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WAGES in CANADA: SCF, SLID, LFS and the Skill Premium

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SEDAP Research Paper No. 106

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WAGES in CANADA:
SCF, SLID, LFS and the Skill Premium

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WAGES in CANADA:
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Abstract

For the years 1981 to 1997 the Survey of Consumer Finances served as the main source of information about the earnings of individuals, households and families. The Survey of Labour Income Dynamics, begun in 1993, was intended to replace and to improve upon the SCF. The Labour Force Survey began releasing earnings information in 1997 (the last year of the SCF) is a second alternative for extending historical earnings data to the present day. This paper examines the extent to which either of these two surveys can be used to extend the SCF series to more recent times. Neither survey comes off as satisfactory in all respects as an extension of SCF earnings data though if one's purposes are more limited, such as studying the education premium, then merging results from the SCF and SLID seems a reasonable way to proceed. It is not possible here to assess the ability of SLID or LFS to extend the SCF for other applications. But this method could easily be adapted to address other similar questions.

1. Introduction

Canada has never had particularly good individual wage data available to researchers on an annual basis over an extended period of time. To study wage trends in Canada, the best available source has been the Survey of Consumer Finances (SCF) published annually from the early 1980's,[1] which, although it actually collected annual earnings data, allows one to calculate wage indexes by making use of additional information on the extent of work.[2] This survey used the monthly Labour Force Survey sampling frame and collected income information in the spring of each year (close to tax time when information was likely fresh in individuals' minds). We have used this data elsewhere (see, for example, Bar-Or et al. 1995 and Burbidge et al. 1997) with some success. The major problem with the data has been the lack of a survey generated wage rate – a wage series has to be constructed from annual earnings data, which is the variable collected in the survey. By selecting full time, full year workers, and dividing annual earnings by 52, it is possible to construct a weekly wage rate which is what we have done elsewhere.[3]

Unfortunately this survey has now been discontinued – the last year of income data is for 1997. Statistics Canada has provided two alternative micro-data sources which can be used to study more recent wage issues; the Survey of Labour and Income Dynamics (SLID) and the revised Labour Force Survey (LFS). The purpose of this note is to examine the surveys with a view to indicating whether either can be used to provide a continuous wage series when combined with the SCF and, in particular, whether either can be used along with the SCF to study the wage premium to a university education.

2. The Surveys and the Wage and Education Information

SLID is designed as a longitudinal survey with the first panel starting in 1994 (income year 1993) and subsequent panels starting every three years. Individuals in a household are surveyed annually. Each person is kept in the panel for 6 years so that after startup there is a

[1] Census family files are also available biennially from 1971 to 1981.

[2] A similar approach can be used with Census data at less frequent intervals.

[3] There are other considerations of course, such as excluding the self employed where labour income and capital income tend to be inseparable. We discuss the exact extracts later.

three year overlap between panels and two panels will be 'active' at all times. A cross-section file is maintained as well by adding individuals living with panel members in subsequent years. This is required in order to continue providing complete household and family level variables that are of interest after there are changes in household or family composition. As we used the cross section files for all our analysis reported in this paper, some of the people in SLID data sets are longitudinal members of a panel and others are not.

Income in SLID is collected in the spring about the previous year and has a conceptual basis identical to the SCF – annual income. In fact, SLID has encouraged individuals to give the surveyors permission to retrieve income data from income tax files and this has been an increasingly popular option.[4] SLID collects wage information (as well as the income information mentioned above) on individual jobs held in the previous year but because individuals are not asked this information about all jobs in the previous year (it goes back from year-end to a maximum of 6 jobs) the wage data cannot easily be translated into a weekly wage index for the year comparable to the one in the SCF data. As a consequence, we use the SLID income data in all the analysis here.

The LFS underwent a major revision in 1997 which involved adding questions about wages on a monthly basis. Prior to that time, although there were occasional add-on supplements, no regular wage data were collected monthly. The revised LFS sought to collect data explicitly on wages, unlike the SCF which covered all the components of annual income. The wage question sequence in the LFS began by asking about the "hourly rate of pay" for those who were hourly rated. For others, questions were asked regarding whatever pay period was the 'easiest one' for the respondent to report ('yearly, monthly, weekly, or some other basis'). Unfortunately, the questionnaire is not explicit on how to treat overtime pay or earnings.[5] While it is most probable that the request for an "hourly rate of `pay" would elicit a base (or straight-time) hourly rate, it is likely that the request for the yearly or monthly "wage or salary" draws responses that sometimes include overtime earnings and sometimes include only straight time

[4] Whatever we conclude about the possibility of using SLID in conjunction with the SCF, one should keep in mind that the accuracy of the income data, coming as it does so frequently from tax records, is unlikely to be matched in any of the other surveys. In earlier unpublished work we matched SCF income data with the income tax data (LAD) and found they matched reasonably well on means and medians on earned income and total income.

[5] Though it is quite clear that tips and commissions should be included.

earnings.[6] For those who report wages on some basis other than hourly, the wages are converted to an hourly basis by dividing the reported wage by the usual hours of work in the same time period. A first guess would be that the average or median wages generated from such data will lie between an overtime and a straight time rate. Another major conceptual difference is that the income notion in the LFS is current or forward looking (current annual salary) while in the other surveys it is backward looking.

One is not usually interested in wages for a population as whole but rather for subsets of the population. Our own interest has been in wage structure and in particular in the skill or education premium. To that end, it is also important to pay attention to the way the different surveys collect information on education levels. The SCF uses the labour force survey sampling frame and the education questions collected from that survey, so we expect consistency on that basis. SLID uses a much more detailed series of questions but the logic appears to be structured somewhat similarly to that of the LFS. One difference that we note is that the LFS asks whether the respondent has "received any other education that could be counted towards a degree, certificate or diploma from an educational institution?" whereas SLID asks "not counting university, has [respondent] ever been enrolled in any other kind of school, for example, a community college, business school, trade or vocational school, or CEGEP?" As a consequence, one might expect more individuals in SLID to end up in a category of 'some post secondary' which we do find and do report on below.

The three surveys are coded in a way that allowed us to classify educational attainment into six educational groups that seem somewhat similar (subject to the comment above):

elementary (**EL** or 1 to 8 years of schooling),

some high school (**HS1**, 9 to 13 years of schooling, no graduation from high school),

completed high school (**HS2**),

some post-secondary (**PS1**),

post-secondary certificate or diploma (**PS2**) and,

university degree (**UN**, baccalaureate, or higher degree).

Since the education questions differ across surveys, we anticipated that categories associated with memorable events such as high school or university graduation would be most

[6] We understand discussions are underway about a revision to this set of questions that would clarify which wage concept (straight time or overtime) is to be reported.

consistent across the surveys and of these the UN category would be the one measured most consistently across surveys and over time. As a consequence, we have tended to focus on the university - high school wage (earnings) ratio and on the ratio of university to non-university wages (this latter aggregate category we denote by **NONUN**).

3. The Data and the Extracts

Before turning to a discussion of extracts, it is worth reminding the reader that the SCF and the LFS are publicly available micro data sets available through the Data Liberation Initiative (DLI). At the time of writing SLID cross-sectional data were available only through Statistics Canada (in Ottawa or in one of the regional offices) or through an RDC (research data centre).[7] In the case of SLID we work with the master files (at the McMaster RDC) while in the case of SCF and LFS we work with the publicly available micro data sets.[8] Having the data available in public use form is of immense importance in terms of ease of use of the data. However, this is tempered by the fact that the data is often released with some variables aggregated (or collapsed) in certain ways and that has had some influence on the extracts we have chosen for compatibility across surveys. One important example of this is that the LFS observations available in the public use files are not coded as to single years of age but instead are assigned to 5 year age groups (25-29, etc.). As a consequence we have worked everywhere with 5 year groupings for all 3 data sets. As another example, the LFS public use files do not give any information on which individuals reported wages on an hourly basis, and which ones reported on some other basis. As a consequence some possibilities regarding how to handle data reported on different bases were not available to us.

Another general feature worth commenting on at the outset is that the LFS data is available monthly while the others are available only on an annual basis. However, the observations are not independent from month to month because the LFS is a rotation survey and individuals (assuming they are not lost, and do not move) stay in the sample for 6 months at a time (though one cannot identify which individuals are the 'rotate-ins" in the public use files).

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[7] Additional years of the SLID data have subsequently been released in public use form through the DLI though not in the detail in the master files.

[8] At the time this paper was written public use SLID files were not available except for the initial years. Files with some information suppressed are now available through the DLI.

In the work reported here, we have handled this by using only one month in the year of data for the LFS. This may introduce some seasonal aspects into the LFS data but we thought that was of less concern than the non-independence problem created when observations would be included multiple times if, say, all the months of the years were used. We have chosen to use April as the month for comparisons but have checked with other months and with all the months aggregated together and there is hardly any difference in the results.

As we have mentioned above, one of our main interests has been to address the issue of the education premium – the extra earnings associated with additional education – and this has influenced our choice of extracts. One important consideration in this regard was the age bounds of the extracts. Since some individuals are still acquiring education in their early twenties and others are in apprenticeship type situations where some salary is foregone to improve salary growth in the future, we decided to limit our attention to individuals 25 years of age or older. At the other end of the age spectrum, individuals begin to reduce their labour force activities in their sixties and a large fraction of the population has retired by age 65. As a consequence we have focussed on those under 65 and the extracts are therefore for ages 25 to 64. A second concern is to limit ourselves to paid workers and exclude the self-employed. The main issue here is that the income from capital is confounded with the income from labour in the case of the self employed and our interest is really in labour earnings potential (what a full-time worker would earn). As a consequence we have excluded the self employed as best we can. In the case of the LFS we are able to use a class of worker variable to exclude the self employed (by retaining only those who are classed as public employee or private employee) while in the other surveys we have been able to consider the main source of income, including only those whose main source is wages and salaries. Because either of these exclusions is imperfect, we have also excluded occupations where we know there is a high concentration of the self-employed: namely the farming, fishing and trapping occupations.

Finally, we note that the extracts are restricted to individuals working 30 or more hours per week in all three surveys. Since our interest is in wages, selecting on what is essentially full time work allows us to treat weekly wages as if they are proportional to wages. We have taken this approach with some success in earlier papers with the SCF data (see the references) and use the same strategy here for all three surveys. For SLID and SCF, it should be noted that the income period is the previous year while for the LFS the income is current. For SLID, the hours

restriction is based on the monthly hours worked at all jobs in the reference year. For SCF, the hours restriction is based on whether individuals were "mostly full time" in the reference year. For the LFS, we required that both Actual Total Hours and Usual Total Hours of work were 30 or more per week.

4. The Time Series

Tables 1 for males and 3 for females record information about the educational distributions for the three surveys. The results here and in the rest of this report all use the croos-section weights provided by Statistics Canada.. The year 1997 is the only year in common for all three surveys and it is highlighted for ease of comparison.

As anticipated, because of the difference in the educational classification, more individuals show up in some post-secondary category (PS1) in the SLID survey than in either of the other surveys for all years.[9] Moreover, it appears that the increase in individuals in this group comes from all three of the lower educational groups (by comparing these proportions in SLID to the corresponding proportions in the other surveys) but most notably from the high school graduate category (HS2). This observation made us realize that examination of the University - High School earnings ratios could be problematic because of the different notions of high school. For this reason we have tended to focus on the University - Non-University earnings ratio in what follows.

Tables 2 and 4 report the Median Weekly Wages for the 3 surveys for all years in constant 1997 dollars. Looking at the last two columns (which together comprise the entire sample) in Table 2 for males we note that the LFS has the lowest median weekly earnings of the three for the overlap year. Recall the reason we anticipated this was because the other surveys included overtime while the LFS was unclear about whether individuals were to report overtime earnings, or not. Since overtime is likely to be of least importance to the university educated group (which is more likely to be on a salary pay schedule) it is interesting that this group has earnings more similar to those recorded by the SLID or the SCF. SLID records a somewhat

[9] This is all years of the SLID and the SCF at the time of writing. We consider only the surveys available from 1981 for the SCF – a change in the educational coding between 1979 and 1981 makes it difficult to get consistency further back in time. However, we are interested in the more recent period in any event.

higher median earnings for this group for 1997 but note that this difference is not so large in the earlier overlap years for the SCF vs. SLID comparison. On the other hand, the LFS has noticeably lower earnings recorded for the non university group which is as expected. This feature of lower weekly earnings for the LFS is apparent in all the individual education groups that make up non-university.

For females, the results are a little different. Here, the LFS has lower earnings for all educational groups – the university as well as the non-university ones. (Are more university educated females in jobs which have hourly wage rates rather than salaries?) Again the university earnings in SLID are above the other two surveys but by less than in the case of males.[10] Moreover, as in the case of males there is a lack of consistency in earlier year comparisons of SLID and SCF. This may just be noise in the data.

The median earnings estimates from these three surveys can be viewed in various ways. One way we have found useful is to view them graphically. This can often provide a better indication of consistency across the series. Figures 1 and 2 for males and 3 and 4 for females graph the median weekly earnings for the key groups of interest for the SCF/SLID and the SCF/LFS comparisons. We plot university, non-university and high school graduates (HS2) in each of these figures. Though slight differences are apparent here and there, the non-university category and the high school categories appear to show much the same trends. Male real weekly earnings tend to decline over the period while female real weekly wages increase slightly. These differences, however, would not necessarily lead to a difference between the male and female trends in the education premium since the same difference between males and females is apparent in the median wages of male and female university graduates.

The skill premia are displayed in Figures 5 to 8. These are organized in a slightly different way. The skill premia for all three surveys are shown on each graph. The university to non-university premia are shown for males in Figure 5 and for females in Figure 7. Figures 6 and 8 display the same information for the university- high school premium. For males, both SLID and LFS show a higher premium than does SCF in the overlap year, 1997, whether you consider the university/non-university or the university/high school premium. For females (Figures 7 and 8), both SLID and LFS show a higher premium than SCF in the overlap year for the university/non-university measure, but for the university/high school premium the LFS is

[10] In fact, all the differences seem smaller in the case of females.

lower and the SLID higher in the overlap year.

Are these differences in the skill premium large or small? Figures 5 through 8 employ a vertical scale chosen to highlight where the series differ. However, these differences are not that large as can be seen by redrawing Figure 5 with a different scale on the vertical axis. This is shown as Figure 5B for males (Figure 7B shows a similarly scaled graph for females). This draws our attention to the fact that while these ways of looking at the education or skill premium can give an overall impression of whether one series can carry on from the other, none of these ways of looking at the premium allows for formal testing of hypotheses about the equivalence of the surveys. This we explore using regression analysis in the next section.

5. Regression analysis for 1997

A formal way of evaluating the extent to which SLID and LFS convey the same information as SCF is to study in depth the years of overlap between the surveys. Here we first examine the data sets for 1997, the one year for which all 3 surveys are available. Subsequently, we repeat the analysis for the additional years for which SLID and SCF overlap (1993-96). The framework we employ is the human capital model of earnings and we seek to determine whether the surveys (SCF and SLID or SCF and LFS) can be pooled and treated as a single survey. This is a quite demanding standard and it may be that the surveys cannot be treated as identical for all purposes but can nevertheless be combined for some purposes – such as examining the skill premium. We develop tests for both the more demanding standard and the more limited comparison and report on them here.

We begin by laying out a standard human capital model of wages/earnings. We use the same extracts and earnings calculations as in previous sections. We analyse weekly earnings but the extracts are restricted to full time workers (30 plus hours per week) so we tend to refer to wages rather than earnings. The basic human capital model can be written as a regression model in a general way as:

1) $w = \log W = \alpha + \beta X + \gamma A + \delta UN + \theta(A*UN) + e$

Here w is the log of W, the wage index (the weekly wage rate), X is a set of exogenous variables other than age and education, A is the age variable (or it could be a set of age dummy variables), and UN is an indicator for university education (or, it could be a set of education variables).

Greek letters indicate parameters to be estimated. Education is separated out for special treatment here because of our focus on the skill premium and age is separated out because in some of the specifications we wish to allow for the skill premium to vary with age (hence the interaction term). Finally, we note that e is an error term and the index indicating the individual observations is suppressed.

To combine surveys we create a dummy variable, S, which has value of unity for the alternate survey (SLID or LFS) and zero for the SCF. The combined model can then be written as:

2) $w = \alpha + \beta X + \gamma A + \delta UN + \theta(A*UN) + S*[\alpha' + \beta' X + \gamma' A + \delta' UN + \theta'(A*UN)] + e'$

The Greek letters with primes, α' β' etc., indicate differences from the SCF survey in the SLID or LFS surrvey as the case may be. The error is now written as e' to indicate the difference from the previous model. A test of equivalence of the surveys then is the test of the null hypothesis:

H_0 $\alpha' = \beta' = \gamma' = \delta' = \theta' = 0$

Alternatively, the test of whether the two surveys give the same results as far as the education premium is concerned is the test of the null hypothesis:

H_0^* $\delta' = \theta' = 0$

It is perhaps not obvious that this is the appropriate test so we take a slight diversion to demonstrate this. Consider first the difference between UN = 1 and UN = 0 in equation 2 (that is, between university and non-university earnings).

3) $w_{(UN = 0)} = \alpha + \beta X + \gamma A + S*[\alpha' + \beta' X + \gamma' A]$

4) $w_{(UN = 1)} = \alpha + \beta X + \gamma A + \delta + \theta(A) + S*[\alpha' + \beta' X + \gamma' A + \delta' + \theta'(A)]$

The difference between log earnings for university and non-university workers represents the log of the skill premium and is given by:

5) $w_{(UN = 1)} - w_{(UN = 0)} = \log(W_{(UN = 1)}/W_{(UN = 0)}) = \delta + \theta(A) + S*[\delta' + \theta'(A)]$

We can then conclude that the skill premium is the same in two surveys if we can accept the null

hypothesis, H_0^*.

The estimated regression models for 1997 are reported in Tables 5 through 8 and the test statistics for the hypothesis tests described above are reported in Table 9. Tables 5, for males, and 7, for females, report a standard regression model along the lines of equation 2 above. In addition to age and education, provincial dummy variables are included as the X vector here. In these models, the 6 education groups are used with the group having the lowest level of education serving as the reference category. Ontario serves as the reference province and the age group 25 to 29 serves as the reference age group. In the models reported in Tables 5 and 7, the education-age interactions are dropped as the equation would need another 35 terms and would have become cumbersome and hard to interpret if they were included. In order to allow for interactions, however, we consider also a model with just two levels of education – university and non-university – and we report these results in Table 6, for males, and Table 8 for females. There is a fairly strong basis for preferring this specification both theoretically and empirically.[11] All the regression models incorporate the Huber/White robustness correction for heteroscedasticity and incorporate sample weights.[12]

Panel A of Table 9 reports the F-test statistics and their associated p-values for the hypothesis test H_0 with the 6 categories of education variable and no age-education interactions.[13] For males, at a 5% significance level, we reject the null hypothesis of equality between the SCF and SLID surveys but cannot reject the null for the SCF and LFS pair (though at 10% we could reject both). For females, we cannot reject the null in either case. These first tests suggest caution in using either of the replacement surveys to extend analysis beyond the overlap year in the case of males.

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[11] Theoretically, that different education streams are likely to involve different timing and different amounts of post education training would suggest different age profiles. Such differences are generally found empirically.

[12] To deal with different weights in different surveys, each survey's weights are normalized by the average weight for that survey. Thus, the weights in each survey have a mean of unity. All regressions reported use STATA Version 7 and use the 'weight' qualifier and the 'robust' option.

[13] To be more precise, the coefficients on all of the terms prefaced by an S* in Table 5 are set to zero under the Null (21 terms). This does not include the dummy itself, however, so that the surveys are allowed to vary by a scale difference even under the Null. All the tests in Table 9 follow this strategy of allowing a scale difference. However, we note that tests that do not allow the scale difference yield the same results as those reported here.

Panel B of Table 9 reports on the tests for the models whose results are shown in Tables 6 and 8, that is with only a two-way categorization of education – university education as distinguished from non-university – and allowing for age interactions. That is, different education levels are now allowed to have different profiles. Again, we reject the null hypothesis of equivalence of the two surveys in the case of males for the SCF / SLID comparison but cannot reject in the other 3 cases at the 5% level.

Panel C considers the null hypothesis of the form of H_0^* – that is, that the skill premium is the same for the 2 surveys while allowing other differences (in province, for example). Here, the SLID / SCF comparison indicates that we cannot reject that the two surveys contain the same information on the education premium. However, in the case of the LFS, the education premium for females is rejected as being the same for the two surveys.

As mentioned earlier, 1997 is the only overlap year for SCF and the LFS. However, the SCF and SLID overlapped from 1993 to 1997 and we can conduct all these tests for the 5 years. These are reported in Table 10.[14] While there is some variation from year to year, we note that of the 10 tests of the common educational premium (Type C), only one rejects at the 5% significance level – for females in 1995. On the other hand, 14 of 20 or 70% of the tests of the A and B type (as described in the previous paragraph) reject. We are led to conclude that while it might be unwise to assume the SLID can be used to carry on from the SCF in later years for all purposes, for the limited purpose of studying the education (skill) premium it appears to be not unreasonable.[15]

As a final note, we show in Figures 9 and 10, for males and females respectively, the education premium (university to non-university) by age according to the 3 surveys. These are derived from the coefficients of the regression equations given in Tables 6 and 8 for males and

[14] Although the regressions underlying these F-tests are conducted separately, because the SLID is a longitudinal date set, the tests are not entirely independent. Because the second panel is added in the SLID in 1996, the 1996 and 1997 tests use at least ½ new observations for these years for the SLID.

[15] One limitation of these tests is that they cannot take account of the complex survey design. Since this paper was written, a set of bootstrap weights has been released for SLID as a means of taking account of design issues. No such weights are available for SCF or LFS. It is not clear how one could use the SLID bootstrap weights in this context. The direction of bias from failing to use the complex design information is likely to be in the direction of rejection of the nulls since standard errors tend to be understated when the sample design is not included however we know of no formal demonstration of this proposition.

females, respectively. While there are ages where the surveys diverge, for the most part the age structure of the premia are similar in all 3 surveys. The most noticeable difference is the extent to which the premium rises more significantly for females than for males, and this is apparent in all 3 surveys.

6. Conclusion

To summarize the results of this research, neither SLID nor LFS comes off as entirely satisfactory as a replacement and extension of the SCF in all respects.[16] However, if one's purpose is more limited, such as extending the analysis of changes in the education premium beyond 1997, then merging results from the SLID and the SCF seem a reasonable way to proceed.[17] Unfortunately, there is only the one overlap year between SCF and LFS and not a lot of information to go on. Only one of the tests for the SCF / LFS commonality rejects, though unfortunately it is one of the tests in which we have most interest – involving the education premium. One would probably want to be cautious in merging the SCF and LFS in the case of females for this sort of analysis.

[16] Though we would remind the reader of our comment in footnote #4 above, that the extensive use of tax records for the SLID income increases the accuracy of SLID income data – at least as far as reported income goes.

[17] As an example, see Burbidge, Magee and Robb (2002).

References

Y. Bar-Or, J.B. Burbidge, L. Magee and A.L. Robb (1995) "The Wage Premium to a University Education in Canada: 1971-1991," **Journal of Labor Economics**, 13, pp. 762-794.

J.B. Burbidge, L. Magee and A.L. Robb (2002) "The Education Premium in Canada and the United States", **Canadian Public Policy** 28(2), June 2002, pp. 203-217. .

J.B. Burbidge, L. Magee and A.L. Robb (1997) "Canadian Wage Inequality Over the Last Two Decades," **Empirical Economics**, 22, pp. 181-203.

Table 1: Percentage Distributions Across Education Categories: Canadian Males Aged 25-64; SCF, SLID and LFS

Year	EL	HS1	HS2	PS1	PS2	UN	NONUN
				SCF			
1981	17	25	21	8	13	16	84
1982	17	23	22	9	12	17	84
1983							
1984	15	24	22	9	13	17	83
1985	13	23	22	9	15	18	82
1986	12	23	23	9	14	19	81
1987	12	22	22	9	15	19	81
1988	11	21	24	9	16	19	81
1989	9	17	20	8	29	17	83
1990	7	17	21	8	29	17	83
1991	7	16	22	8	28	19	81
1992	6	14	21	8	30	20	80
1993	6	15	21	7	32	19	81
1994	6	14	20	7	33	21	79
1995	6	14	21	7	33	20	80
1996	5	12	20	7	35	21	79
1997	5	12	20	7	35	20	80
				SLID			
1993	5	13	15	12	36	20	80
1994	4	12	15	12	36	20	80
1995	4	11	14	12	37	21	79
1996	5	11	17	12	35	20	80
1997	4	11	16	13	36	20	80
1998	4	10	15	13	37	21	79
				LFS			
1997	4	12	19	7	35	22	78
1998	4	12	20	7	36	21	79
1999	4	12	19	7	37	22	78
2000	4	11	20	7	36	22	78

NOTES: The education categories are: EL - elementary - 1 to 8 years of schooling, HS1 - 9 to 13 years of schooling without graduation, HS2 completed High School, PS1 - some post secondary, PS2 - post secondary certificate or diploma, UN - bachelor's or higher degree. Non-UN aggregates the non university categories.

Table 2: Median Weekly Earnings by Education (1997 dollars)
Canadian Males Aged 25-64; SCF, SLID and LFS

Year	EL	HS1	HS2	PS1	PS2	UN	NONUN
				SCF			
1981	$682	$734	$791	$808	$849	$1,054	$760
1982	$665	$743	$792	$792	$841	$1,048	$761
1983							
1984	$689	$718	$760	$811	$819	$1,040	$746
1985	$664	$713	$777	$814	$827	$1,042	$753
1986	$689	$714	$768	$795	$834	$1,037	$755
1987	$686	$711	$773	$808	$809	$1,016	$754
1988	$695	$723	$757	$795	$830	$1,024	$756
1989	$689	$698	$744	$755	$789	$1,046	$744
1990	$687	$689	$739	$776	$810	$1,014	$750
1991	$651	$683	$724	$766	$799	$1,039	$735
1992	$657	$690	$745	$771	$807	$1,035	$745
1993	$654	$675	$711	$720	$781	$1,015	$727
1994	$648	$689	$717	$751	$811	$1,014	$748
1995	$600	$684	$715	$724	$774	$984	$721
1996	$610	$661	$693	$710	$781	$995	$723
1997	$588	$673	$695	$712	$769	$962	$729
				SLID			
1993	$606	$668	$726	$721	$790	$997	$724
1994	$669	$641	$719	$765	$801	$1,011	$745
1995	$618	$625	$712	$743	$785	$1,002	$733
1996	$654	$637	$710	$748	$784	$988	$729
1997	$658	$654	$706	$707	$784	$1,005	$728
1998	$661	$656	$725	$743	$793	$1,047	$747
				LFS			
1997	$577	$600	$673	$673	$754	$961	$682
1998	$571	$619	$667	$677	$762	$951	$686
1999	$561	$584	$657	$701	$749	$936	$690
2000	$569	$596	$683	$682	$750	$936	$692

Table 3: Percentage Distributions Across Education Categories: Canadian Females Aged 25-64; SCF, SLID and LFS

Year	EL	HS1	HS2	PS1	PS2	UN	NONUN
			SCF				
1981	12	23	26	9	16	13	87
1982	12	22	27	8	16	15	85
1983							
1984	10	21	27	9	17	16	84
1985	9	21	27	9	18	16	84
1986	7	20	28	10	18	17	83
1987	8	19	27	9	19	18	82
1988	7	19	27	9	19	18	82
1989	6	15	26	9	29	16	84
1990	5	15	26	9	30	15	85
1991	5	12	27	9	30	17	83
1992	4	12	26	8	31	19	81
1993	4	11	25	8	32	20	81
1994	4	10	23	8	34	20	80
1995	4	10	25	8	34	20	80
1996	4	9	21	8	36	22	78
1997	4	9	21	8	36	22	78
			SLID				
1993	3	9	17	11	41	19	81
1994	3	8	17	11	41	20	80
1995	3	7	16	12	41	22	78
1996	3	8	20	11	38	20	80
1997	3	8	19	11	39	20	80
1998	3	7	17	11	40	22	78
			LFS				
1997	4	9	22	8	35	22	78
1998	4	9	22	8	35	22	78
1999	3	9	22	8	36	23	77
2000	3	8	23	8	34	24	76

Table 4: Median Weekly Earnings by Education (1997 dollars)
Canadian Females Aged 25-64; SCF, SLID and LFS

Year	EL	HS1	HS2	PS1	PS2	UN	NONUN
				SCF			
1981	$366	$428	$492	$524	$561	$776	$471
1982	$380	$427	$482	$518	$551	$779	$469
1983							
1984	$365	$430	$488	$514	$574	$763	$472
1985	$363	$414	$481	$513	$552	$770	$469
1986	$371	$418	$498	$530	$554	$763	$482
1987	$365	$419	$494	$508	$559	$762	$482
1988	$387	$417	$481	$508	$547	$766	$476
1989	$353	$418	$488	$476	$535	$798	$477
1990	$399	$403	$495	$508	$554	$776	$492
1991	$363	$420	$498	$519	$546	$807	$502
1992	$376	$433	$518	$517	$563	$828	$517
1993	$407	$420	$500	$508	$550	$794	$502
1994	$369	$406	$507	$533	$550	$802	$507
1995	$379	$431	$497	$516	$549	$794	$506
1996	$405	$430	$508	$512	$547	$782	$508
1997	$385	$432	$504	$558	$556	$788	$519
				SLID			
1993	$339	$459	$524	$555	$565	$802	$532
1994	$358	$448	$498	$547	$577	$771	$533
1995	$366	$428	$504	$539	$585	$764	$539
1996	$363	$410	$498	$531	$556	$793	$518
1997	$325	$410	$498	$530	$556	$795	$516
1998	$343	$414	$512	$542	$560	$804	$528
				LFS			
1997	$370	$404	$500	$500	$550	$769	$500
1998	$355	$389	$481	$530	$555	$762	$499
1999	$351	$382	$502	$548	$555	$768	$506
2000	$360	$379	$498	$522	$547	$766	$508

Table 5: Male Log Earnings Regressions 1997

	SCF vs SLID			SCF vs LFS	
Variable	**Coefficient**	**t-stat**		**Coefficient**	**t-stat**
Nfld	-0.17	-6.12		-0.17	-6.12
PEI	-0.30	-11.51		-0.30	-11.51
NS	-0.19	-9.38		-0.19	-9.38
NB	-0.18	-8.75		-0.18	-8.76
PQ	-0.11	-6.91		-0.11	-6.91
Man	-0.10	-5.23		-0.10	-5.23
Sask	-0.11	-5.70		-0.11	-5.70
Alta	-0.06	-3.09		-0.06	-3.09
BC	0.01	0.40		0.01	0.40
age 30-34	0.12	6.22		0.12	6.22
age 35-39	0.24	12.51		0.24	12.51
age 40-44	0.31	15.76		0.31	15.76
age 45-49	0.33	16.68		0.33	16.68
age 50-54	0.34	14.43		0.34	14.44
age 55-59	0.34	12.53		0.34	12.53
age 60-64	0.30	9.18		0.30	9.18
HS some	0.13	5.05		0.13	5.05
HS -grad	0.18	6.92		0.18	6.92
PS some	0.20	6.31		0.20	6.31
PS cert	0.28	11.35		0.28	11.36
Univ	0.51	18.69		0.51	18.70
LFS or SLID	0.01	0.26		-0.02	-0.64
S*HS some	-0.08	-1.72		-0.07	-1.95
S*HS -grad	-0.04	-0.83		-0.01	-0.28
S*PS some	-0.05	-0.86		-0.00	-0.04
S*PS cert	-0.04	-0.90		0.01	0.19
S*Univ	-0.06	-1.15		-0.02	-0.50
S*age 30-34	0.06	1.72		0.01	0.35
S*age 35-39	0.07	2.03		-0.00	-0.20
S*age 40-44	0.04	1.23		0.00	0.03
S*age 45-49	0.05	1.33		0.02	0.65
S*age 50-54	0.14	3.50		0.02	0.56
S*age 55-59	0.07	1.63		-0.03	-0.76
S*age 60-64	0.04	0.74		-0.04	-0.91
S*Nfld	-0.05	-1.15		0.00	0.10
S*PEI	-0.05	-1.15		0.04	1.22
S*NS	-0.05	-1.41		-0.02	-0.96
S*NB	-0.01	-0.41		0.01	0.39
S*PQ	-0.03	-1.16		-0.01	-0.67
S*Man	-0.07	-2.09		-0.00	-0.08
S*Sask	-0.06	-1.67		0.05	1.85
S*Alta	0.01	0.27		0.03	1.38
S*BC	-0.14	-3.82		0.04	1.74
Constant	6.14	217.99		6.14	218.02
Observations	26793			32023	
Adjusted R-squared	0.1144			0.1527	

Table 6: Male Log Earnings regressions, comparing surveys, 1997

	SCF vs SLID			SCF vs LFS	
Variable	**Coefficient**	**t-stat**		**Coefficient**	**t-stat**
Nfld	-0.16	-5.82		-0.16	-5.82
PEI	-0.31	-11.97		-0.31	-11.98
NS	-0.19	-9.07		-0.19	-9.08
NB	-0.18	-8.99		-0.18	-8.99
PQ	-0.11	-7.27		-0.11	-7.28
Man	-0.10	-5.32		-0.10	-5.32
Sask	-0.12	-5.93		-0.12	-5.93
Alta	-0.05	-2.86		-0.05	-2.86
BC	0.02	0.96		0.02	0.96
age 30-34	0.14	6.21		0.14	6.21
age 35-39	0.23	10.55		0.23	10.55
age 40-44	0.28	12.61		0.28	12.61
age 45-49	0.29	12.82		0.29	12.82
age 50-54	0.29	11.70		0.29	11.70
age 55-59	0.28	9.38		0.28	9.38
age 60-64	0.21	6.27		0.21	6.27
UN (University)	0.23	6.93		0.23	6.93
UN*age 30-34	-0.07	-1.44		-0.07	-1.44
UN*age 35-39	0.06	1.06		0.06	1.06
UN*age 40-44	0.13	2.63		0.13	2.63
UN*age 45-49	0.13	2.79		0.13	2.79
UN*age 50-54	0.15	2.21		0.15	2.21
UN*age 55-59	0.14	2.02		0.14	2.02
UN*age 60-64	0.26	2.45		0.26	2.45
LFS or SLID	-0.03	-0.94		-0.03	-1.14
S*UN	-0.04	-0.64		-0.02	-0.57
S*UN*age 30-34	0.16	1.61		0.10	1.57
S*UN*age 35-39	-0.02	-0.24		0.02	0.23
S*UN*age 40-44	-0.07	-0.70		-0.03	-0.53
S*UN*age 45-49	-0.01	-0.15		-0.01	-0.20
S*UN*age 50-54	0.11	1.07		0.01	0.17
S*UN*age 55-59	0.15	1.39		0.12	1.27
S*UN*age 60-64	-0.19	-1.25		-0.13	-0.92
S*age 30-34	0.03	0.73		-0.02	-0.61
S*age 35-39	0.08	2.21		-0.01	-0.35
S*age 40-44	0.06	1.56		0.00	0.06
S*age 45-49	0.06	1.62		0.02	0.55
S*age 50-54	0.12	2.96		0.00	0.14
S*age 55-59	0.04	0.88		-0.07	-1.85
S*age 60-64	0.06	1.01		-0.03	-0.65
S*Nfld	-0.05	-1.17		0.01	0.39
S*PEI	-0.03	-0.79		0.04	1.33
S*NS	-0.05	-1.43		-0.03	-1.21
S*NB	-0.01	-0.17		0.01	0.41
S*PQ	-0.03	-1.10		-0.01	-0.56
S*Man	-0.06	-1.95		-0.01	-0.22
S*Sask	-0.06	-1.57		0.04	1.60
S*Alta	0.02	0.57		0.03	1.46
S*BC	-0.14	-3.71		0.04	1.67
constant	6.37	335.47		6.37	335.53
Observations		26793			32023
R-squared		0.1044			0.1342

Table 7: Female Log Earnings Regressions 1997

	SCF vs SLID			SCF vs LFS	
Variable	**Coefficient**	**t-stat**		**Coefficient**	**t-stat**
Nfld	-0.29	-9.68		-0.29	-9.68
PEI	-0.24	-8.57		-0.24	-8.58
NS	-0.27	-9.43		-0.27	-9.43
NB	-0.26	-11.92		-0.26	-11.93
PQ	-0.12	-6.56		-0.12	-6.57
Man	-0.21	-9.28		-0.21	-9.28
Sask	-0.21	-9.23		-0.21	-9.23
Alta	-0.16	-7.52		-0.16	-7.52
BC	-0.01	-0.67		-0.01	-0.67
age 30-34	0.10	4.45		0.10	4.45
age 35-39	0.23	10.22		0.23	10.23
age 40-44	0.24	11.28		0.24	11.28
age 45-49	0.25	11.38		0.25	11.39
age 50-54	0.30	12.57		0.30	12.57
age 55-59	0.23	6.62		0.23	6.62
age 60-64	0.17	3.31		0.17	3.31
HS some	0.12	3.06		0.12	3.06
HS -grad	0.28	7.78		0.28	7.78
PS some	0.37	9.65		0.37	9.65
PS cert	0.41	11.82		0.41	11.82
Univ	0.73	20.43		0.73	20.43
LFS or SLID dum	-0.17	-2.42		0.00	0.01
S*HS some	0.10	1.39		-0.00	-0.09
S*HS -grad	0.11	1.65		0.02	0.47
S*PS some	0.12	1.64		-0.03	-0.55
S*PS cert	0.14	2.10		0.02	0.59
S*Univ	0.15	2.26		0.00	0.03
S*age 30-34	0.03	0.75		0.05	1.80
S*age 35-39	0.05	1.45		-0.02	-0.71
S*age 40-44	0.04	1.10		-0.02	-0.80
S*age 45-49	0.05	1.45		0.02	0.56
S*age 50-54	-0.01	-0.16		-0.03	-1.00
S*age 55-59	0.03	0.63		-0.01	-0.13
S*age 60-64	0.10	1.28		0.07	1.08
S*Nfld	0.04	0.97		-0.02	-0.56
S*PEI	-0.04	-0.95		-0.03	-0.92
S*NS	0.03	0.80		0.02	0.45
S*NB	0.01	0.25		-0.01	-0.22
S*PQ	-0.01	-0.26		0.01	0.30
S*Man	0.02	0.52		0.03	1.26
S*Sask	-0.02	-0.60		0.05	1.61
S*Alta	-0.03	-0.89		0.01	0.43
S*BC	-0.03	-1.01		0.01	0.57
Constant	5.76	153.71		5.76	153.74
Observations	18603			22455	
Adjusted R-squared	0.1909			0.2132	

Table 8: Female Log Earnings regressions, comparing surveys, 1997

	SCF vs SLID			SCF vs LFS	
Variable	**Coefficient**	**t-stat**		**Coefficient**	**t-stat**
Nfld	-0.27	-9.05		-0.27	-9.05
PEI	-0.23	-8.33		-0.23	-8.33
NS	-0.26	-8.80		-0.26	-8.80
NB	-0.26	-11.86		-0.26	-11.86
PQ	-0.12	-6.79		-0.12	-6.79
Man	-0.21	-9.17		-0.21	-9.17
Sask	-0.21	-9.15		-0.21	-9.15
Alta	-0.15	-7.08		-0.15	-7.08
BC	0.00	0.16		0.00	0.16
age 30-34	0.08	3.00		0.08	3.00
age 35-39	0.14	5.51		0.14	5.51
age 40-44	0.15	6.02		0.15	6.02
age 45-49	0.14	5.57		0.14	5.57
age 50-54	0.17	6.30		0.17	6.30
age 55-59	0.09	2.33		0.09	2.33
age 60-64	0.02	0.41		0.02	0.41
UN (University)	0.23	6.69		0.23	6.69
UN*age 30-34	0.04	0.71		0.04	0.71
UN*age 35-39	0.27	4.78		0.27	4.78
UN*age 40-44	0.24	5.12		0.24	5.12
UN*age 45-49	0.33	6.07		0.33	6.07
UN*age 50-54	0.29	5.56		0.29	5.56
UN*age 55-59	0.32	3.42		0.32	3.42
UN*age 60-64	0.37	2.83		0.37	2.83
LFS or SLID dum	-0.05	-1.67		-0.01	-0.42
S*Univ	0.06	1.02		0.06	1.35
S*UN*age 30-34	0.05	0.55		0.05	0.84
S*UN*age 35-39	-0.10	-1.13		-0.14	-2.05
S*UN*age 40-44	-0.02	-0.28		-0.10	-1.70
S*UN*age 45-49	-0.12	-1.39		-0.18	-2.72
S*UN*age 50-54	-0.21	-1.98		-0.12	-1.73
S*UN*age 55-59	-0.03	-0.18		-0.10	-0.87
S*UN*age 60-64	0.10	0.52		0.00	0.01
S*age 30-34	0.02	0.52		0.03	1.06
S*age 35-39	0.08	2.01		0.02	0.52
S*age 40-44	0.06	1.52		0.00	0.13
S*age 45-49	0.09	2.03		0.05	1.59
S*age 50-54	0.05	1.06		-0.01	-0.16
S*age 55-59	0.03	0.53		0.02	0.42
S*age 60-64	0.04	0.48		0.04	0.67
S*Nfld	0.04	0.99		-0.01	-0.32
S*PEI	-0.04	-0.91		-0.01	-0.39
S*NS	0.02	0.55		0.03	0.77
S*NB	0.01	0.28		0.01	0.34
S*PQ	-0.02	-0.62		0.01	0.33
S*Man	0.01	0.28		0.04	1.43
S*Sask	-0.01	-0.24		0.06	2.01
S*Alta	-0.03	-0.82		0.02	0.77
S*BC	-0.04	-1.03		0.02	0.70
constant	6.15	295.21		6.15	295.28
Observations	18603			22455	
Adj, R-squared	0.1580			0.1752	

Table 9: F tests for differences between surveys

A: Six Education Groups (Table 5 & 7)

Tests for surveys being equivalent

	SCF vs. SLID		SCF vs LFS	
	F-stat	**P-value**	**F-stat**	**P-value**
Males	1.76	0.02	1.41	0.10
Females	0.87	0.64	1.16	0.28

B: University Education with age interactions (Tables 6 & 8)

Tests for surveys being equivalent

	SCF vs. SLID		SCF vs LFS	
	F-stat	**P-value**	**F-stat**	**P-value**
Males	1.82	0.01	1.08	0.36
Females	0.86	0.67	1.41	0.09

C: University Education with age interactions (Tables 6 & 8)

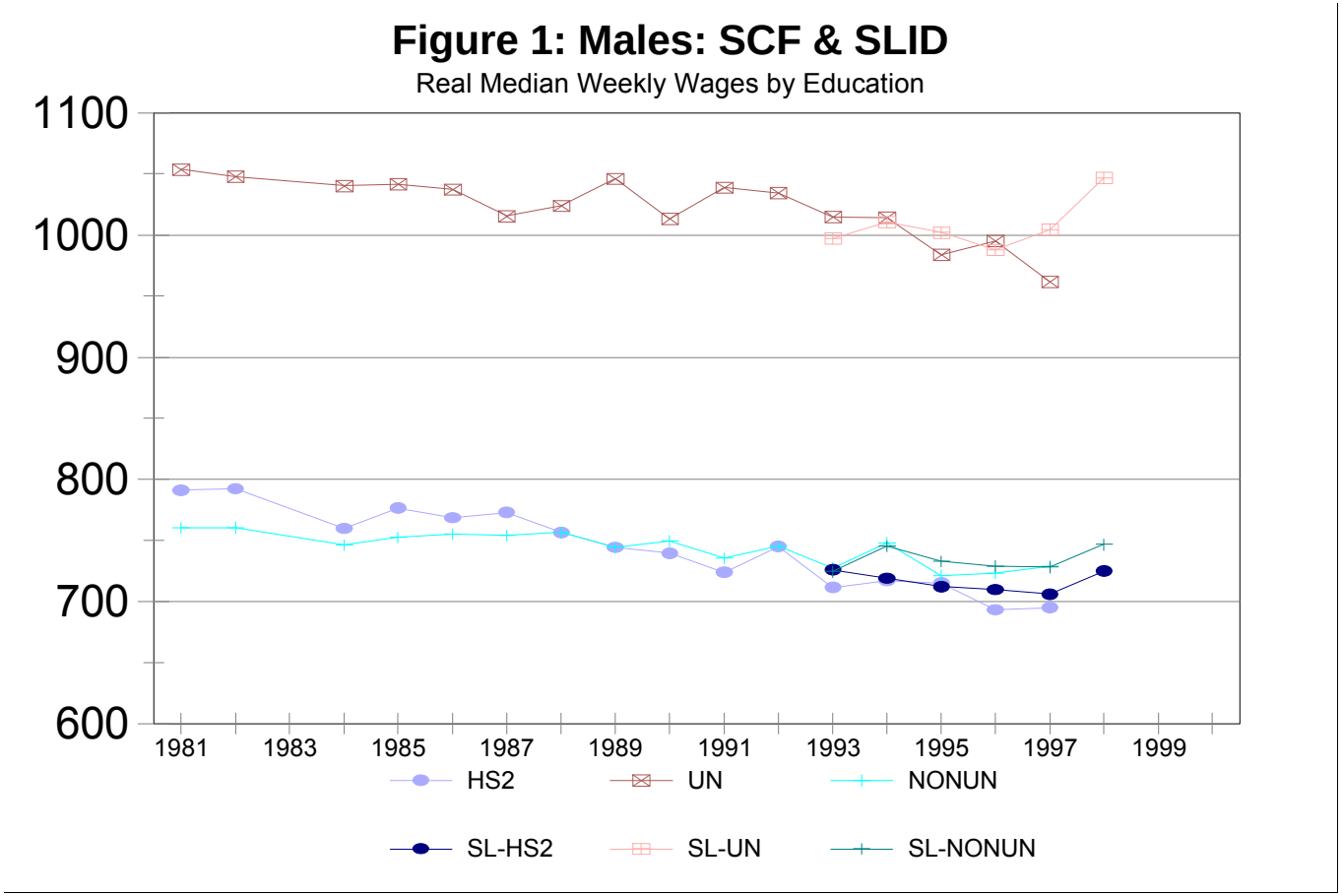
Tests for Surveys giving same education premium

	SCF vs. SLID		SCF vs LFS	
	F-stat	**P-value**	**F-stat**	**P-value**
Males	1.44	0.17	1.01	0.42
Females	1.24	0.27	2.30	0.02

Table 10: F tests for differences between SLID and SCF surveys

	Males			Females		
Year	**A**	**B**	**C**	**A**	**B**	**C**
1997	1.76*	1.82*	1.44	0.87	0.86	1.24
1996	1.64*	1.65*	1.31	1.60*	1.29	0.93
1995	1.47	1.58*	1.75	1.64*	2.19*	2.32*
1994	1.29	1.12	0.26	1.04	1.55*	1.72
1993	1.71*	1.66*	1.25	2.14*	1.99*	1.59

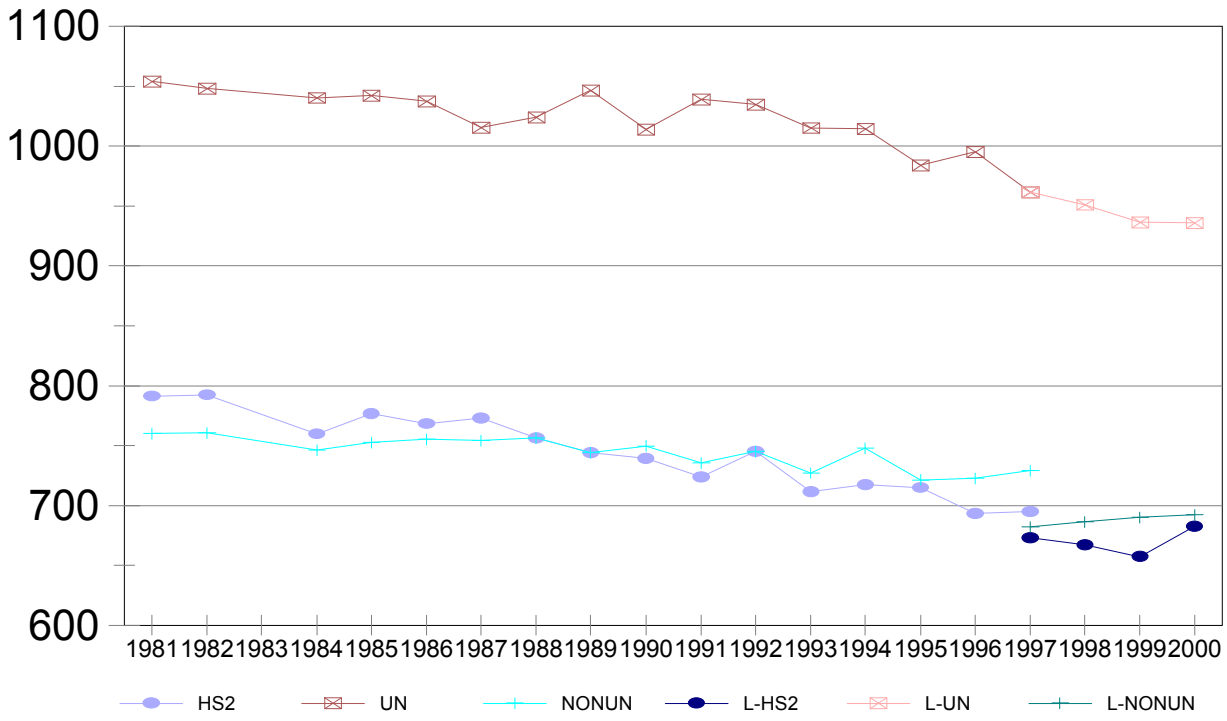
Note: Tests are as in the leftmost column of Table 9.
* indicates rejection at the 5% level of significance



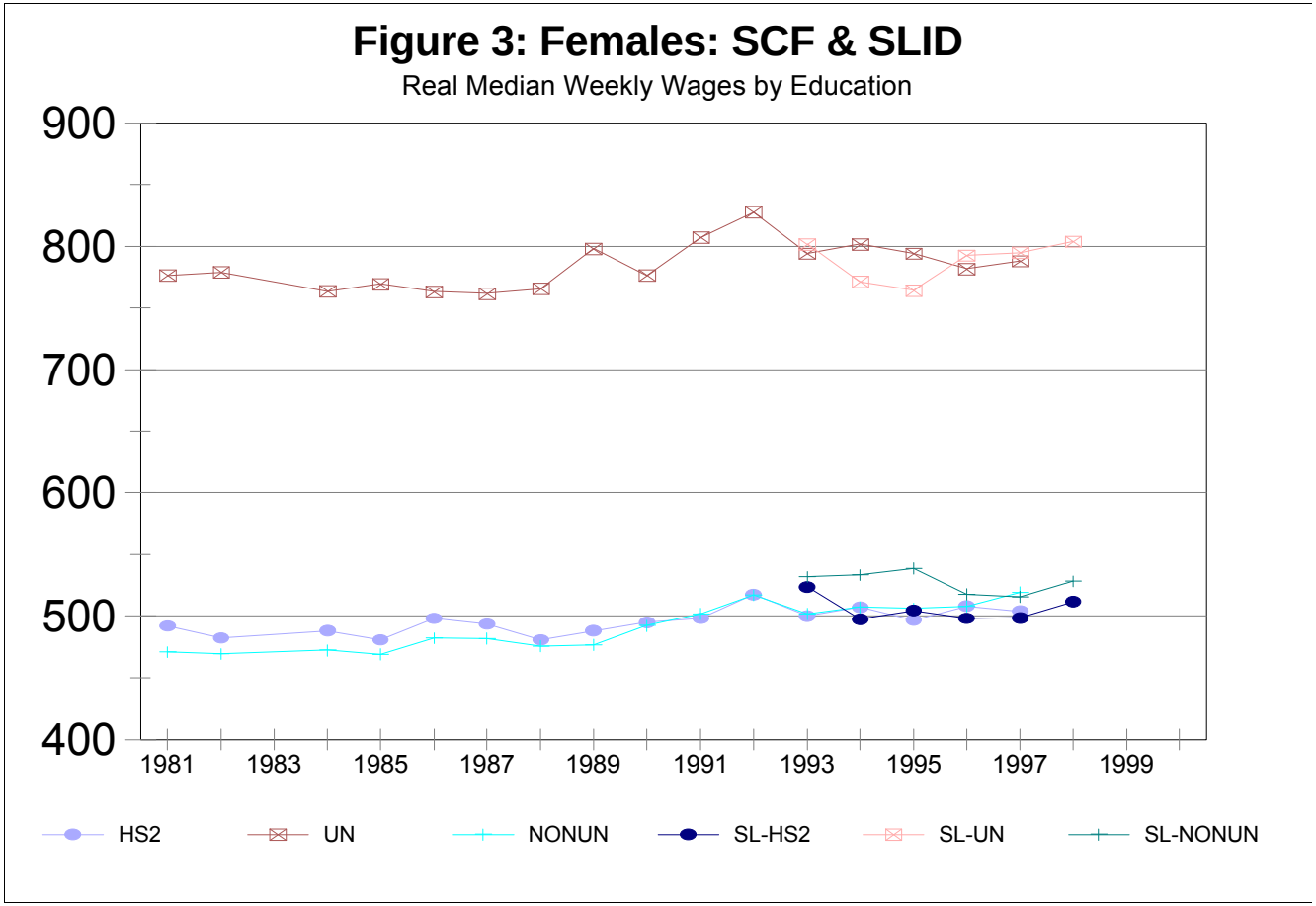
NOTES: HS2 is completed high school, NONUN is all non-university and UN is university
The SL prefix indicates the data is from the SLID

Figure 2: Males: SCF & LFS

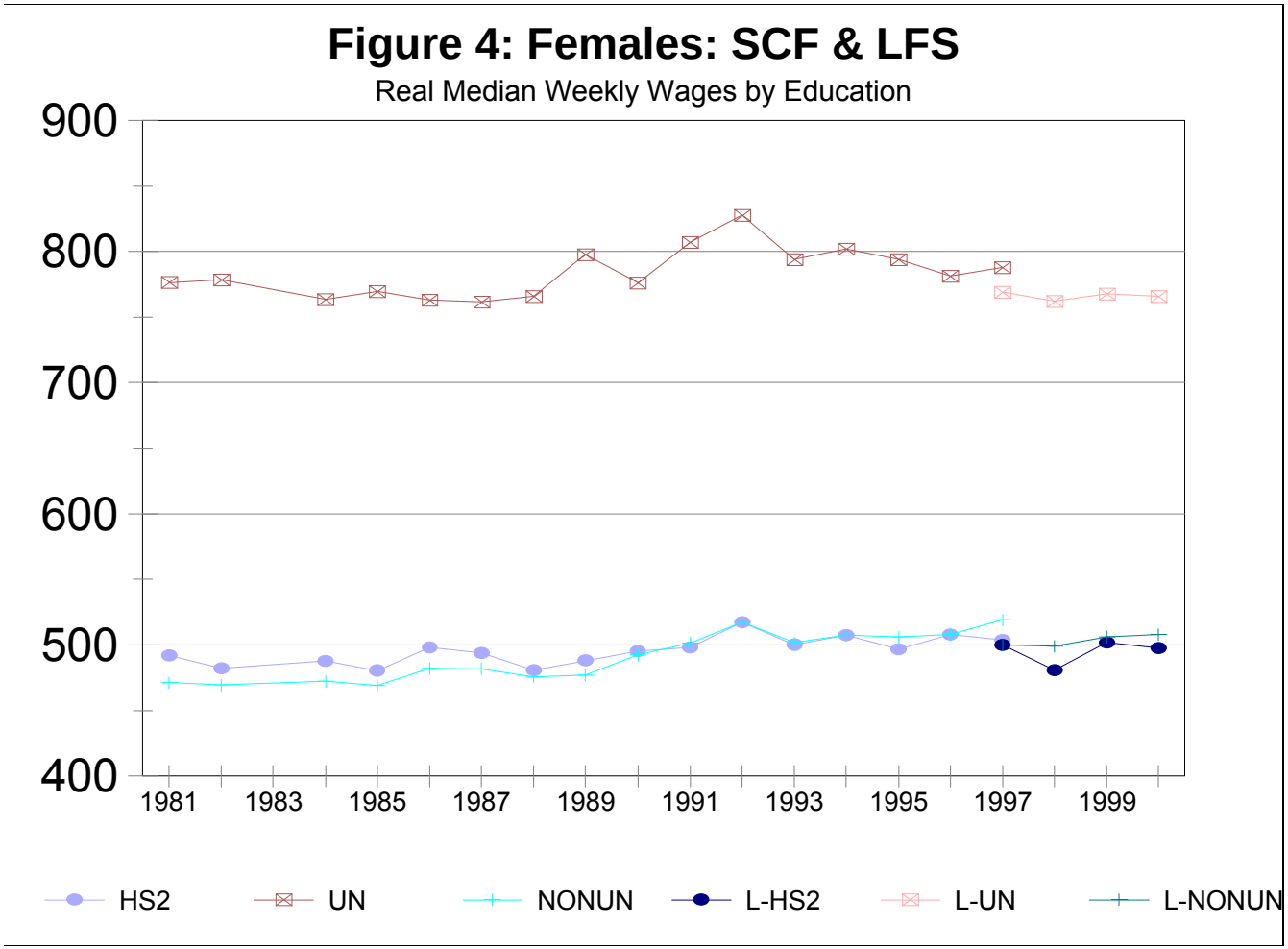
Real Median Weekly Wages by Education



NOTES: HS2 is completed high school, NONUN is all non-university and UN is university
The L prefix indicates the data is from the SLID



NOTES: HS2 is completed high school, NONUN is all non-university and UN is university
The SL prefix indicates the data is from the SLID



NOTES: HS2 is completed high school, NONUN is all non-university and UN is university
The L prefix indicates the data is from the SLID

Figure 5: Skill Premium -- Males

ratio of University to non-University

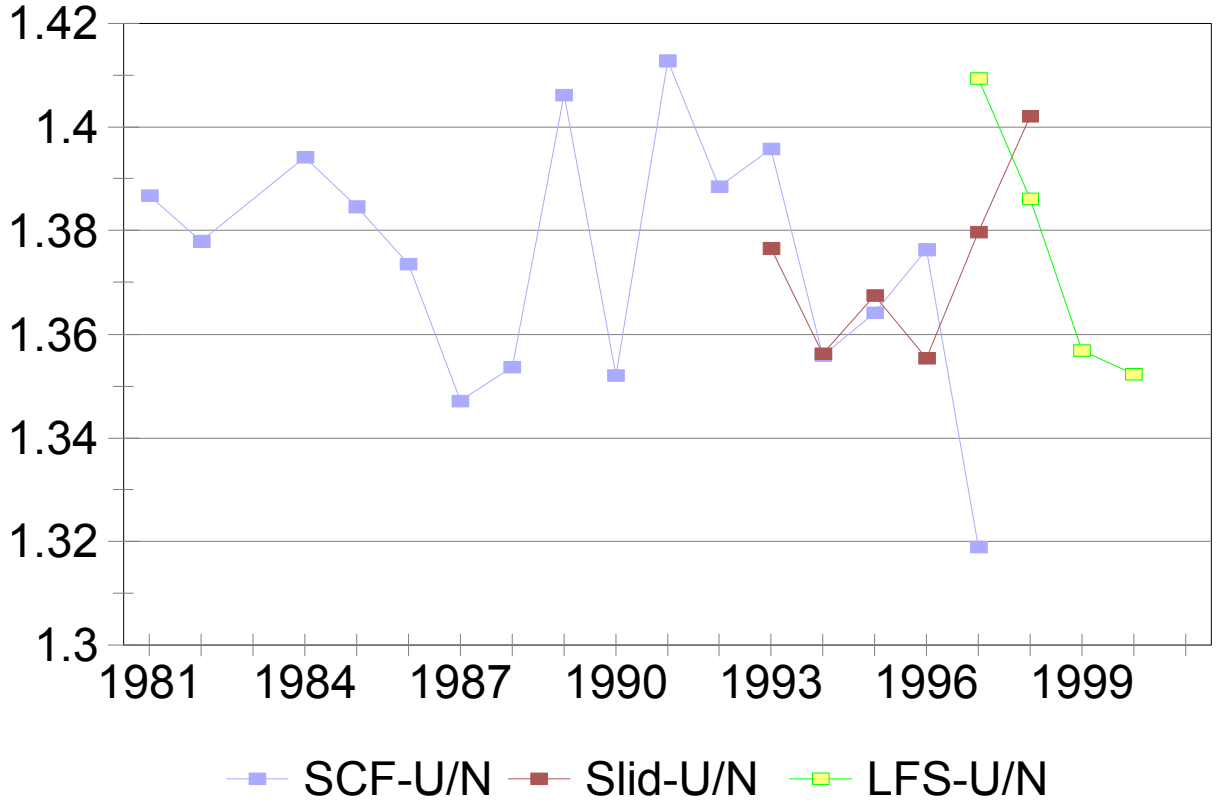


Figure 5B: Skill Premium -- Males

ratio of University to non-University

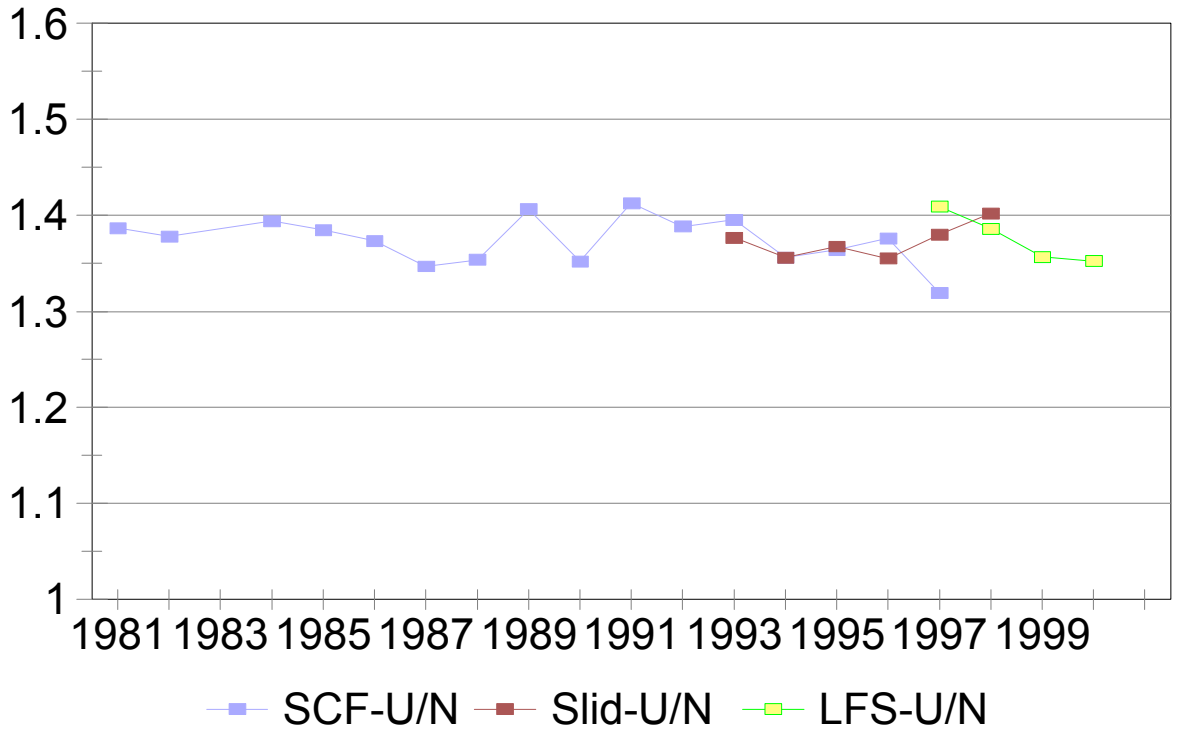


Figure 6: Skill Premium -- Males

ratio of University to HS grads

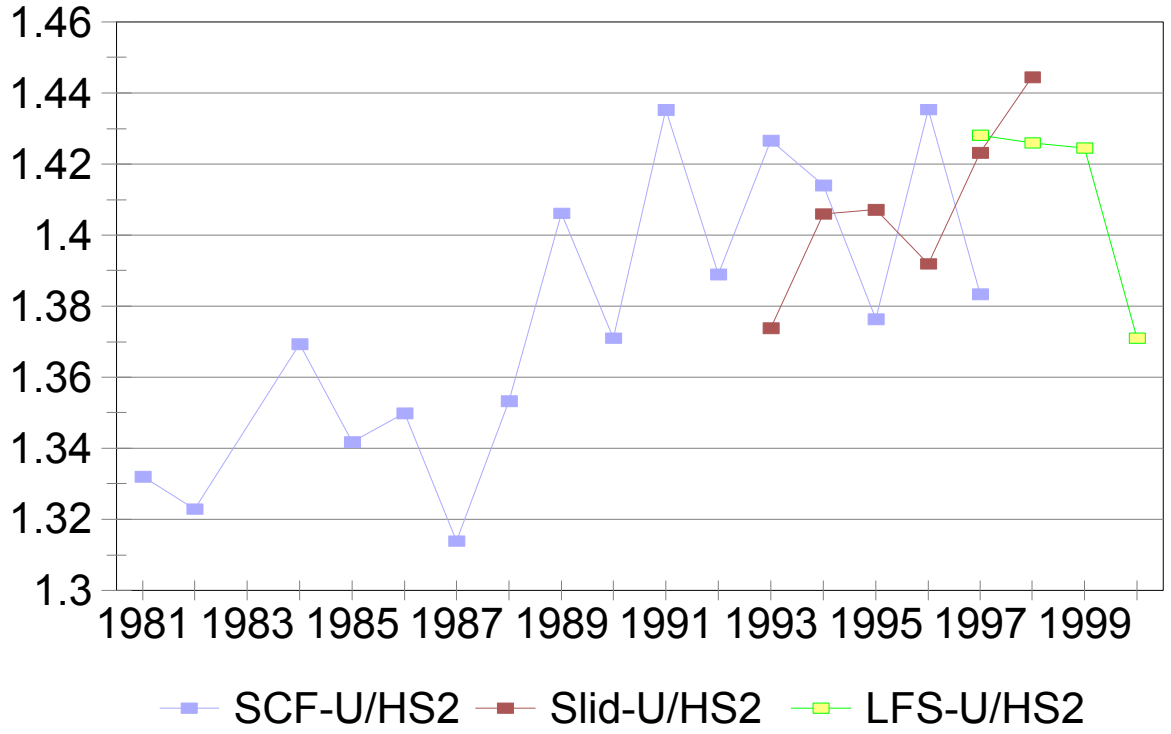


Figure 7: Skill Premium -- Females

ratio of University to non-University

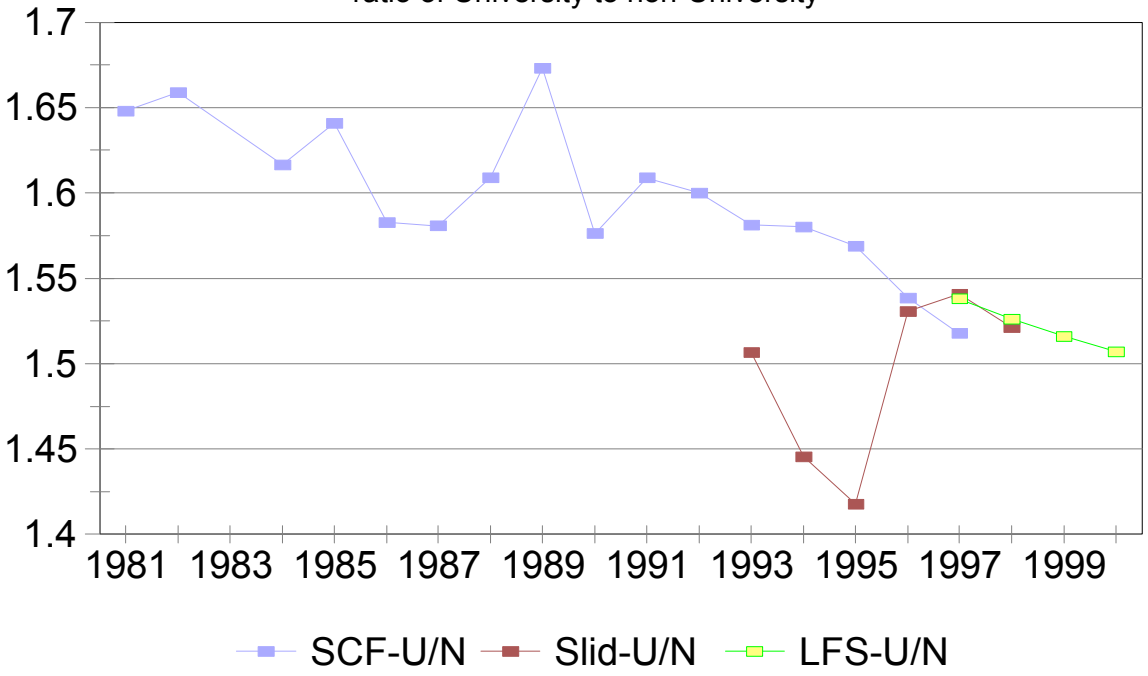


Figure 7B: Skill Premium -- Females

ratio of University to non-University

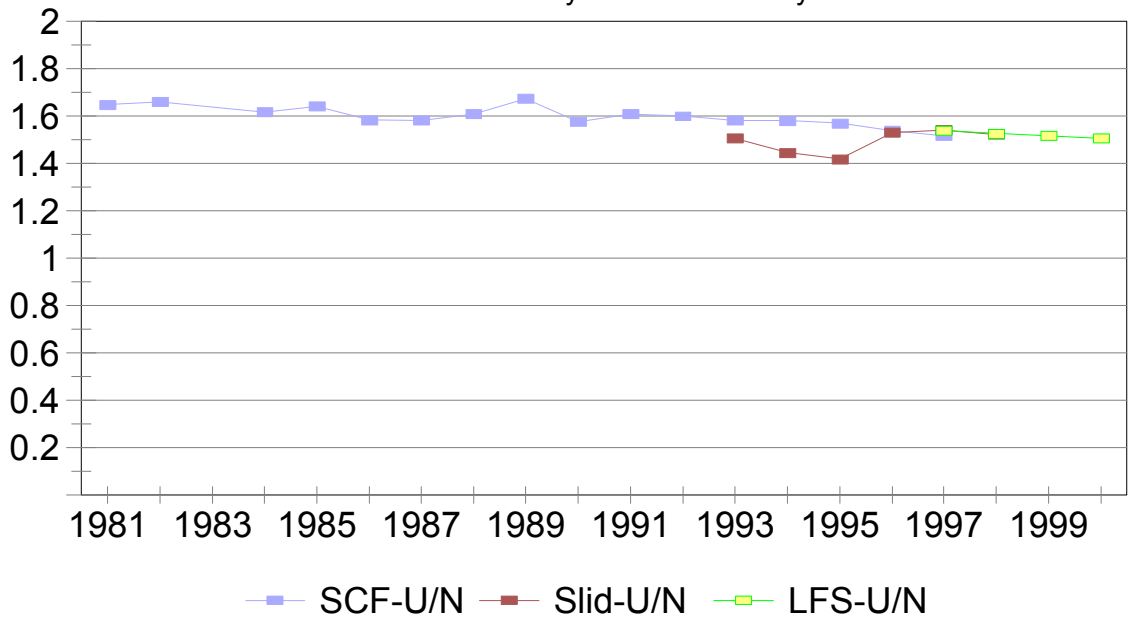


Figure 8: Skill Premium -- Females

ratio of University to HS grads

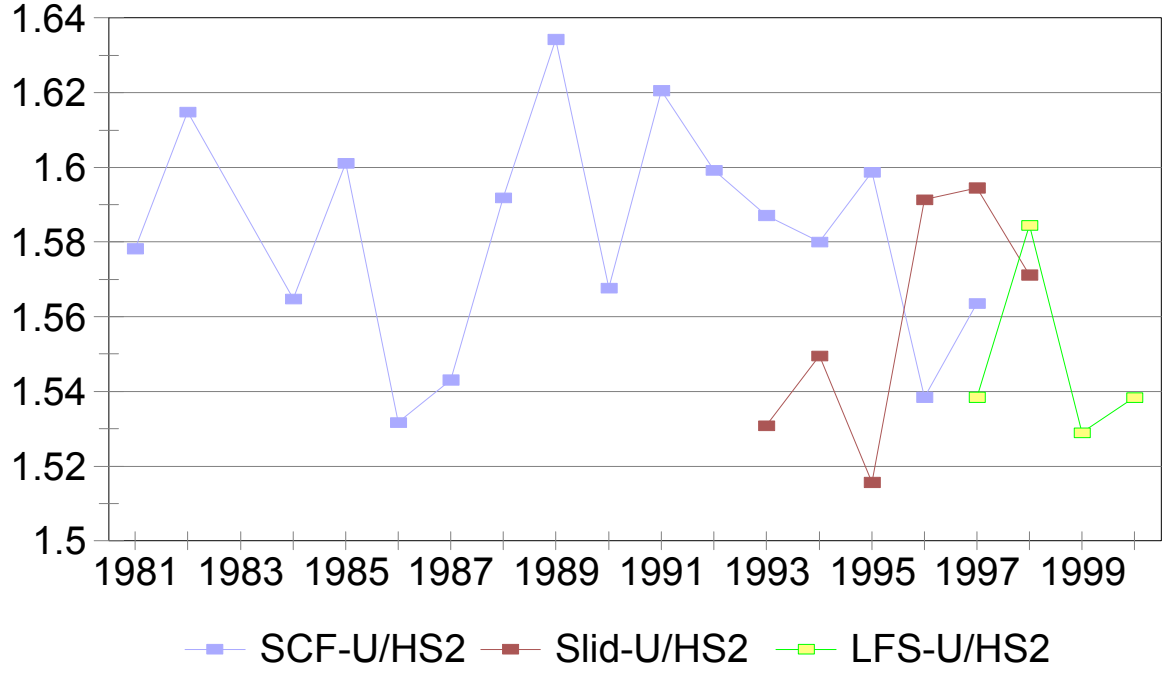
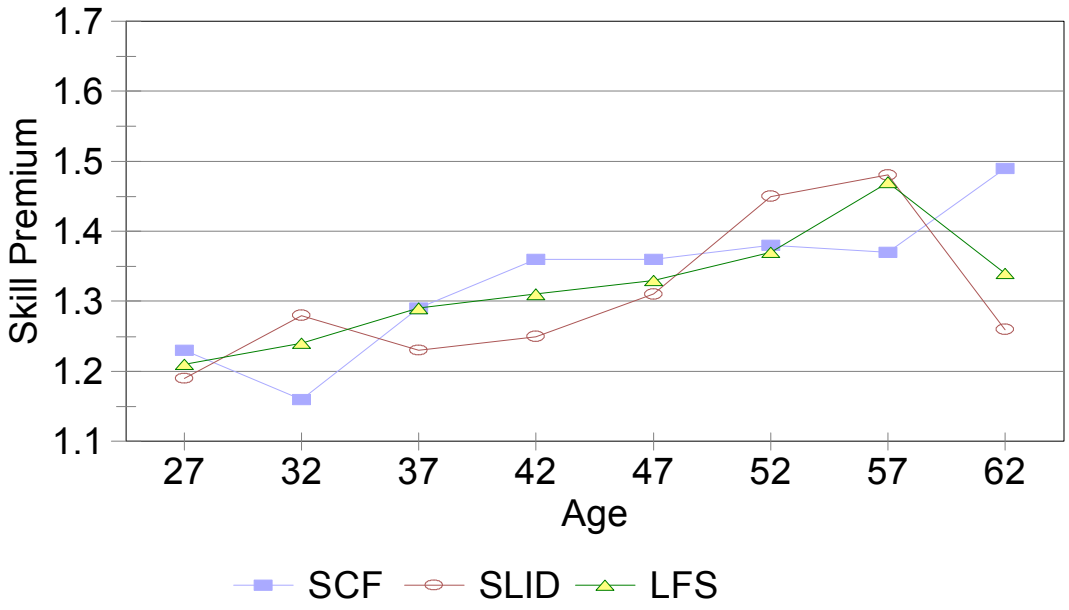


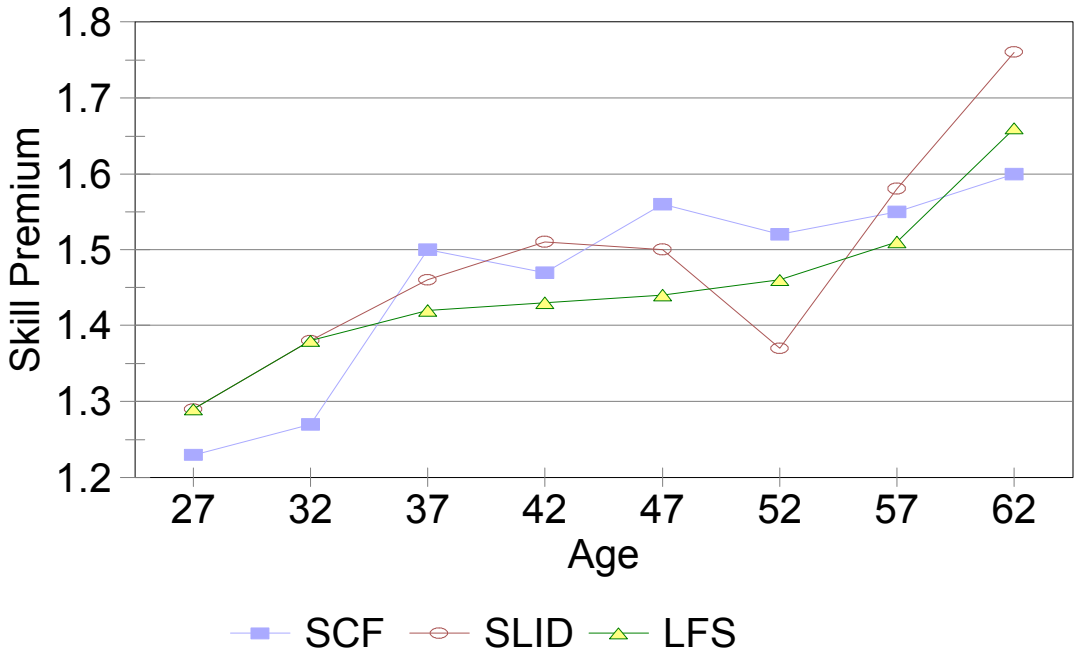
Figure 9: Education Premia by Age

Males, SCF, SLID, & LFS



Notes: The premium shown is the log of the ratio of Universtiy to Non-University wages

Figure 10: Education Premia by Age
Females, SCF, SLID, & LFS



Notes: The premium shown is the log of the ratio of Universtiy to Non-University wages

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