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Is the Federal Government Undercharging for Self-Employment Taxes?

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ABSTRACT

The calculation of self-employment taxes is not mathematically consistent with the argument that the self-employed individual should not pay self-employment taxes on the equivalent of the employer's share of the tax. This paper provides a historical background, reviews current laws and applications, describes and illustrates the mathematical inconsistency, and discusses related implications. Suggestions for changes to the tax code are presented.

KEYWORDS: Tax Code, Self-Employment Taxes, Taxation, Government Policy

INTRODUCTION

In the United States, employers and employees both pay employment taxes, sometimes called FICA taxes. These taxes, which can be divided into the Social Security tax and the Medicare tax, are collected to help fund Social Security and Medicare benefits to qualified individuals. Self-employment taxes are charged to those who are self-employed so they can also be covered by Social Security and Medicare benefits. Since those who are self-employed do not have a separate employer who is withholding employment taxes from their compensation and matching the amount withheld, they pay both the employee and employer portions of the self-employment tax. These taxes are reported through the federal income tax system.

Although Internal Revenue Service (IRS) forms for self-employment taxes follow the Internal Revenue Code (IRC), the IRC itself is mathematically inconsistent, leading to underreported self-employment income and undercharging for self-employment taxes. This paper provides a historical background, reviews current laws and applications, describes and illustrates this mathematical inconsistency, and discusses related implications. Suggestions for changes to the tax code and for further research are also presented. The analysis and discussion in this paper assume the taxpayer has only self-employment income and no employee earnings. The analysis and suggestions would be more complex when both employee earnings and self-employment income are involved. After this paper was submitted to the DSI meeting, it was submitted to, accepted by, and published in *Tax Notes* (Smith & Smith, 2017). Minor difference may exist between the two versions.

HISTORICAL BACKGROUND

Payroll taxes for both employees and employers were first introduced with the Social Security Act of 1935. The benefits under this act were originally designed only to provide retirement income to retired employees. However, in 1939, benefits were added for the retired worker's dependents as well as dependents of workers who died before retirement age (SSA, Brief History). Also in 1939, the Federal Insurance Contributions Act (FICA) incorporated the tax provisions of the act in the IRC (Olsen & Hudson, 2009). Thus, these taxes are sometimes called FICA taxes.

During the decade of the 1950s, different classes of self-employed individuals were also added to the Social Security program over a number of years, and self-employment taxes were levied under the Self-Employment Contributions Act of 1954 (SECA)(Olsen & Hudson, 2009). Also in this decade, the disability insurance tax was first levied, as disability benefits were added to the Social Security program (SSA, Statistical Supplement). Therefore, another name for the Social Security tax is Old-Age, Survivors, and Disability Insurance (OASDI).

In 1966, the Medicare Hospital Insurance (HI) program started, and the Medicare tax was first levied (Olsen & Hudson, 2009). Since its inception, the Social Security tax, both the employee and employer portions of employment taxes and self-employed individuals' Social Security portion of the self-employment tax, has been levied on a maximum earnings base each year. When the Medicare tax started in the 1960s, it also had the same maximum earnings base. Although the earnings base increased over time, it was the same for the Social Security and Medicare taxes through 1990. By 1991, legislation had increased the maximum earnings base for the Medicare tax above the earnings base for the Social Security tax. However, by 1994, the maximum earnings base for the Medicare tax was eliminated, meaning that all employee earnings and all self-employment income is now subject to the Medicare tax (SSA, Statistical Supplement).

Since 1990, with a few temporary exceptions, the self-employment tax rates have been double the employee rates for Social Security and Medicare taxes (SSA, Statistical Supplement). This policy made the tax rates the same in total since employers have to match the taxes withheld for employees. Effective in 1990, two additional changes were made to tax laws in an attempt to make the self-employment tax equivalent to the employee/employer payroll taxes. The first of these changes allows self-employed individuals to reduce their self-employment income by 7.65% (IRC, Sec. 1402(a)(12)). The argument for this reduction is that an employee does not have to pay employment taxes on the amounts the employer pays as employment taxes, so a self-employed individual should not have to pay the self-employment taxes on self-employment earnings representing the employer's share of the self-employment taxes (Brazelton, et. al., 2000).

The second change allows self-employed individuals to deduct one-half of the self-employment taxes as a deduction *for* adjusted gross income (AGI) in calculating taxable income and income taxes (IRC, Sec. 164(f)). "Because employers deduct their half of an employee's Social Security tax, the law allows self-employed individuals to deduct one-half of the self-employment tax liability from gross income in calculating adjusted gross income. The reason for this provision is to achieve parity between employer-employee and self-employed individuals" (Brazelton, et. al., 2000, 351-52).

In 2013, an additional Medicare tax became effective for high-income earners, both those who are employees and those who are self-employed. The employer does not match this additional tax, so it is not doubled for the self-employed. This tax was legislated by the Patient Protection and Affordable Care Act (PPACA) (P.L. 111-148) and amended by the Health Care and Education Reconciliation Act of 2010 (P.L. 111-152) as one way of funding provisions of the PPACA.

CURRENT LAWS AND APPLICATIONS

The current self-employment tax rate is 12.4% for the Social Security portion (IRC, Sec. 1401(a)) and 2.9% for the Medicare portion (IRC, Sec. 1401(b)(1)). These rates are double the Social Security and Medicare tax rates paid by employees, 6.2% and 1.45% (IRC, Secs. 3101 and 3111), respectively, because employers have to match the amounts paid by employees, making the combined rates contributed by the employee and the employer the same as the rates paid by the self-employed.

The term “net earnings from self-employment” (NESE) is defined in the tax code and in the Social Security Handbook (IRC, Sec. 1402(a); SSA, Handbook, Sec. 1200.1). The first step in determining NESE is to add all self-employment income and subtract amounts allowed as trade or business deductions. In this paper, we will refer to this subtotal as the earnings from self-employment (ESE). ESE is further reduced by one-half of the self-employment tax rates multiplied by the ESE (IRC, Sec. 1402(a)(12)). The result is NESE.

On Form 1040, Schedule SE, the IRS has simplified the calculation of NESE. Instead of taking the ESE and subtracting one-half of the 12.4% and 2.9% self-employment tax rates multiplied by the ESE, Schedule SE simply takes the ESE and multiplies it by 0.9235. This is equivalent mathematically, as the ESE minus (1/2 x 15.3% x ESE) equals 0.9235 of the ESE.

For 2017, the maximum earnings base for the Social Security tax is $127,200, so the self-employment tax is 15.3% of the NESE if the NESE are less than $127,200. If the NESE are larger than $127,200, the tax equals 15.3% of the first $127,200 plus 2.9% of NESE above that amount. If the self-employed individual also has employee earnings, the self-employment taxes would be coordinated with the employment taxes paid to make sure the employee is not paying Social Security taxes on amounts over the maximum earnings base for the year (IRC, Sec. 1402(b)).

Both Social Security and Medicare taxes are subject to a self-employment income floor. If the NESE is less than $400 for a particular year, no self-employment taxes are due (IRC, Sec. 1402(b)). This $400 floor is the amount of annual self-employment income needed prior to 1978 to earn the maximum of four credits (quarters of coverage) per year toward earning Social Security benefits (SSA, Quarter). This $400 floor has existed since the inception of self-employment taxes; it has not been increased or indexed, even though the amount needed to earn one quarter of coverage has been indexed since 1978. For 2017, the amount of earnings or self-employment income needed to earn one quarter of credit has risen to $1,300 (SSA, Quarter).

Self-employment taxes are calculated and reconciled in filing the federal income tax forms for the year. Self-employment taxes are first calculated and reported on Schedule SE. Two sections of this form exist, Section A (Short Schedule SE) and Section B (Long Schedule SE). The flowchart at the beginning of Schedule SE helps taxpayers determine whether they can complete the short schedule or if they need to complete the long schedule. In calculating the net earnings from self-employment (NESE) on Schedule SE, the earnings from self-employment (ESE) are multiplied by 0.9235. The amount of self-employment tax is then transferred to the second page of Form 1040.

The ESE calculated is included as taxable income on the first page of Form 1040 for purposes of the income tax. However, a deduction *for* AGI is also allowed for one-half of the self-employment tax calculated on Schedule SE (IRC, Sec. 164(f)). This deduction is calculated on Schedule SE and then transferred to the first page of Form 1040.

For years starting with 2013, if the taxpayer’s earnings, including NESE, exceeds a certain threshold, the additional Medicare tax is applicable and adds 0.9% of any earnings above the threshold to the taxes due. However, this tax is not reported on Schedule SE but is, instead, calculated and reported on Form 8959. The amount of this tax is then transferred to the second page of Form 1040 on a different line than where the self-employment taxes from Schedule SE are reported. The threshold amounts for this tax depend on the filing status. For a joint return, the threshold amount is $250,000. For a married taxpayer filing separately, the threshold is $125,000. For all other taxpayers, the threshold is $200,000 (IRC, Sec. 1401(b)(2)). The thresholds for the additional Medicare tax are coordinated with amounts earned as an employee (IRC, Sec. 1401(b)(2)(B)). For example, if a single taxpayer has $175,000 of wage earnings from an employer and $50,000 of NESE, the taxpayer would owe the additional Medicare tax on the $25,000 of total earnings that exceed the $200,000 threshold amount. In certain circumstances, employers have the responsibility to withhold for this additional 0.9% tax. However, in this situation since the employee earnings are less than $200,000, the employer would not be withholding for this additional tax. Therefore, the taxpayer might either need to have the employer withhold additional amounts or personally make increased estimated tax payments during the year to avoid penalties for underpayment of taxes during the year.

MATHEMATICAL INCONSISTENCY AND IMPLICATIONS

The calculation of NESE given above is consistent with the IRC and with IRS forms requiring the calculation and reporting of self-employment taxes and the deduction for one-half of the self-employment tax for income tax purposes. However, the calculation of NESE is mathematically inconsistent with the arguments for reducing self-employment income by the employer's share of the self-employment taxes.

Miscalculation of Self-Employment Income

If a self-employed individual is allowed to pay self-employment taxes on only the portion of self-employment earnings after the employer's share of the self-employment taxes is subtracted, then the self-employed individual as the employer will only be paying the matching amount on the same self-employment earnings after the employer's share is subtracted. Thus, the formula for calculating NESE,

$$\text{NESE} = \text{ESE} - [(1/2 \times 15.3\%) \times \text{ESE}] \quad (1)$$
$$= \text{ESE} - (7.65\% \times \text{ESE}) \quad (2)$$
$$= 92.35\% \times \text{ESE}, \quad (3)$$

is not consistent with the concept of subtracting the employer's share of the self-employment taxes, because it subtracts 7.65% of the unadjusted self-employment income rather than 7.65% of the adjusted self-employment income.

The formula should instead be as follows:

$$\text{CNESE} = \text{ESE} - 7.65\% \text{ CNESE}, \quad (4)$$

where CNESE stands for corrected net earnings from self-employment. This formula is consistent with subtracting the employer's share of the self-employment taxes. In solving for CNESE, the terms are combined into the following equation:

$$1.0765 \times \text{CNESE} = \text{ESE}. \quad (5)$$

To solve for CNESE, each side of the equation is then multiplied by the reciprocal of 1.0765, leading to the following:

$$\text{CNESE} = 0.928936368 \times \text{ESE}. \quad (6)$$

This formula is valid for CNESE amounts below the Social Security tax maximum earnings base. This formula would also be valid if the sum of employee earnings and CNESE is less than the Social Security earnings base. However, it would not be valid if the sum exceeds the Social Security earnings base. The CNESE is not the same as NESE because multiplying by 0.9235 (1 – 7.65%) is not the same as dividing by 1.0765 (1 + 7.65%). As can be seen, the CNESE will be larger than the NESE. Thus, earnings from self-employment that are calculated on Schedule SE are underreported, leading to undercharging for self-employment taxes. Since

$$\text{CNESE}/\text{NESE} = 0.928936368/0.9235 = 1.005886701, \quad (7)$$

CNESE will be 0.5886701% larger than NESE.

The formula for CNESE needs further adjustment for amounts above the Social Security maximum earnings base. This is even more obvious, as the formula used for NESE multiplies all ESE by 0.9235 even though the employer would not still be paying the 6.2% Social Security tax, so why would the entire 7.65% be subtracted after that maximum has been reached, after which the employer's share would only be 1.45% for the Medicare tax? The formula for calculating CNESE when it is above the Social Security maximum earnings base is as follows:

$$\text{CNESE} = \text{ESE} - (7.65\% \times \$127{,}200) - 1.45\% \times (\text{CNESE} - \$127{,}200) \quad (8)$$

$$= \text{ESE} - 9{,}730.80 - 1.45\% \times \text{CNESE} + \$1{,}844.40. \quad (9)$$

When terms are combined, the equation becomes

$$1.0145 \times \text{CNESE} = \text{ESE} - \$7{,}886.40. \quad (10)$$

Each side of the equation is then multiplied by the reciprocal of 1.0145, leading to the following:

$$\text{CNESE} = (\text{ESE} - \$7{,}886.40) \times 0.985707245. \quad (11)$$

Simplified further,

$$\text{CNESE} = 0.985707245 \times \text{ESE} - \$7{,}773.68. \quad (12)$$

This formula would not be valid if the taxpayer also has employee earnings.

If this formula for calculating CNESE is set equal to the formula for calculating NESE, we can determine the level of ESE at which CNESE and NESE will be equal as follows:

$$0.9235 \times \text{ESE} = 0.985707245 \times \text{ESE} - \$7{,}773.68 \quad (13)$$

Dividing both sides of the equation by 0.9235 leaves us with the following:

$$\text{ESE} = 1.067360309 \times \text{ESE} - \$8{,}417.63, \quad (14)$$

which can be solved by combining terms

$$0.067360309 \times \text{ESE} = \$8{,}417.63, \quad (15)$$

and then dividing both sides by 0.067360309, resulting in an ESE of $124,964.24 at which NESE would equal CNESE. However, since the maximum Social Security earnings base that makes this version of the equation for CNESE relevant is $127,200, CNESE would already exceed NESE at the beginning of the relevant range. Thus, the self-employment income reported as NESE is again understated compared to CNESE for amounts above the maximum Social Security earnings base, implying that self-employment taxes are also undercollected for higher-income self-employed workers whose income exceeds the Social Security maximum earnings base.

As reported earlier, for amounts under the Social Security maximum earnings base, the CNESE will be 0.5886701% larger than NESE, so the difference between the CNESE and the NESE is rising at a constant rate. However, for amounts over the Social Security maximum earnings base, the difference between the CNESE and the NESE is rising at an increasing rate. This occurs because at the beginning of the relevant range where CNESE equals $127,200, the CNESE is already higher than the NESE and the CNESE is increasing faster than NESE (0.985707245 of ESE compared to 0.9235 of ESE). Intuitively, this also makes sense because NESE in this range is still calculated as though the employer is paying the full 7.65% rate (Social Security plus Medicare) when the employer would only be paying the 1.45% Medicare tax rate in this range of self-employment income.

Undercharging for Self-Employment Taxes

If NESE and CNESE are both under the Social Security maximum earnings base, the self-employment tax is calculated as 15.3% of the respective amount, so the undercollection of the self-employment tax in this range is 15.3% of the understatement of NESE compared to CNESE. When NESE and CNESE are both above the Social Security maximum earnings base, the marginal self-employment tax rate is 2.9%, so the undercollection of the self-employment tax in this range is 2.9% of the understatement of NESE compared to CNESE. However, it is also important to remember that in this range, the difference between NESE and CNESE is rising at an increasing rate.

Because NESE and CNESE are calculated differently based on ESE, the ESE levels at which NESE and CNESE reach the Social Security maximum earnings base will also differ. These different ESE levels can be calculated by plugging in $127,200 for NESE or CNESE, respectively, and solving for ESE as follows:

For NESE of $127,200:

$$\$127{,}200 = 0.9235 \times ESE \tag{16}$$

$$ESE = \$137{,}736.87 \tag{17}$$

For CNESE of $127,200:

$$\$127{,}200 = 0.985707245 \times ESE - \$7{,}773.68 \tag{18}$$

$$\$134{,}973.68 = 0.985707245 \times ESE \tag{19}$$

$$ESE = \$136{,}930.80 \tag{20}$$

Therefore, the ESE that will lead to NESE of $127,200 is $137,736.87. However, the ESE that will lead to CNESE of $127,200 is $136,930.80.

For ESE below $136,930.80, both NESE and CNESE are at or below $127,200 and CNESE is 0.5886701% larger than NESE. Therefore, the undercollection of self-employment taxes in this range (ESE up to $136,930.80) is 15.3% of the increasing difference between NESE and CNESE. Translated to specific dollar amounts, the undercollection of self-employment taxes in this range of ESE increases, essentially from $0 up to $113.89.

For ESE above $137,736.87, both NESE and CNESE are at or above $127,200. At an ESE of exactly $137,736.87, NESE equals $127,200 and CNESE equals $127,994.55. At this ESE level, CNESE divided by NESE is 1.00624646, indicating that CNESE is 0.624646% larger than NESE, but this percentage difference will increase as the level of ESE increases. The undercollection of self-employment tax in this range is 2.9% of the increasing difference between NESE and CNESE. Translated to dollar amounts, the undercollection in this range of ESE starts at $23.04 and increases as ESE increases, theoretically with no upper limit except as limited by the amount of self-employment income a taxpayer could generate in a year. By the time CNESE reaches $200,000, the undercollection is $154.82, and by the time NESE reaches $200,000, the undercollection is $165.25. By the time ESE reaches $1,000,000, the undercollection is $1,578.57. By the time ESE reaches $5,000,000, the undercollection is $8,794.61.

For ESE amounts between $136,930.80 (where the CNESE equals $127,200) and $137,736.87 (where the NESE equals $127,200), CNESE is still larger than NESE, starting at 0.5886701% higher, gradually increasing up to 0.624646% larger. Therefore, the difference between NESE and CNESE in this range of ESE is rising at an increasing rate. However, the marginal self-employment tax rate for NESE amounts in this range is still 15.3%, while the marginal self-employment tax rate for CNESE amounts is only 2.9%. This leads to a gradual drop in the undercollection of self-employment taxes in this range of ESE from $113.89 down to $23.04.

ADDITIONAL IMPLICATIONS AND DISCUSSION

Because the calculation of NESE understates the correct amount, the self-employment taxes are undercharged. Some implications follow from the understatement of self-employment income and the resulting self-employment taxes.

Impact on Federal Income Taxes

The first implication relates to how self-employment income is included in the income tax calculations. Those filing Form 1040 for their income taxes can subtract one-half of their self-employment taxes in calculating federal AGI. Because NESE understates self-employment income and results in undercharging for self-employment taxes, the amount of self-employment income included in federal AGI is overstated, leading to overpayment of federal income taxes.

Intuitively, it would make sense that if ESE is included on the income tax return but that one-half of the self-employment taxes could be subtracted, the net amount included as self-employment income should be the same as the amount of self-employment income on which the self-employment tax was calculated. However, with the incorrect calculation of NESE in the tax code, this is not the case. As an example, assume a taxpayer with only self-employment income that is below the Social Security maximum earnings base. The self-employment tax would be calculated as follows:

(ESE x 92.35%) x 15.3% = 14.12955% of ESE. (21)

However, if you then subtract one-half of the self-employment tax from the ESE, the proportion of ESE that would be included in federal AGI would be calculated as follows:

ESE – (1/2 x 14.12955% x ESE) = 92.935225% of ESE. (22)

NESE, the amount on which self-employment taxes was calculated, is only 92.35% of ESE, but the net amount of self-employment income that would be included in federal AGI is 92.935225% of ESE.

On the other hand, if the same calculations are performed using CNESE, the amount on which self-employment taxes are calculated equals the net amount of self-employment income that would be included in federal AGI as follows:

(ESE x 92.8936368%) x 15.3% = 14.2127264% of ESE (self-employment tax) (23)

ESE – (1/2 x 14.2127264% x ESE) = 92.8936368% of ESE (included in federal AGI). (24)

CNESE, the amount on which the self-employment tax is calculated is 92.8936368% of ESE, and the resulting net amount of self-employment income included in federal AGI is also 92.8936368% of ESE. This is true because CNESE uses the correct adjustment to ESE in arriving at CNESE, whereas the adjustment to ESE used in arriving at NESE is not mathematically consistent.

The example given above assumed the self-employment income was below the Social Security maximum earnings base. However, the same relationships are true for amounts above that earnings base. CNESE will equal the ESE minus one-half of the self-employment tax, but NESE will be less than the ESE minus one-half of the self-employment tax. In fact, as one data point without showing the calculations, the NESE for ESE of $216,567.41 will be $200,000, but ESE minus one-half of the self-employment taxes will be $205,781.

As a summary, the current calculation of NESE leads to an understatement of self-employment taxes. Since one-half of the self-employment taxes is subtracted as a deduction *for* AGI, AGI and federal income taxes are both overstated.

Impact on State Income Taxes

A second implication relates to state income taxes for states that ask taxpayers to start with federal AGI in calculating state taxable income. If the federal AGI is overstated because of an understatement in self-employment taxes, the state taxable income would also be overstated, resulting in an overpayment of state income taxes.

Impact on Social Security Benefits

A third implication relates to Social Security retirement benefits (and survivors' benefits and disability benefits). If NESE underreports self-employment income, those whose income is less than the Social Security maximum earnings base are not getting credit for all their earnings in the Social Security system. This means when it comes time for the Social Security Administration to calculate their Average Indexed Monthly Earnings (AIME) and Primary Insurance Amount (PIA), these amounts will also be understated, resulting in an underpayment of benefits.

Additional Medicare Tax

A fourth implication relates to the 0.9% additional Medicare tax imposed on high-income earners (IRC, Secs. 1401(b)(2) and 3101(b)(2)). For example, if a self-employed single individual has self-employment income (after adjustment for either the NESE or the CNESE) above the $200,000 threshold, the formulas for calculating NESE or CNESE do not change. This is because the 0.9% additional Medicare tax is levied only on the employee, not on the employer, so none of this additional rate would be subtracted in calculating the net earnings from self-employment. Also, because the additional Medicare tax is not reported on Schedule SE, it will not affect the calculation of what is subtracted on the income tax return as an adjustment *for* AGI for one-half of the self-employment taxes. However, the additional 0.9% tax would be separately reported on Form 8959 and then transferred to Form 1040 as an additional tax.

For amounts of ESE where both NESE and CNESE are above this $200,000 threshold for single taxpayers, the undercollection of employment taxes, including the additional Medicare tax, would be 3.8% of the understatement of NESE compared to CNESE instead of 2.9% of that understatement. However, in the bubble between where CNESE would be $200,000 (ESE of $210,786.40) and where NESE would be $200,000 (ESE of $216,567.41), the understatement of these self-employment taxes would not just be 2.9% of the understatement of NESE compared to CNESE. The understatement of the self-employment taxes would also be an additional 0.9% of the understatement of NESE within that bubble range.

The threshold amounts for the additional Medicare tax are different for different filing statuses ($250,000 for married filing jointly, $125,000 for married filing separately, and $200,000 for others) (IRC, Secs. 1401(b)(2) and 3101(b)(2)). Therefore, the filing status of the taxpayer could affect how this additional tax would affect the underpayment of total self-employment taxes. In fact, if someone is married filing separately, it is possible that this additional Medicare tax would become applicable even before the self-employment earnings have reached the Social Security maximum earnings base. Also, even though a couple may file jointly, the self-employment taxes are levied on individuals, so both members of a couple could have self-employment income and be subject to self-employment taxes, each with his or her own separate Social Security earnings base maximum.

The threshold amounts for the additional Medicare tax are not indexed. Therefore, as wage earnings and self-employment income (or a combination of both) rise with general increases in earnings, a larger proportion of earned income will become subject to this tax. For any portion of this increase that is attributable to self-employment income, the underpayment of the additional Medicare taxes because of the understatement of NESE will also increase. However, as this additional Medicare tax is associated with the PPACA and currently elected politicians are claiming that this act will be repealed and replaced, it remains unknown if the additional Medicare tax will continue to exist, and if so, if it will change in any way.

Coordination of Employment Taxes and Self-Employment Taxes

A fifth implication relates to the coordination of employment taxes with self-employment taxes. If a taxpayer has both employee earnings and self-employment income, the Social Security tax earnings base would first be applied toward employee earnings since the employer is automatically withholding Social Security taxes on earnings up to the earnings base and then matching those amounts. If the employee earnings did not reach the Social Security maximum earnings base, then any amount of NESE from the level of employee earnings up to the maximum earnings base would be subject to the 12.4% Social Security portion of the self-employment tax. However, no amount of NESE that would make the total earnings for the year, including both employee earnings and self-employment earnings, exceed the earnings base would be subject to that 12.4% tax (IRC, Sec. 1402(b)). Since the CNESE exceeds the NESE, using CNESE would get the individual to the earnings base maximum sooner than using NESE.

Net Investment Income Tax

A sixth implication relates to the net investment income tax (NIIT), a separate, additional tax created by the Health Care and Education Reconciliation Act of 2010 (P.L. 111-152) and effective starting in 2013. This tax is imposed by Section 1411 of the IRC under a new chapter titled, "Unearned Income Medicare Contribution." Even though the title of this chapter of the IRC might imply that the NIIT is a Medicare tax, the taxes imposed are not transferred to the Medicare Trust Fund (Joint Committee on Taxation, 2011). The tax "has a single stated purpose—to raise revenue to help pay for health care reform" (Eicher & Hitt, 2014, 23). This tax is calculated and reported on Form 8960, and the amount of the tax is transferred to the second page of Form 1040.

For individuals, the NIIT is a 3.8% tax on the smaller of (1) net investment income, or (2) the excess of modified AGI over a threshold amount. The threshold amounts for this tax are as follows: $250,000 for those who are married filing jointly or surviving spouses, $125,000 for those who are married filing separately, or $200,000 for any other filing status (IRC, Sec. 1411). While the specific definition of net investment income is not important to this paper, it does include many types of unearned income that are not subject to FICA taxes or self-employment taxes.

While this tax is not an employment tax and it is not transferred to the Medicare Trust Fund, it seems to be somewhat parallel to the additional Medicare tax levied on those with high earned incomes. It is likely that the 3.8% NIIT tax rate was conceived through comparison with the 1.45% Medicare tax rate for employees plus the 1.45% Medicare tax rate for employers (or equivalently 2.9% for those who are self-employed) plus the 0.9% rate for the additional Medicare tax.

Even though net investment income is not self-employment income, and this Medicare tax on unearned income is not a self-employment tax, self-employment income and self-employment taxes can have implications for the NIIT. For someone who has both self-employment income and net investment income, the current calculation of NESE could undercharge for the NIIT compared to the amount that would be paid if CNESE were used. As an example, assume that a single taxpayer has $200,000 of ESE, no employee income, and $50,000 of net investment income. The NESE would be $184,700, while the CNESE would be $189,367.77. Since the CNESE is $4,667.77 larger than the NESE, using CNESE would make that much more of the net investment income subject to the 3.8% NIIT. In this situation, using NESE instead of CNESE would understate the NIIT by $177.38 ($4,667.77 x 3.8%). This implication could also become moot if the PPACA is repealed and replaced, depending on what it is replaced with.

Interestingly, the threshold amounts for the NIIT are not all the same as the threshold amounts for the additional Medicare tax. While most of the threshold amounts are the same, the threshold amount for a surviving spouse subject to the NIIT is $250,000, while the threshold amount for a surviving spouse for the additional Medicare tax is $200,000. In addition, as with the threshold amounts for the additional Medicare tax, the threshold amounts for the NIIT are not indexed. Therefore, as incomes, including net investment incomes, increase, more taxpayers will become subject to this tax even if their inflation-adjusted income does not increase. Also, while conceptually, the employer's share of the self-employment taxes is subtracted in calculating the amount of self-employment income subject to self-employment taxes, and one-half of the self-employment taxes are deducted for AGI to recognize that the employer's share of those taxes is not taxable income to the self-employed individual, no similar adjustments are made for the 1.45% of the 3.8% NIIT that would, in a parallel system, represent the employer's share which would not be taxable. Of course the NIIT is not a tax on earnings, but if the rates for this tax are parallel, perhaps the reduction and deduction available for self-employment taxes, including the Medicare portion, should be consistently applied in the NIIT requirements.

Self-Employment Tax Floor

A seventh implication relates to the floor for self-employment taxes. If NESE is less than $400, no self-employment taxes are due for the year. With the current calculation of NESE, the ESE can be as much as $433.13 ($400/0.9235) before the floor is reached. However, if the CNESE were instead used, the $400 floor would be reached at an ESE of $430.60 ($400 x 1.0765). These calculations mean there is again a small range where self-employment taxes should be charged but are not now being imposed. Once both NESE and CNESE are slightly above $400, the undercollection of self-employment taxes will be very small. However, as discussed by Smith (2010), if a taxpayer has self-employment income just below the $400 floor, a small amount of additional self-employment income can result in marginal self-employment taxes many times as large as the marginal self-employment income. So if a self-employed individual has ESE between $430.60 and $433.13, the current calculation for NESE would imply that no self-employment taxes are due, whereas the CNESE calculation would imply that more than $60 of self-employment taxes are due (assuming the taxpayer does not already have employee earnings in excess of the Social Security earnings base).

SUGGESTIONS FOR CHANGES TO THE TAX CODE

The implications mentioned in this paper lead to several possible changes in the tax law.

Calculation of Net Earnings from Self-Employment

The major change needed to make self-employment taxes parallel with employment taxes is to change the current calculation of NESE to the mathematically correct calculation of CNESE. Instead of calculating NESE using the current method as follows:

$$\text{NESE} = 0.9235 \times \text{ESE}, \tag{25}$$

use the corrected calculation given in this paper that involves one of two formulas, depending on whether the CNESE is above or below the Social Security earnings base as follows:

For ESE below $136,930.80: $\text{CNESE} = 0.928936368 \times \text{ESE}$, and (26)

For ESE above $136,930.80: $\text{CNESE} = 0.985707245 \times \text{ESE} - \$7{,}773.68$. (27)

The second of these two formulas is valid for 2017 and would have to be adjusted in future years as the Social Security maximum earnings base increases. The ESE amount at which the split between formulas would take place would also have to be adjusted each year as the earnings base increases. The actual change to the tax code would be in IRC Section 1402(a)(12).

While the calculation for NESE on current tax forms is quite straightforward, the calculation of CNESE on Schedule SE would be a little more complicated because the formula used to calculate CNESE would depend on whether CNESE would be under or over the Social Security maximum earnings base for the year. (The calculations would be much more complex if the taxpayer also has employee earnings; the adjustments to tax forms would also be more complicated.) The formula for CNESE when it is above the earnings base would change from year to year, whereas the formula for NESE is the same for all self-employment income in a given year and the same from year to year. However, the change in the formula for CNESE above the earnings base would not be terribly complicated to incorporate, especially since the tax forms usually have to be adjusted for the increase in the earnings base from year to year anyway. Forms 8959, 8960, and 1040 would not need any significant changes if CNESE were used. The ESE could still be reported on the first page of Form 1040 along with the deduction for one-half of the self-employment taxes. While the amounts reported for self-employment earnings on Forms 8959 and 8960 would change if the definition of net earnings from self-employment were corrected, the calculations on these forms would not otherwise change. The amounts from either or both of these forms could still be transferred to the second page of Form 1040 just as they are now.

Other Changes

Other changes in the tax code could also be considered based on the implications given above. The threshold amounts for both the additional Medicare tax and the NIIT could be made consistent for a surviving spouse, as they are now different. The fact that no indexing exists for any of these thresholds could also be reconsidered and possibly changed. Other changes that could be considered for the NIIT would be (1) to do a similar calculation to that presented for CNESE so that the NIIT would be a tax on the adjusted net investment income after deducting 1.45% of the adjusted net investment income, allowing for a reduction for the "employer's share" of the tax even though it is not an employment tax, and (2) to incorporate a deduction *for* AGI similar to that allowed for one-half of the self-employment taxes. In this case, the deduction would only be for 38.16% (1.45%/3.8%) of the NIIT, as that is the only portion that would be parallel to the employer share of the Medicare tax that seems to be conceptually included in the 3.8% NIIT tax rate. Currently no part of the NIIT is deductible in calculating income taxes (Joint Committee on Taxation, 2011).

Correcting the calculation of NESE will also have a small impact around the $400 floor. Consideration should be given to increasing the floor or at least making sure that the marginal self-employment tax is not more, potentially many times more, than the marginal self-employment income. Smith (2010) gives suggestions as to how this could be accomplished.

Technical Correction

In addition to the possible changes mentioned above, a technical correction is also needed in IRC Section 1401(b)(2)(B). As referred to earlier, this section relates to the coordination of the threshold amounts for the additional Medicare tax on self-employment income with the threshold amounts on the additional Medicare tax on employee income. IRC Section 1401(b)(2)(B) was added by the PPACA (P.L. 111-148) and amended by the Health Care and Education Reconciliation Act of 2010 (P.L. 111-152). The current wording of Subparagraph B is as follows:

> (B) Coordination with FICA
> The amounts under clause (i), (ii), or (iii) (whichever is applicable) of subparagraph (A) shall be reduced (but not below zero) by the amount of wages taken into account in determining the tax imposed under section 3121(b)(2) with respect to the taxpayer. (IRC, Sec. 1401(b)(2)(B))

The clauses referred to in subparagraph (A) give the different threshold amounts for the different filing statuses relating to the additional Medicare tax on self-employment income. However, the reference to a "tax imposed under section 3121(b)(2)" is incorrect, as that section does not refer to a tax. Instead, the reference should be to Section 3101(b)(2), which is the place where the additional Medicare tax on employment income is imposed. This incorrect reference within the IRC was in the original PPACA legislation. The amendments made in the Health Care and Education Reconciliation Act of 2010 did not correct this reference, and apparently, no subsequent legislation has made this correction either.

FURTHER RESEARCH

While this paper discusses the underreporting of self-employment income and the resulting undercharging for self-employment taxes from a mathematical viewpoint, it does not present any data or estimates on the total impact of this mathematical inconsistency on the collection of self-employment taxes, including additional Medicare taxes. While it may be unlikely that correcting the calculation of NESE will resolve the long-term concerns of funding in the Social Security trust funds or the Medicare trust funds, a correction in this calculation could help with the anticipated shortfalls. While those whose wage earnings plus self-employment income total less than the Social Security earnings base are undercharged in self-employment taxes, they are also credited with earnings toward Social Security benefits that are too small. On the other hand, those whose earnings plus self-employment income is above the earnings base are paying the maximum amount toward the Social Security portion of the self-employment tax, and their AIME will be calculated using the maximum amount for that year. On the other hand, these individuals are still undercharged for the Medicare portion of the self-employment tax. Further research could report empirical measures or estimates of these understatements of taxes based on archival data. Research could also show how the underreporting of self-employment income may affect retirees, future retirees, and their dependents with respect to lower Social Security benefits earned because lower earnings are reported.

This paper also presents no aggregate measure of the impact of undercharging for self-employment taxes on either the overreporting of federal AGI or overpayment of federal income taxes. Further research could also be done to provide estimates of these amounts. To some extent, the undercharging for self-employment taxes may be offset by overcharging for income taxes. However, even if some of the amounts offset, they may offset in different government funds intended for different purposes.

In addition to looking at the overpayment of federal income taxes on federal tax returns, state tax implications could be considered. The effect on state income tax revenues, either by individual states or in combination, could be studied.

With the election of a Republican president and a majority of Republicans in both houses in the current Congress, further research can also be done to see how the implications mentioned in this paper may be affected with possible changes in the PPACA, including the tax provisions. Talk of general tax reform is also, as usual, part of current political discussions, so attempts to overhaul the income tax system could also affect the implications mentioned here.

CONCLUSION

Current tax laws cause an underreporting of self-employment income, leading to an undercharging for self-employment taxes. This occurs because self-employment taxes are calculated based on NESE. However, NESE is mathematically lower than it should be because (1) for earnings below the Social Security maximum earnings base, earnings from self-employment are multiplied by 0.9235 rather than being divided by 1.0765 (or multiplied by 0.928936368), and (2) for earnings above the Social Security maximum earnings base, earnings from self-employment are still multiplied by 0.9235 (1 – 0.0765) even though the employer's share of the self-employment taxes would have dropped from 7.65% to 1.45% for amounts beyond the earnings base.

This understatement of self-employment income and the resulting self-employment tax leads to an overstatement of federal AGI. Since income is overstated, federal income taxes are also overstated. In addition, if state income taxes are calculated by starting with federal AGI, then income is also overstated at the state level, leading to overpayment of state income taxes.

Other complications and implications were also discussed in this paper. Suggestions are given for adjustments to the tax code to make the mathematical calculations for net earnings from self-employment consistent with the argument that self-employment earnings and taxes should be calculated in a way to achieve parity in these employment taxes when comparing those who are employees with those who are self-employed. These suggestions would make the calculation of net earnings from self-employment internally consistent as used in calculating both self-employment taxes and federal adjusted gross income for income tax purposes.

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