PSID Technical Report
The 2005 PSID Transition to Adulthood Supplement (TA) Weights

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May, 2008

1. Introduction

The young adults interviewed for the 2005 Transition to Adulthood (TA-05) study were originally part of sample of PSID families with young children who were selected and interviewed for the first wave of the Child Development Supplement (CDS-I). Data collection for CDS-I was completed in 1997 when the TA-05 young adults were aged 0-12.Most of the TA-05 sample also participated in the second wave of the CDS in 2002/2003 five years later when they were aged 5-18.

Eligibility requirements for 2005 TA interview were as follows:

a. CDS sample member, defined as having participated in at least the Primary Caregiver interview for the initial wave of the CDS (CDS-I) in 1997 (see http://psidonline.isr.umich.edu/CDS/ for more details).

b. Part of a family that provided an interview for the main PSID 2005 data collection;

c. At least 18 years of age during the data collection period; and

d. If 18 years of age and living with parents/caregivers, had graduated from high school or were no longer attending high school.

The eligible TA sample includes 860 individuals, of whom 710 participated in both the 1997 and 2002 CDS interviews. The remaining 150 TA-05 sample respondents participated only in the 1997 CDS interview. Among the eligible sample, 745 respondents were successfully interviewed, resulting in a follow-up response rate of 87%. Table 1 summarizes the eligibility and response outcomes for the TA interview.

2. 2005 TA individual Weight

The 2005 TA individual weight is constructed as a product of the 1997 CDS individual weight (CH97PRWT) and an attrition adjustment factor.

2005 TA individual weight = 1997 CDS I individual weight x Attrition adjustment factor (1)

Note that without attrition, the 2005 TA individual weight would be the same as the CDS-I individual weight (CH97PRWT). The CDS-I individual weight accounts for initial selection and within family selection. It is also adjusted for 1997 initial non-response in CDS and post-stratified to distributions for important demographic and household variables measured in the 1997 U.S. Current Population Survey (CPS).1

In order to construct the 2005 TA individual weight, the effect of attrition between 1997 and 2005 was taken in account. The attrition adjustment factor was developed using a model-based approach. A logistic response propensity model with the dependent variable coded as 0 for those who did not participate in TA interview and 1 for individuals who responded in TA interview is estimated (Little and Rubin, 2002)[2]. The set of 1997 individual and family variables being used as covariates in the logistic regression include age and gender of the TA individual, and Variables such as head's age, head's race, head's education, marital status, family income, and location measures (see Table 2).

The estimated model is used to obtain predicted probabilities of response for all eligible 2005 TA sample individuals. Using the predicted response probabilities all observations were ranked and deciles of the ranked response propensities were formed. For each decile an empirical response rate was calculated as the ratio of the number of persons who responded in the TA interview to the total number of persons (Table 3). Note that with two exceptions the trend in the estimated response rates for the modeled propensity score deciles increases from the lowestto the highest reponse decile. The exceptions occur because there is a degree of lack of fit in the logistic regression model. For each 2005 TA repondent, the attrition adjustment factor in (1) was set equal to the reciprocal of the empirical response rate for the propensity score decile to which they belonged.

Next we obtained the attrition adjusted individual weight for 2005 TA respondent cases as the product of the 1997 CDS-I individual weight (CH97PRWT) and the attrition adjustment factor. As the final step in the weight development, the newly constructed weights are trimmed to reduce the influence of extreme weights on the variance of sample estimates of population statistics. Values of weights in the top and bottom one-percent of the distribution were trimmed and assigned the 99th and 1st percentile values respectively. Table 4 reports key summary statistics for the final 2005 TA individual weights.

As a quality control check on the 2005 TA individual weight, we compared weighted estimates for some basic 1997 CDS-I demographic, geographic and socio-economic variables (weighted by the 1997 CDS-I weight) to the same 1997 estimates for the smaller 2005 TA re-interview sample (weighted by the 2005

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[1] For the description of the 1997 CDS weights construction see http://psidonline.isr.umich.edu/CDS/weightsdoc.html

[2] Little, R.J.A. and Rubin, D. B. (2002). Statistical Analysis with Missing Data, 2nd Edition. John Wiley and Sons, NY.

TA individual weight). The results of this comparison are provided in Table 5. The comparison of weighted estimates for the eligible TA sample in 1997 and the interview sample in 2005 indicates that for the selected statistics considered in this test, the attrition adjustment factor appears to compensate for potential attrition bias in the data. Note, however, that the result of the comparison pertains to the set of variables used in the analysis and does not necessarily rule out the possibility of spurious or more subtle forms of selection bias that may be associated with other characteristics of the respondents.

The final 2005 TA weight is stored in the variable TA05095.

Table 1 TA-05 Sample Dispositions.

	Eligible	Non-response	Response
Total	860	115	745
Participated only in CDS-I	150	38	112
Participated in both CDS-I and CDS-II	710	77	633

Table2 Logistic regression of 2005 TA response propensity

Variable	Estimate		StdErr	WaldChiSq	ProbChiSq
Intercept	-3.3626	***	0.7697	19.0881	<.0001
D SEO sample	-0.4032		0.3747	1.1576	0.282
D Male	0.842	***	0.2221	14.3742	0.0001
D Birth year 1984	0.868	**	0.3695	5.5192	0.0188
D Birth year 1985	0.7609	**	0.365	4.3456	0.0371
D Birth year 1986	0.5468		0.3696	2.1888	0.139
D Head and Wife in FU	-0.7565		0.5379	1.9784	0.1596
D age<=40 (head)	-0.1404		0.2902	0.2341	0.6285
D 40<age<=45 (head)	-0.5027		0.3588	1.9627	0.1612
D White (head)	-0.8904	**	0.388	5.267	0.0217
D Black (head)	-0.1677		0.4618	0.1319	0.7165
D Head is male	0.5442		0.5401	1.0152	0.3137
D No High School Degree (head)	0.4816		0.4171	1.3328	0.2483
D High School Degree (head)	0.2999		0.4113	0.5317	0.4659
D Some College (head)	0.5234		0.4117	1.6164	0.2036
D inc in 1st quartile	0.9403	**	0.4415	4.5357	0.0332
D inc in 2nd quartile	0.8148	**	0.3988	4.1737	0.0411
D inc in 3rd quartile	0.1604		0.3962	0.1639	0.6856
D Northeast	0.4307		0.4413	0.9528	0.329
D North Central	0.5271		0.3866	1.8594	0.1727
D South	0.2461		0.3731	0.4351	0.5095
D MSA	0.1246		0.2343	0.2829	0.5948
Summary statistics:					
N	860				
Response profile:					
Non-response	115				
response	745				
Chi-squared	70.73				
DF	21				
P-value	0				

Table 3 Empirical 2005 TA response rates for propensity score

Decile	Response rate
0	0.60465
1	0.77907
2	0.84884
3	0.84884
4	0.87209
5	0.94253
6	0.89412
7	0.95349
8	0.95349
9	0.96512

Table 4 Summary statistics of individual 2005 TA weight variable

Statistic	Individual weight 2005
N	745
MIN	0.98
MAX	69.99
MEAN	16.85
STD	14.43

Table 5 Comparison of weighted estimates based on 1997 data using 1997 individual weight with weighted estimates based on 1997 data using 2005 individual weight

		Individual weight 1997		Individual weight 2005		
		N	Fraction	N	Fraction	Ratio
		[1]	[2]	[3]	[4]	[2]/[4]
all		860	100.00	745	100.00	1.00
Region	Northeast	128	19.19	114	19.59	0.98
	North_Central	199	22.48	170	22.13	1.02
	South	399	32.90	341	32.00	1.03
	West	134	25.44	120	26.28	0.97
MSA	Non-MSA	363	46.96	322	47.07	1.00
	MSA	497	53.04	423	52.93	1.00
Education of Head	11-	196	20.54	157	21.13	0.97
	12	290	28.42	252	28.67	0.99
	13-15	201	23.40	174	22.64	1.03
Age of Head	16+	173	27.64	162	27.57	1.00
	40-	494	54.14	419	53.91	1.00
	41-45	244	31.01	221	30.73	1.01
	46+	122	14.84	105	15.36	0.97
Race of Head	White	405	67.05	372	66.90	1.00
	Black	374	16.39	308	16.64	0.98
	Other	81	16.56	65	16.46	1.01