Appendix I. Additional Data Description

Education dummies are dummies for nine categories measuring highest school attainment. Industry and occupation are defined at the 2-digit level. Occasional missing values of these covariates are represented by dummies indicating missing values. For the vast majority of households considered in the regressions, both spouses’ earnings are positive in both base periods (i.e. both 1989 and 1990). However, a number of households have positive earnings for both household members in the base period in one of these years but not in the other. Observations for these individuals are included in the regressions only when the income of both household members is positive in the base year; otherwise, the dependent variable is a missing value. 200,214 individuals are in households in which both spouses have positive earnings in at least one of the years examined.

In 1991, Sweden switched from a global tax system, under which the marginal tax rate on earned income depends on the sum of earned income, capital income, and taxable government transfers (minus deductions), to a dual tax system, under which the marginal tax rate on earned income is computed only based on earned income (and deductions and taxable government transfers), and capital income is taxed at a flat rate. This implies that the proper way to calculate virtual income is different in 1991 than it was before 1991. Prior to 1991, virtual income is calculated by computing the intersection of the individual’s extended budget segment with the y-axis in taxable income-consumption space, and adding the value of untaxed transfers. Predicted virtual income in 1990 is calculated by inflating the value of taxable income in 1990 by the mean per-person growth in taxable income of individuals in the sample, calculating the virtual income associated with this predicted budget segment, and adding this amount to the predicted value of untaxed transfers (calculated by inflating 1989 untaxed transfers by the mean per-person growth in untaxed transfers from 1989 to
In 1991, virtual income is computed by adding three quantities: the intersection with the y-axis of the individual’s extended budget segment in pre-tax taxable labor income-consumption space, the after-tax value of capital income, and the value of untaxed government transfers. (Here taxable labor income is taken to include government transfers.) Because of the change in the tax base, in constructing the instrument for the marginal tax rate for 1991, I project 1991 taxable labor income by multiplying each individual’s 1990 taxable labor income by the mean per-individual growth in taxable labor income of individuals in the sample from 1990 to 1991. I calculate predicted virtual income in 1991 by determining what virtual income would have been in 1991 if an individual had the projected taxable labor income in 1991, as well as the projected values of capital income and untaxed transfers (calculated by inflating the values of capital income and untaxed transfers from 1990 by the mean growth from 1990 to 1991 in the per capita values of these variables of individuals in the sample). Like all income variables, virtual income is always represented in real terms.

When it enters as a dependent variable in my regressions, I construct taxable labor income by subtracting deductions from earned income. The deductions in question do not include deductions for interest payments or capital losses. To form a consistent measure of deductions, I exclude those that were available only before or only after 1991. When I subtract deductions from earned income, the result is occasionally negative. (Because the sample excludes labor market non-participants, earned income minus deductions is negative for less than 1% of the sample.) Since I examine the change in the log of real taxable labor income, and the log of zero or of a negative number is undefined, I set the values of real taxable labor income equal to 1 for these individuals in the years in which it is negative. The results are insensitive to this choice. Before 1991, certain deductions could be claimed
only against the basic tax schedule. However, all of the deductions included in my measure of deductions prior to 1991 could be claimed against both the basic schedule and against the additional schedule. Thus, their marginal tax price was equal to the net-of-tax share associated with earned income, so a specification that relates my measure of taxable labor income to this net-of-tax share is appropriate.