	\$95,071	\$7,531	83.61%	\$85,782	\$41,983	\$43,799		
272																		<b>Total</b>	<b>\$258,007</b>	<b>\$122,539</b>	<b>\$135,468</b>
273																				<b>Tax adjusted</b>	<b>\$204,836</b>
274																					
275																					
276																					
277																					
278																					
279																					
280																					
281																					
282																					
283																					
284																					
285																					
286																					
287																					
288																					

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
289	TABLE 2																				
290	A VALUATION OF THE EXPECTED FUTURE LOST EARNINGS OF																				
291	John Doe																				
292				Age-	Potential	Expected	Spouse's	Total Family	HI AGI	U.S. AGI	Fed + HI	Social	After Tax	Fringe	Prorated	But for	Cumulative	Cumulative	Cumulative	Tax adjustment	
293			Worklife	Earnings	Taxable Inc.	Taxable Inc.	Exp. Taxable	Exp. Tax.	Average	Average	Income	Security	(Inc.+S.S.)	Benefits	After Tax	Present	But for	Mitigating	Lost	Net loss	
294	Age	Year	Probability	Growth			Income	Income	Tax Rate	Tax Rate	Taxes	Tax	Family Inc.		Inc. + Ben.	Value	Pres. Val.	Pres. Value	P.V.		
295	55	12/31/16	0.88634	-0.77%	\$76,628	\$67,919	\$58,131	\$126,050	5.18%	11.84%	\$21,453	\$9,643	\$94,954	\$7,521	\$16,799	\$16,752	\$274,759	\$135,957	\$138,802	\$209,267	
296	56	12/31/17	0.85085	-0.77%	\$75,960	\$64,630	\$53,406	\$118,036	5.18%	11.84%	\$20,089	\$9,030	\$88,917	\$7,156	\$96,073	\$94,164	\$368,923	\$215,352	\$153,571	\$228,901	
297	57	12/31/18	0.81636	-0.77%	\$75,297	\$61,469	\$49,309	\$110,778	5.18%	11.84%	\$18,854	\$8,475	\$83,450	\$6,806	\$90,256	\$86,951	\$455,875	\$288,431	\$167,444	\$247,408	
298	58	12/31/19	0.78111	-0.77%	\$74,640	\$58,302	\$45,470	\$103,772	5.18%	11.84%	\$17,662	\$7,939	\$78,172	\$6,456	\$84,627	\$80,136	\$536,010	\$355,578	\$180,432	\$265,987	
299	59	12/31/20	0.74380	-0.77%	\$73,989	\$55,033	\$41,869	\$96,902	4.69%	7.80%	\$12,096	\$7,413	\$77,392	\$6,094	\$83,486	\$77,701	\$613,711	\$417,093	\$196,618	\$288,963	
300	60	12/31/21	0.70453	0.17%	\$74,042	\$52,165	\$38,546	\$90,711	4.69%	7.80%	\$11,323	\$6,939	\$72,448	\$5,776	\$78,224	\$71,559	\$685,271	\$475,115	\$210,156	\$307,927	
301	61	12/31/22	0.66368	0.17%	\$74,095	\$49,175	\$35,313	\$84,488	4.69%	7.80%	\$10,547	\$6,463	\$67,478	\$5,445	\$72,924	\$65,571	\$750,841	\$528,121	\$222,720	\$325,591	
302	62	12/31/23	0.61949	0.17%	\$74,147	\$45,934	\$32,222	\$78,156	4.69%	7.80%	\$9,756	\$5,979	\$62,421	\$5,086	\$67,507	\$59,663	\$810,504	\$576,232	\$234,272	\$341,853	
303	63	12/31/24	0.57241	0.17%	\$74,200	\$42,473	\$29,221	\$71,694	4.11%	6.05%	\$7,283	\$5,485	\$58,926	\$4,703	\$63,629	\$55,273	\$865,777	\$619,548	\$246,229	\$358,686	
304	64	12/31/25	0.52404	0.17%	\$74,254	\$38,912	\$26,182	\$65,093	4.11%	6.05%	\$6,613	\$4,980	\$53,501	\$4,309	\$57,810	\$49,359	\$915,136	\$658,139	\$256,997	\$373,844	
305	65	12/31/26	0.47382	0.17%	\$74,307	\$35,208	\$23,151	\$58,359	4.11%	6.05%	\$5,928	\$4,464	\$47,966	\$3,899	\$51,864	\$43,526	\$958,662	\$693,012	\$265,651	\$386,039	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
339				Table 3a														
340				<b>Summary Loss Table for Pre-Tax Award Amount</b>										<b>Estimated State and Federal Income Taxes on Award</b>				<b>2015 Hawaii State Marginal Tax Rates for Joint Filers</b>
341																		
342																		
343																		
344																		
345	Age																	
346	54																	
347																		
348																		
349																		
350																		
351																		
352																		
353																		
354																		
355																		
356																		
357																		
358																		
359																		
360																		
361																		
362																		
363																		
364																		
365																		
366																		

  

2016 Federal Marginal Tax Rates for Married Filing Jointly		2015 Hawaii State Marginal Tax Rates for Joint Filers	
Taxable Income Amount	tax amount at	taxable Income Amount	tax amount at
over	but not over	over	but not over
	min. of bracket		min. bracket
	marginal rate		marginal rate
\$0	\$18,550	\$0	\$4,800
\$18,550	\$75,300	\$4,800	\$9,600
\$75,300	\$151,900	\$9,600	\$19,200
\$151,900	\$231,450	\$19,200	\$28,800
\$231,450	\$413,350	\$28,800	\$38,400
\$413,350	\$466,950	\$38,400	\$48,000
\$466,950		\$48,000	\$72,000
		\$72,000	\$96,000
		\$96,000	\$300,000
		\$300,000	\$350,000
		\$350,000	\$400,000
		\$400,000	

  

Tax Calculations	
Item	
Award Income	\$204,836
2016 husband's income	\$7,265
2016 wife's income	\$58,131
other family income	\$20,000
deductible attorney fees	(\$61,451)
HI standard deduction	(\$4,400)
HI Taxable Income	\$224,381
HI Income Tax	(\$17,018)
Fed. itemized deductions	(\$10,000)
Fed. Taxable Income	\$201,763
Fed. Income Tax	\$43,479

  

Item	Back Pay
PRE-TAX AWARD AMT.	\$204,836
Federal Tax on Award	(\$43,479)
State Tax on Award	(\$17,018)
Soc. Sec. & Medicare Tax	(\$8,870)
Total taxes	(\$69,368)

  

After tax award	\$135,468
After tax Loss Amount	\$135,468
Difference	\$0

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
367				Table 3b														
368				<b>Summary Loss Table for Pre-Tax Award Amount</b>														
369																		
370																		
371																		
372																		
373																		
374	Age		55															
375																		
376																		
377																		
378																		
379																		
380																		
381																		
382																		
383																		
384																		
385																		
386																		
387																		
388																		
389																		
390																		
391																		
392																		
393																		
394																		
395																		

  

<b>Estimated State and Federal Income Taxes on Award</b>				<b>2015 Hawaii State Marginal Tax Rates for Joint Filers</b>			
<b>2016 Federal Marginal Tax Rates for Married Filing Jointly</b>		tax amount at		Taxable Income Amount		tax amount at	
over	but not over	min. of bracket	marginal rate	over	but not over	min. of bracket	marginal rate
\$0	\$18,550	\$0	10.0%	\$0	\$4,800	\$0	1.40%
\$18,550	\$75,300	\$1,855	15.0%	\$4,800	\$9,600	\$67	3.20%
\$75,300	\$151,900	\$10,368	25.0%	\$9,600	\$19,200	\$221	5.50%
\$151,900	\$231,450	\$29,518	28.0%	\$19,200	\$28,800	\$749	6.40%
\$231,450	\$413,350	\$51,792	33.0%	\$28,800	\$38,400	\$1,363	6.80%
\$413,350	\$466,950	\$111,819	35.0%	\$38,400	\$48,000	\$2,016	7.20%
\$466,950		\$130,579	39.6%	\$48,000	\$72,000	\$2,707	7.60%
				\$72,000	\$96,000	\$4,531	7.90%
				\$96,000	\$300,000	\$6,427	8.25%
				\$300,000	\$350,000	\$23,257	9.00%
				\$350,000	\$400,000	\$27,757	10.00%
				\$400,000		\$32,757	11.00%

  

<b>Tax Calculations</b>	
Item	
Award Income	\$209,267
2016 husband's income	\$7,265
2016 wife's income	\$58,131
other family income	\$20,000
deductible attorney fees	30% Attorney Fee %
HI standard deduction	(\$4,400)
HI Taxable Income	\$227,483
HI Income Tax	(\$17,274)
Fed. itemized deductions	(\$10,000)
Fed. Taxable Income	\$204,609
Fed. Income Tax	\$44,276