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Tax evasion and self-employment in a high-tax country: evidence from Sweden

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Abstract

Self-employed individuals have arguably greater opportunities than wage earners to underreport their incomes. This article uses recent Swedish income and expenditure data to examine the extent of underreporting of income among self-employed individuals. A key hypothesis is that underreporting of incomes among the self-employed would be visible in the data as ‘excess food consumption’, for a given level of observed income. Our results confirm the underreporting hypothesis. In particular, we estimate that households with at least one self-employed member underreport their total incomes by around 30%. Under-reporting appears to be much more prevalent among self-employed people with unincorporated businesses as among those with incorporated businesses.

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Notes

[1] There exist also other studies using different methods that also indicate that tax evasion is more prevalent among groups with more opportunity to evade. See e.g. Slemrod et al. (2001) and Joulfaian and Rider (1998). Blumenthal (2001) examine how normative appeals affect tax compliance using a randomized experiment.

[2] According to OECD data, the tax-to-GDP ratio in Sweden stood at 50.7% in 2004 which is the highest ratio among OECD countries; Denmark came second at 49.6%. Agell et al. (1996) provide an overview and evaluation of the major 1991 reform of the Swedish tax system.

[3] The theoretical literature on tax evasion does not provide clear predictions regarding the relationships between tax rates and tax compliance. In the seminal contribution by Allingham and Sandmo (1972), an increase in the tax rate has an ambiguous effect on tax evasion: there is a substitution effect that works in the direction of increased evasion but there is also an income effect that works in the opposite direction if agents' absolute risk aversion is decreasing in income. See also Sandmo (2005) for a survey of the theory of tax evasion. The empirical research on tax rates and tax evasion has produced mixed results; see Slemrod and Yitzhaki (2002).

[4] By effective tax rate we mean $t = 1$ - (disposable income/total factor income). Transfers to households add to disposable income and thus reduces the effective (average) tax rate. Reported disposable income, Y^D , is given as $Y^D = Y^* - t(Y^* - U)$. We have $\kappa \equiv Y^*/(Y^* - U)$ and k is the ratio between true disposable income and reported disposable income. We thus get $\kappa = k(1 - t) + t$.

[5] The design and main results of the HUT-studies are presented in reports from Statistics Sweden (2003, 2004, 2005).

[6] We have obtained similar results for broader measures of food consumption, such as food purchases plus meals out.

[7] Disposable income thus includes transfers consisting of taxable transfers, such as sick pay and unemployment benefits, and tax-free transfers, such as child allowances and social assistance payments.

[8] Pissarides and Weber (1989) define households as self-employed if income from self-employment accounts for at least 25% of total income.

[9] The fraction of self-employed in total employment is 10% according to the labour force surveys of 2000. Note that our sample is restricted to couples. Moreover, our measure of the rate of self-employment in households is not directly compared to the labour force survey data based on individuals.

[10] The food consumption ratios are substantially lower in 2003–2004 than in the previous surveys, a pattern also visible in the aggregate data published by Statistics Sweden. The likely main reason for the differences is that the measurement techniques have changed. According to Statistics Sweden (2003), the surveys for 1999–2001 produced an upward bias in food consumption by inducing households to include some nonfood items in their reports of food purchases.

[11] Age is the age of the ‘household head’, which is the person with the highest income in the household; type of housing is a dummy for single family housing; regions are so called H-regions, which capture the degree of urbanization.

[12] The tax system pertaining to wage earners and self-employed people remains effectively constant during the period of investigation (except possibly minor changes of some municipal tax rates.)

[13] The other included explanatory variables exhibit patterns that appear reasonable. The number of children has a positive and highly significant effect, years of education enters with a significantly positive effect, age kicks in positive and significant whereas age squared enters negative and significant. Type of housing is not significant and the regional variables do not indicate any significant regional differences in food consumption behavior.

[14] In Swedish, this concept is known as ‘inkomst av näringsverksamhet’.

[15] It is not possible to disentangle income sources in the 1999–2001 data so we focus on 2003–2004.

[16] We have examined whether the basic results are affected by relaxing our maintained assumption that the Engel curves for employees and self-employed have the same slopes. There is some evidence from the OLS estimations that the Engel curve for employees is slightly steeper, but this have negligible effects on the estimated degree of underreporting for the main part of the income distribution. The IV estimates do not indicate any differences in slopes.

[17]Skatteverket (2006) presents evidence based on tax audits that implies underreporting of a similar magnitude for this group of self-employed.

[18] According to data from Statistics Sweden, the amount of reported entrepreneurial income (inkomst av näringsverksamhet) accounts for about 3% of total reported labour income as defined above. The amount of hidden entrepreneurial income relative to total reported income is thus given as

[19] Persson (2005) compares earnings among employees and self-employed using Swedish data for 2002 and find substantially lower reported earnings among the self-employed even after having standardized for industry affiliation. The paper does not distinguish between incorporated and unincorporated businesses, however.

[20] See Hamilton (2000) for a study of the returns to self-employment in the United States. Hamilton finds a substantial ‘earnings penalty’ associated with self-employment, a result that he interprets as evidence of nonpecuniary self-employment benefits. Blanchflower (2004) surveys the literature on self-employment and reports that job satisfaction is higher among self-employed than among wage earners.

[21] According to the Swedish labour force surveys for 2004, paid employees worked on average 35 h per week whereas self-employed people worked 43 h.

[22] We include industry dummies because a large literature has confirmed persistent industry wage differentials; these may reflect compensating wage differentials but also rent sharing that varies across industries with different characteristics. We have, however, chosen to exclude industry dummies as controls in the food consumption regressions since self-employment varies highly with respect to industry; the estimated industry coefficients may therefore pick up much of the differences in underreporting of income.

[23] The estimates in column (1) imply , whereas the estimates in column (4) imply .

[24] One example is the paper by Bovi (2003), where the determinants of underground (OECD) economies are examined. Bovi finds that the underground economy is mainly affected by variables capturing 'institutional failures' and to a lesser degree taxation and market regulations.

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