

# UNDERCHARGING FOR SELF-EMPLOYMENT TAXES: THE EFFECT ON THE OVERSTATEMENT OF INCOME TAXES

Sheldon R. Smith, Woodbury School of Business, Utah Valley University, 800 W. University Parkway, Orem, UT 84058, (801) 863-6153, [smithsh@uvu.edu](mailto:smithsh@uvu.edu)

Lynn R. Smith, Woodbury School of Business, Utah Valley University, 800 W. University Parkway, Orem, UT 84058, (801) 863-6490, [smithly@uvu.edu](mailto:smithly@uvu.edu)

## ABSTRACT

Prior work [2] demonstrated how the current application of tax laws undercharges for self-employment taxes. Additional work [4] extended that prior research to include taxpayers with both employee earnings and self-employment income. This paper adds a more specific analysis about the overstatement of income taxes resulting from the self-employment tax understatement.

**Keywords:** Self-employment tax, Self-employment income, Net earnings from self-employment

## INTRODUCTION

Smith and Smith [2] demonstrated how the current application of tax laws undercharges for self-employment taxes. However, that analysis presented only results of the self-employment tax deficiency for taxpayers who had self-employment income but no employee earnings. Smith and Smith [4] extended their work to include taxpayers with both employee earnings and self-employment income. In addition, although they indicated that the understatement of self-employment taxes leads to an overstatement of income taxes, Smith and Smith [2] did not provide any specific analysis of the amount of this overstatement. This paper provides a more specific analysis about the overstatement of income taxes, which are a consequence of the understatement of self-employment taxes. In most cases, the understatement of self-employment taxes and resulting overstatement of income taxes for individual taxpayers will be fairly small. However, taxpayers with larger amounts of self-employment income will face larger discrepancies. In either case, the macroeconomic impact on total taxes, both self-employment taxes and income taxes, could be significant.

## BACKGROUND

Employees and employers each pay 6.2% for Social Security taxes and 1.45% for Medicare taxes (often called FICA taxes when combined) for the amounts paid in compensation. The Social Security tax has an annual maximum earnings base per employee on which it is levied each year, \$127,200 for 2017. The Medicare tax has no annual maximum. Those who are self-employed pay both parts of the tax, resulting in self-employment tax rates of 12.4% for Social Security taxes and 2.9% for Medicare taxes (often called SECA taxes when combined). Earnings from self-employment (ESE) is the net of all self-employment income minus amounts allowed as trade or business deductions. As allowed in Internal Revenue Code (IRC) Section 1402(a)(12), ESE is further reduced by half of the SECA tax rates  $[(12.4\% + 2.9\%) \times \frac{1}{2} = 7.65\%]$  multiplied by ESE, resulting in net earnings from self-employment (NESE). This reduction was legislated in 1983 [1] but first became effective in 1990. The same legislation added IRC Section 164(f), which allows self-employed individuals a deduction for adjusted gross income (AGI) for one-half of the SECA tax when calculating income taxes.

Smith and Smith [2] show how the current calculation for NESE is not mathematically consistent with the arguments given for these legislative adjustments to make the SECA taxes comparable to the FICA taxes for an employee and employer. They derive formulas for corrected net earnings from self-employment (CNESE), depending on whether the amount is below or above the Social Security maximum earnings base. In all cases, CNESE is larger than NESE, implying that SECA taxes calculated using NESE are understated compared to the correct calculation using CNESE.

Two reasons exist for the understatement. First, for amounts below the earnings base: in calculating NESE, the 7.65% reduction is based on the total ESE rather than on the amount that will actually be taxed, the CNESE. In other words, we are multiplying by 92.35% [1 – 7.65%] rather than dividing by 107.65% [1 + 7.65%]. These are not mathematically equivalent. Second, for amounts above the earnings base: in calculating NESE, we still use the 7.65% reduction, but at that point, the employer would no longer be liable for the 6.2% Social Security tax, so the reduction should no longer be 7.65% but should be 1.45%. In addition, the reduction of 1.45% would be based on CNESE, not ESE as is done in the calculation for NESE.

### **UNDERSTATEMENT OF SECA TAXES WITH EMPLOYEE EARNINGS INCLUDED**

All of the analysis by Smith and Smith (2017a) reviewed above assumes the self-employed individual has no employee earnings in addition to the self-employment income. However, it is possible that a taxpayer has both self-employment income and employee earnings. Smith and Smith [4] give an analysis of the understatement of SECA taxes when employee earnings are also considered.

In all cases, NESE is calculated by multiplying ESE by 92.35%. If employee earnings are above the maximum earnings base, the SECA tax rate would be 2.9%, applied to all NESE, as the Social Security maximum would have been satisfied through the employee earnings. If the NESE plus employee earnings are below the maximum earnings base, all NESE would be taxed at the 15.3% rate. If the total of NESE and employee earnings is above the maximum earnings base (but with employee earnings below the base), the SECA tax would be 12.4% of any NESE above the employee earnings up to the maximum earnings base plus 2.9% applied to all NESE.

The formula for CNESE differs depending on the amount of employee earnings and whether the amounts are below or above the maximum earnings base. If the employee earnings are above the maximum earnings base, CNESE would be calculated as follows:  $CNESE = 98.5707245\% \times ESE$ . The SECA tax in this case would be 2.9% of all CNESE.

If the employee earnings plus CNESE are below the maximum earnings base, CNESE would be 92.8936368% of ESE. The SECA tax would be 15.3% multiplied by all CNESE.

If the employee earnings plus CNESE are above the maximum earnings base (with the employee earnings below the base), CNESE would be calculated as follows:  $CNESE = 98.5707245\% \times ESE - \$7,773.68 + (6.1113849\% \times EE)$ , where EE stands for employee earnings. The SECA tax would be 12.4% on all CNESE above the employee earnings up to the maximum earnings base plus 2.9% of all CNESE.

Smith and Smith [4] show the derivation of these formulas and also provide tables, which show the range of the understatement of SECA tax for various amounts of employee income and self-employment income. For modest amounts of self-employment income, the understatement of SECA taxes for an individual is

small, but for large amounts of self-employment income, the understatement can be significant. In the entire U.S. economy, the effect of the understatement could be much larger.

## **OVERSTATEMENT OF INCOME TAX**

As mentioned earlier, the same legislation that added the reduction of 7.65% of ESE in determining NESE [1] also added a deduction for self-employed individuals on their federal income tax return, again to make SECA taxes comparable to FICA taxes for employees and employers. It allowed them to subtract half of the SECA tax as a deduction for AGI. However, the automatic result of the understatement of SECA taxes is an overstatement of AGI and federal income taxes. In fact, when using the current calculation for NESE, the amount of NESE on which SECA taxes are calculated is not the same as the net amount of self-employment income that is actually included on the income tax return after considering the deduction for half of the SECA tax. If CNESE is instead used to calculate SECA taxes, the net amount of self-employment income actually included on the income tax return is the same as CNESE.

Because the deduction on the income tax return is for half of the SECA tax, the overstatement of AGI is exactly half of the understatement of the SECA tax. However, the actual impact on the overstatement of income tax depends on many other factors besides the amount of AGI.

To make the illustrations tractable, we will limit the calculations to two simple examples and make several restrictive assumptions. Of course, relaxation of these assumptions would change the numbers reported. The first example will involve a single taxpayer with just one exemption (\$4,050 for 2017) and a standard deduction (\$6,350 for 2017). The second example will involve a married couple filing jointly with four exemptions (\$16,200 for 2017) and the standard deduction (\$12,700 for 2017). This example will also assume the married couple has two children who qualify for the child tax credit (\$1,000 for each child for 2017). For certain levels of income, the exemption amounts and the child tax credits are phased out. These phaseouts are reflected in the numbers presented for each of these examples.

The illustrations will not consider the \$400 floor on SECA taxes. The only income assumed for these examples will be the employee earnings and any self-employment income. For the example involving the couple, only one member of the couple is assumed to earn income, both as an employee and/or as self-employed. None of the taxpayers is assumed to be over 65 or blind. In addition, the reported numbers will use the 2017 tax rate schedules, which calculate taxes as a continuous function, even though those with taxable income less than \$100,000 are required to use the tax rate tables which do not represent a continuous function.

Table 1 shows the understatement of SECA taxes and the overstatement of income taxes for the single taxpayer, assuming various amounts of employee earnings and self-employment income. Table 2 shows the understatement and overstatement, respectively, for the example with the married couple filing jointly with the same amounts of employee earnings and self-employment income [3].

Table 1

Understatement of SECA Tax and Overstatement of Income Tax\*

For Various Levels of Employee Earnings and Self-Employment Income

Single taxpayer, one exemption, standard deduction, no other income, no credits

		Earnings from Self-Employment (ESE)				
		\$60,000	\$120,000	\$200,000	\$500,000	\$1,000,000
Employee Earnings	\$0	\$49.91	\$99.81	\$135.37	\$676.57	\$1,578.57
		\$6.24	\$13.97	\$18.95	\$133.96	\$312.56
	\$20,000	\$49.91	\$26.49	\$170.81	\$712.01	\$1,614.02
		\$6.24	\$3.71	\$28.18	\$140.98	\$319.58
	\$50,000	\$49.91	\$79.66	\$223.98	\$765.18	\$1,667.19
		\$6.99	\$11.15	\$36.96	\$151.51	\$330.10
	\$100,000	\$60.03	\$168.27	\$312.60	\$853.80	\$1,755.80
		\$8.40	\$27.77	\$51.58	\$169.05	\$347.65
\$150,000	\$108.24	\$216.48	\$360.80	\$902.01	\$1,804.01	
	\$17.86	\$35.72	\$59.53	\$178.60	\$357.19	
\$200,000	\$108.24	\$216.48	\$360.80	\$902.01	\$1,804.01	
	\$17.86	\$35.72	\$59.53	\$178.60	\$357.19	
\$250,000	\$108.24	\$216.48	\$360.80	\$902.01	\$1,804.01	
	\$17.86	\$35.72	\$71.44	\$178.60	\$357.19	

\*First number in each cell is the understatement of SECA taxes.

Second number in each cell is the overstatement of income taxes.

Because both examples assume the same amount of earnings by one person, the understatement of SECA taxes is the same in every case when comparing the single taxpayer with the married taxpayer. In addition, since the AGI in both examples is calculated using the same employee earnings, the same self-employment income, and the same deduction for half of the SECA taxes, the AGI overstatement when comparing AGI using NESE with AGI using CNESE is the same for each case between the two examples. While it is theoretically possible that the phaseout of exemptions could be different between the calculations of taxable income using NESE versus taxable income using CNESE, it was not different in any of the cases calculated and presented here. Therefore, the overstatement of taxable income using NESE compared to taxable income using CNESE is the same as the overstatement in AGI for all calculations presented.

Table 2

## Understatement of SECA Tax and Overstatement of Income Tax\*

For Various Levels of Employee Earnings and Self-Employment Income

Married taxpayers filing jointly (only one with income), four exemptions, standard deduction, no other income, two child tax credits

		Earnings from Self-Employment (ESE)				
		\$60,000	\$120,000	\$200,000	\$500,000	\$1,000,000
Employee Earnings	\$0	\$49.91	\$99.81	\$135.37	\$676.57	\$1,578.57
		\$3.74	\$12.48	\$18.95	\$133.96	\$312.56
	\$20,000	\$49.91	\$26.49	\$170.81	\$712.01	\$1,614.02
		\$3.74	\$3.31	\$23.91	\$140.98	\$319.58
	\$50,000	\$49.91	\$79.66	\$223.98	\$765.18	\$1,667.19
		\$6.24	\$9.96	\$31.36	\$151.51	\$330.10
	\$100,000	\$60.03	\$168.27	\$312.60	\$853.80	\$1,755.80
		\$7.50	\$23.56	\$51.58	\$169.05	\$347.65
\$150,000	\$108.24	\$216.48	\$360.80	\$902.01	\$1,804.01	
	\$15.15	\$35.72	\$59.53	\$178.60	\$357.19	
\$200,000	\$108.24	\$216.48	\$360.80	\$902.01	\$1,804.01	
	\$15.15	\$35.72	\$59.53	\$178.60	\$357.19	
\$250,000	\$108.24	\$216.48	\$360.80	\$902.01	\$1,804.01	
	\$17.86	\$35.72	\$63.14	\$178.60	\$357.19	

\*First number in each cell is the understatement of SECA taxes.

Second number in each cell is the overstatement of income taxes.

For the case of the married taxpayer with two child tax credits, it is also possible that the child tax credits that can be claimed could be phased out differently based on AGI using NESE versus AGI using CNESE. If this were the case, the overstatement of income tax could be different than what would otherwise be reported. However, for the amounts of AGI in the examples presented, the phaseout of child tax credits would be the same using both NESE and CNESE.

Although the understatement of SECA taxes and the overstatement of AGI are the same in the two examples presented, the overstatement of income taxes is not always the same when comparing the single taxpayer with the married taxpayer because several factors help determine which marginal tax bracket the taxpayers in the two examples are in: the filing status, the amount of income, the amount deducted for exemptions, the amount of the standard deduction, and the phaseout of exemptions in certain cases. Also, in all cases presented in Tables 1 and 2, the taxable income using NESE and the taxable income using CNESE were in the same tax bracket. Therefore, the overstatement of income tax in these cases is simply the marginal tax rate multiplied by the overstatement of AGI, which is exactly half of the understatement of SECA taxes. It is possible that with different combinations of employee earnings and self-employment income, the taxable income using NESE would be in a different marginal tax bracket than would the

taxable income using CNESE. In these cases, the overstatement of income tax would not simply be the marginal income tax rate multiplied by the overstatement of AGI.

In addition, other complications which could affect the overstatement of income taxes include the following: a spouse with income, either employee earnings and/or self-employment income; individuals who are blind and/or over 65; itemized deductions in lieu of the standard deduction, either with or without phaseout; the impact of the income limits/phaseouts for any refundable or nonrefundable credits; other types of income, such as interest, dividends, and capital gains; more or fewer exemptions, with or without phaseout; any impact on the 0.9% additional Medicare tax; and any impact on the 3.8% net investment income tax. Also, if the \$400 floor on SECA taxes were considered, it could make a difference for taxpayers with self-employment income in the range where CNESE would be above \$400 but NESE would still be below \$400. Besides affecting the amount of income, some of these complications could actually put a taxpayer into a different marginal tax bracket, depending on whether SECA taxes were calculated using NESE or CNESE.

## CONCLUSION

This paper extends the works by Smith and Smith [2][4] relating to the understatement of the SECA tax in cases where the self-employed individual either has only self-employment income or also has employee earnings. This paper illustrates how the understatement of SECA taxes affects the overstatement of income taxes. The amounts of the understatement of SECA taxes and the overstatement of income taxes are fairly modest for any individual, although they can become more significant as the level of self-employment income becomes quite large. However, on a macro-economic level, many small differences can add up to a large difference.

In addition, the calculations of CNESE presented by Smith and Smith [2] and as added or amended to include employee earnings [4] lead to SECA tax calculations, which are more consistent with the arguments that SECA taxes should be comparable to the FICA taxes paid, by employees and employers. While the calculation of CNESE is more complicated than the calculation of NESE, it provides mathematical consistency with the arguments for adjusting ESE for the employer's share of the SECA tax. CNESE also provides consistency in the amount of self-employment income used to calculate the SECA tax and the amount of self-employment income included in AGI on an individual's tax return.

## REFERENCES

- [1] Public Law 98-21. (1983). Social Security Amendments of 1983. April 20.
- [2] Smith, Sheldon R. and Lynn R. Smith. (2017a). "Undercharging for Self-Employment Taxes," *Tax Notes*, Volume 155, Number 7, May 15, pp. 935-946.
- [3] Smith, Sheldon R. and Lynn R. Smith (2017b). "Update on Undercharging for Self-Employment Taxes," *Tax Notes*, Volume 156, Number 9, August 28, pp. 1105-1114.
- [4] Smith, Sheldon R. and Lynn R. Smith (2018). "Undercharging for Self-Employment Taxes: Self-Employment Income and Employee Earnings," Proceedings of the American Society of Business and Behavioral Sciences annual meeting, forthcoming.