

Online Appendix to the paper “Intertemporal Consumption and Credit Constraints: Does Total Expenditure Respond to an Exogenous Shock to Credit?”

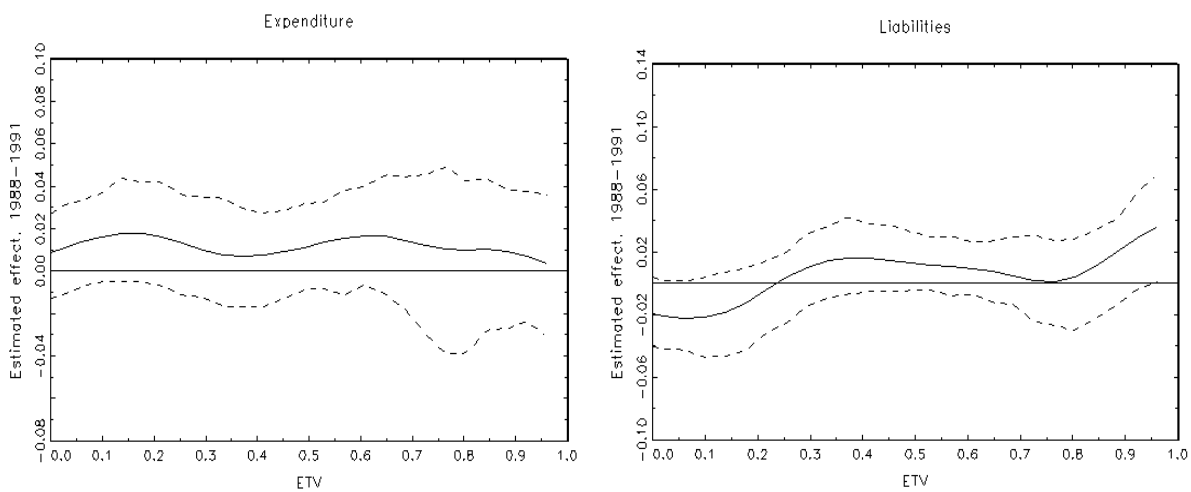
This appendix documents the analyses underlying results that are only summarized in the paper. The appendix is organized as follows: The first section documents the nonparametric regressions, mentioned in footnote 15 in the paper, extending the pre-reform test. The remainder presents detailed results for many of the analyses reported in section 5.3 in the paper. This includes background results for renters, results from the analysis of the sample consisting of households not holding stocks or bonds, and nonparametric regressions exploring how the estimated effects vary with age and educational level. The final section presents results from the analysis of the three alternative sample splits.

Unless described differently the following material is presented in each subsection: Estimates of the probit model, balance tests for covariates, a graph with kernel densities of estimated propensity scores for low and high liquid asset households, the table with average results, and finally two figures with nonparametric regressions showing the association between the estimated total expenditure/liability effects and ETV and age, respectively. The tables and graphs correspond to the material presented for the main analysis in the paper.

1. Nonparametric regressions mentioned in footnote 15

This section explores whether the average results for the tests reported in table 2 in the paper are covering heterogeneous responses. For this purpose the estimated effect for total expenditure and liabilities for the period 1988-1991 is regressed non-parametrically against the equity to house value (ETV) in 1991. Results are presented in figure A1 below. If the matching procedure is able to make high and low liquid asset households comparable, there should be no correlation between the estimated effect and ETV since the households had not yet had access to the equity. The graphs show very clearly that there are no differences in how total expenditure and liabilities develop before the reform when viewed across the level of housing equity.

Figure A1. Kernel regressions of the estimated expenditure and liability effect of the reform for the low liquid asset house owners on equity to value (ETV) in 1991. Estimates based on the period 1988-1989 relative to 1990-1991.



Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance.

2. Renters

Table A1. Probit estimates for renters.

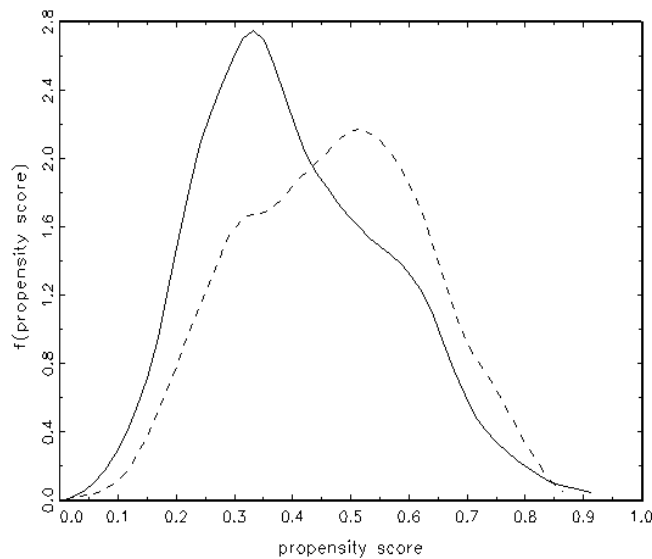
Variable	Param.		Std.err
ln(Gross income)	0.6581	**	0.2536
ln(Gross income) ²	-0.0473	**	0.0109
Age	0.0702	**	0.0105
Age ²	-0.0010	**	0.0001
Single	-0.2644	**	0.0340
UI membership	-0.0200		0.0327
Size of house	-0.0014	*	0.0008
(Size of house) ²	0.0000		0.0000
Labour supply, male	0.0114		0.0353
Labour supply, female	-0.1029	**	0.0331
Self employed, male	0.1903	**	0.0648
Self employed, female	-0.0948		0.0864
Education, short	-0.1644	**	0.0249
Education, medium	-0.3125	**	0.0423
Education, long	-0.3867	**	0.0611
1 child	0.4184	**	0.0325
2 children	0.5963	**	0.0401
3 children	0.7585	**	0.0755
4 children	0.8991	**	0.1544
Constant	-1.6117		1.5240

Note: The dependent variable takes the value 1 if the household holds low levels of liquid assets in 1991. All monetary values are measured in DKK, 1990 price levels. ** significant at the 5% level. * significant at the 10% level.

Table A2. Balance of individual characteristics. Two-sample t-test.

Variable	E(X _{Low})	E(X _{High})	t
ln(Gross income)	12.1876	12.1858	0.0144
Age	47.1339	47.0786	0.1094
Single	0.4927	0.4858	0.0613
UI membership	0.6130	0.6223	-0.0829
Size of house	84.0735	85.1337	-1.1431
Labour supply, male	0.4605	0.4821	-0.1913
Labour supply, female	0.4760	0.4818	-0.0511
Self employed, male	0.0410	0.0508	-0.1331
Self employed, female	0.0200	0.0212	-0.0192
Education, short	0.3784	0.3663	0.1083
Education, medium	0.0743	0.0743	0.0000
Education, long	0.0276	0.0308	-0.0478
1 child	0.2164	0.2133	0.0306
2 children	0.1696	0.1739	-0.0437
3 children	0.0463	0.0447	0.0226
4 children	0.0127	0.0094	0.0638

Figure A2. Kernel densities of propensity scores for low and unmatched high (broken line) liquid asset renters.



Note: Bandwidth set to $1.06\sigma n^{-(1/5)}$.

Table A3. Estimates of the average effect of the reform for renters holding low levels of liquid assets in 1991, for total expenditure, disposable income and liabilities

Average effect of the reform for low liquid asset households ⁽¹⁾			
	(1)	(2)	(3)
	Q=Expenditure	Q=Liabilities	Q=Income
1 $[(Q_{96}+Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89}+Q_{88})]/4$	0.0031	-0.0016	-0.0046
Standard Error ⁽²⁾	0.0095	0.0099	0.0072
2 $[(Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89})]/3$	0.0230	-0.0060	-0.0037
Standard Error ⁽²⁾	0.0133	0.0107	0.0069
3 $[(Q_{94}+Q_{93})-(Q_{91}+Q_{90})]/2$	-0.0204*	-0.0128	-0.0117*
Standard Error ⁽²⁾	0.0118	0.0121	0.0063
4 $(Q_{93})-(Q_{91})$	-0.0081	-0.0087	-0.0273**
Standard Error ⁽²⁾	0.0189	0.0180	0.0063

Note: All variables are measured in DKK at 1990 price levels. Matching is done using replacement. * significant at the 10% level. ** significant at the 5% level.

(1) Size of low liquid asset group: 6,044. Size of matched high liquid asset group: 3,345.

(2) Standard errors are calculated according to Theorem 7 in Abadie and Imbens (2006).

The nonparametric regressions for renters are included in the paper.

3. Sample restricted to include only households without financial assets

Table A4. Probit estimates for house owners without financial assets.

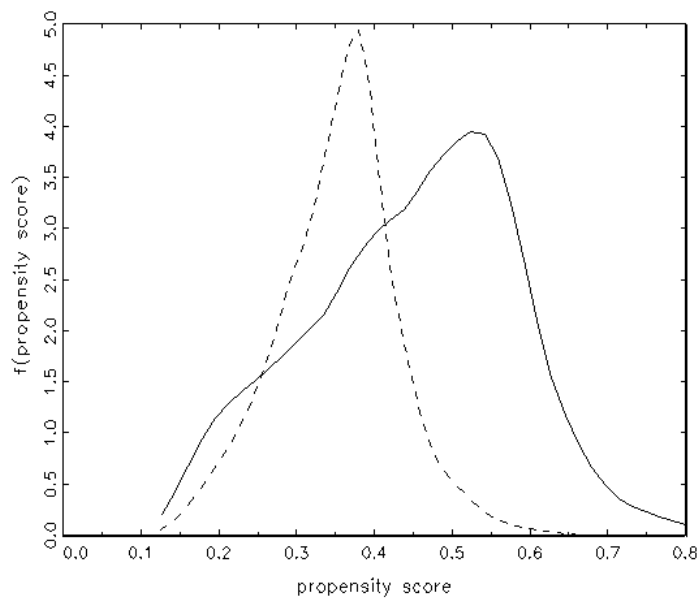
Variable	Param.	Std.err
Housing equity/House value	0.0096	0.0359
(Housing equity/House value) ²	-0.2331 **	0.0501
ln(House value)	-5.1194 **	1.3266
ln(House value) ²	0.1905 **	0.0519
ln(Gross income)	-2.2266 **	0.8928
ln(Gross income) ²	0.0951 **	0.0356
Age	0.0362 **	0.0110
Age ²	-0.0005 **	0.0001
Single	0.0571	0.0515
UI membership	-0.0237	0.0394
Size of house	-0.0002	0.0014
(Size of house) ²	0.0001	0.0001
Labour supply, male	0.0708	0.0463
Labour supply, female	0.0724 **	0.0359
Self employed, male	0.3794 **	0.0632
Self employed, female	0.2966 **	0.0715
Education, short	-0.0565 **	0.0241
Education, medium	-0.1114 **	0.0338
Education, long	-0.0870	0.0636
1 child	0.1345 **	0.0307
2 children	0.2668 **	0.0316
3 children	0.4188 **	0.0456
4 children	0.5573 **	0.0951
Constant	46.1223 **	9.2802

Note: The dependent variable takes the value 1 if the household holds low levels of liquid assets in 1991. All monetary values are measured in DKK 1990 price levels. ** significant at the 5% level.

Table A5. Balance of individual characteristics. Two-sample t-test.

Variable	E(X _{Low})	E(X _{High})	t
Housing equity/House value	0.2832	0.2750	0.0809
ln(House value)	12.8647	12.8302	0.3548
ln(Gross income)	12.7999	12.7582	0.4388
Age	43.6582	43.6719	-0.0296
Single	0.0695	0.0779	-0.1044
UI membership	0.9021	0.9101	-0.0933
Size of house	128.6896	125.6903	3.2328
Labour supply, male	0.8571	0.8663	-0.0992
Labour supply, female	0.8295	0.8209	0.0882
Self employed, male	0.0648	0.0468	0.2375
Self employed, female	0.0354	0.0237	0.1804
Education, short	0.4961	0.5008	-0.0419
Education, medium	0.1537	0.1487	0.0528
Education, long	0.0354	0.0276	0.1182
1 child	0.2355	0.2467	-0.1087
2 children	0.4074	0.3890	0.1666
3 children	0.1013	0.0882	0.1534
4 children	0.0178	0.0178	0.0000

Figure A3. Kernel densities of propensity scores for low and unmatched high (broken line) liquid asset house owners without financial assets.



Note: Bandwidth set to $1.06\sigma n^{-(1/5)}$.

Table A6. Estimates of the average effect of the reform on owners without financial assets holding low levels of liquid assets in 1991, for total expenditure, disposable income and liabilities

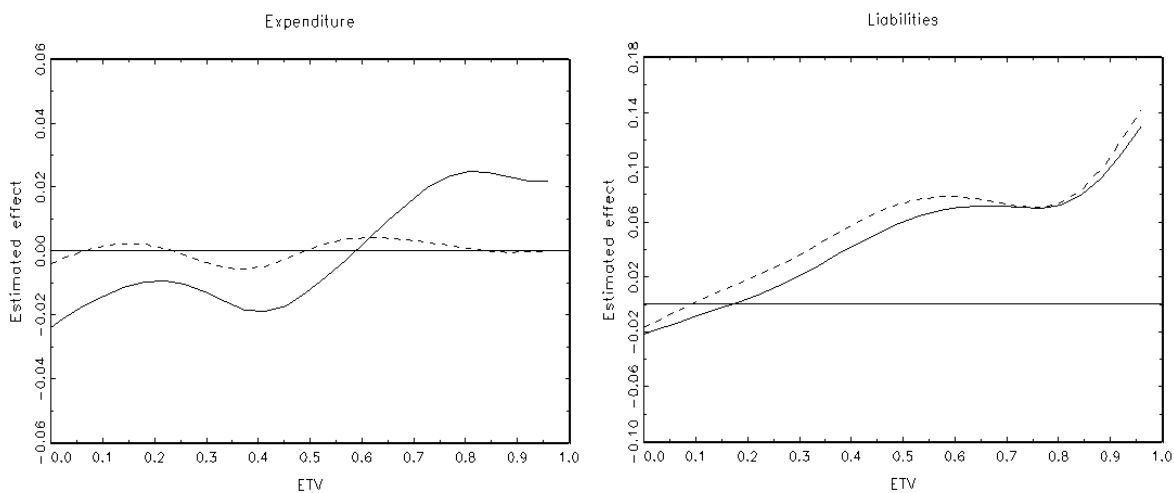
	Average effect of the reform for low liquid asset households ⁽¹⁾		
	(1)	(2)	(3)
	Q=Expenditure	Q=Liabilities	Q=Income
1 $[(Q_{96}+Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89}+Q_{88})]/4$	0.0012	0.0472**	0.0005
Standard Error ⁽²⁾	0.0040	0.0074	0.0035
2 $[(Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89})]/3$	-0.0041	0.0369**	0.0009
Standard Error ⁽²⁾	0.0044	0.0071	0.0033
3 $[(Q_{94}+Q_{93})-(Q_{91}+Q_{90})]/2$	-0.0159**	0.0276**	0.0014
Standard Error ⁽²⁾	0.0065	0.0067	0.0032
4 $(Q_{93})-(Q_{91})$	-0.0270**	0.0234**	-0.0006
Standard Error ⁽²⁾	0.0095	0.0070	0.0034

Note: All variables are measured in DKK at 1990 price levels. Matching is done using replacement. * significant at the 10% level. ** significant at the 5% level.

(1) Size of low liquid asset group: 6,404. Size of matched high liquid asset group: 4,141.

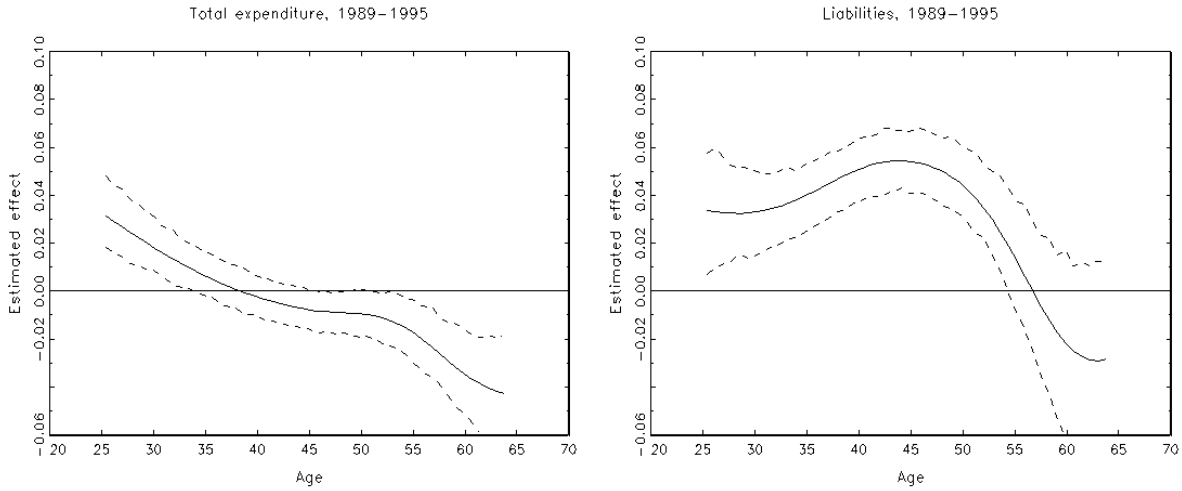
(2) Standard errors are calculated according to Theorem 7 in Abadie and Imbens (2006).

Figure A4. Kernel regression of estimated expenditure and liability effect of the reform for low liquid asset house owners without financial assets on equity to value (ETV) in 1991. Estimates based on the period 1993-1994 relative to 1990-1991 (solid line) and 1993-1995 relative to 1989-1991 (broken line).



Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance.

Figure A5. Kernel regressions of estimated total expenditure and liability effect of the reform for low liquid asset house owners without financial assets on age. Estimates based on the period 1993-1995 relative to 1989-1991.

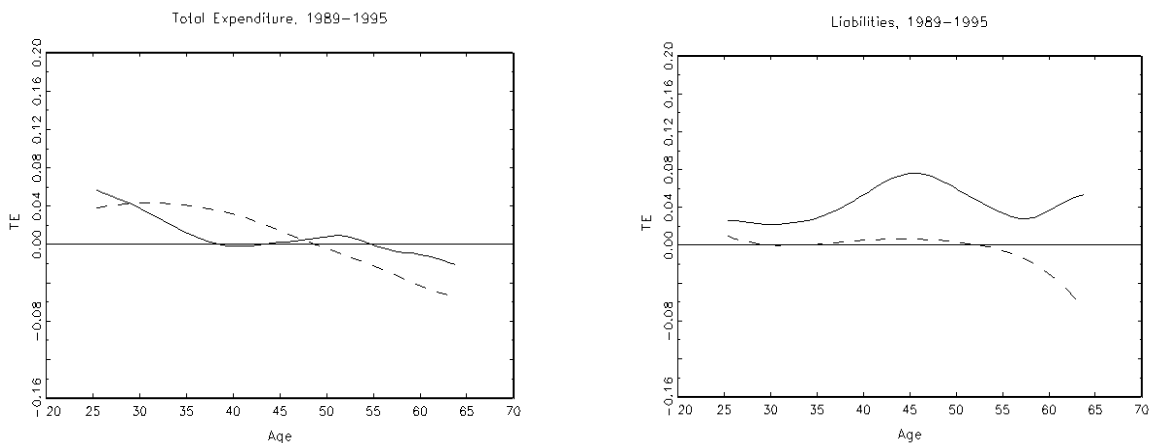


Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance. Confidence intervals are bootstrap point wise confidence intervals based on 500 replications, cf. Härdle (1990).

4. Nonparametric regressions for different educational groups

Figure A6 presents non-parametric regressions of the estimated expenditure and liability effect by age, where the sample is split according to the highest level of education in the household, and the non-parametric regressions are performed separately for households with high and low levels of education. Figure A6 extends the regressions presented in figure 5 in the paper. The regression curves for expenditure lie close to each other, and the regression curves are not significantly different from each other (confidence bands are left out for readability). For liabilities, however, there is some divergence. The two curves are significantly different from each other at the age interval 40 to 50, where households with lower levels of education exhibit higher excess accumulation of liabilities than households with longer education. Plotting the corresponding graph for the sample where low liquid asset status is defined to be less than two months of disposable income, this finding disappears (not reported). It is thus not robust to the choice of sample split. In summary, there does not appear to be preference heterogeneity based on educational levels for the younger segment, whereas this could be the case for the mid aged group.

Figure A6. Kernel regression of estimated total expenditure and liability effect of the reform for the low liquid asset owners by age for no/low (solid line) and medium/high levels of education (broken line). Estimates based on the period 1993-1995 relative to 1989-1991



Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance.

The nonparametric regressions presented in this section are extensions of the estimations presented in the paper, and the background estimations are therefore not presented here.

5. Alternative sample splits

3.1. Low liquid asset households defined as having liquid assets corresponding to two months of disposable income or less in 1991

Table A7. Probit estimates for house owners.

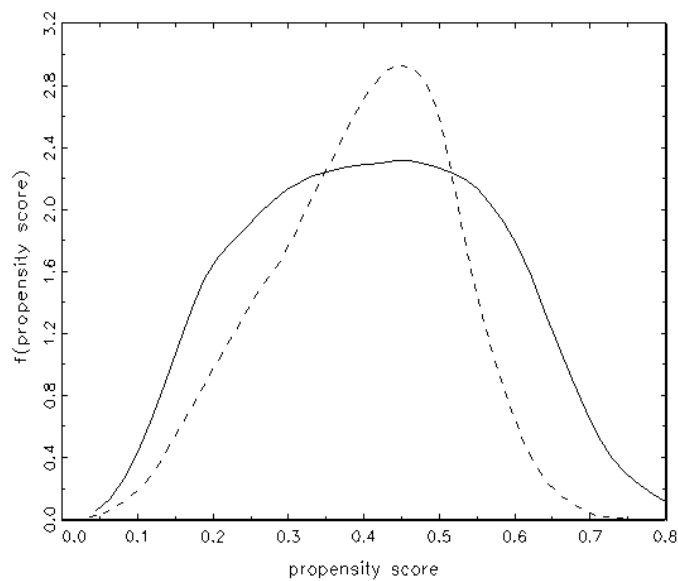
Variable	Param.	Std.err
Housing equity/House value	-0.0175	0.0216
(Housing equity/House value) ²	-0.4075 **	0.0285
ln(House value)	-0.8782	0.5917
ln(House value) ²	0.0166	0.0229
ln(Gross income)	-1.2593 **	0.3715
ln(Gross income) ²	0.0464 **	0.0145
Age	0.0241 **	0.0068
Age ²	-0.0004 **	0.0001
Single	-0.2154 **	0.0295
UI membership	-0.0036	0.0195
Size of house	-0.0007 **	0.0002
(Size of house) ²	0.0001	0.0001
Labour supply, male	0.1233	0.0265
Labour supply, female	0.1190 **	0.0206
Self employed, male	0.1673 **	0.0308
Self employed, female	0.1738 **	0.0312
Education, short	-0.0272 *	0.0146
Education, medium	-0.0591 **	0.0190
Education, long	-0.1300	0.0282
1 child	0.1894 **	0.0172
2 children	0.2676 **	0.0180
3 children	0.4338 **	0.0268
4 children	0.5248 **	0.0598
Constant	16.5871 **	4.0804

Note: The dependent variable takes the value 1 if the household holds low levels of liquid assets in 1991. All monetary values are measured in DKK 1990 price levels. ** significant at the 5% level.

Table A8. Balance of individual characteristics. Two-sample t-test.

Variable	E(X _{Low})	E(X _{High})	t
Housing equity/House value	0.3276	0.3221	0.0712
ln(House value)	12.9441	12.9503	-0.0832
ln(Gross income)	12.8657	12.8706	-0.0655
Age	44.8709	44.8814	-0.0304
Single	0.0596	0.0625	-0.0504
UI membership	0.8815	0.8800	0.0224
Size of house	136.3254	137.3621	-1.3477
Labour supply, male	0.8117	0.8065	0.0698
Labour supply, female	0.8149	0.8165	-0.0211
Self employed, male	0.1197	0.1273	-0.1118
Self employed, female	0.0620	0.0613	0.0121
Education, short	0.4960	0.5003	-0.0511
Education, medium	0.1750	0.1797	-0.0639
Education, long	0.0539	0.0537	0.0027
1 child	0.2414	0.2395	0.0240
2 children	0.3862	0.3847	0.0177
3 children	0.0972	0.1001	-0.0451
4 children	0.0150	0.0170	-0.0480

Figure A7. Kernel densities of propensity scores for low and unmatched high (broken line) liquid asset house owners.



Note: Bandwidth set to $1.06\sigma n^{-1/5}$.

Table A9. Estimates of the average effect of the reform on owners holding low levels of liquid asset in 1991, for total expenditure, disposable income and liabilities

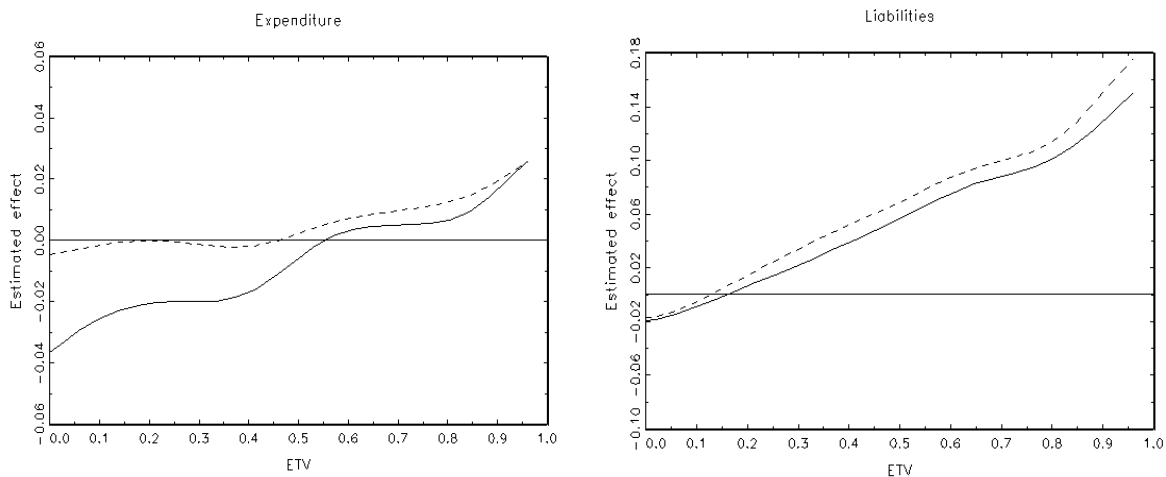
	Average effect of the reform for low liquid asset households ⁽¹⁾		
	(1)	(2)	(3)
	Q=Expenditure	Q=Liabilities	Q=Income
1 $[(Q_{96}+Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89}+Q_{88})]/4$	0.0016	0.0609**	-0.0010
Standard Error ⁽²⁾	0.0032	0.0054	0.0025
2 $[(Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89})]/3$	0.0019	0.0500**	-0.0001
Standard Error ⁽²⁾	0.0037	0.0054	0.0024
3 $[(Q_{94}+Q_{93})-(Q_{91}+Q_{90})]/2$	-0.0181**	0.0401**	0.0028
Standard Error ⁽²⁾	0.0049	0.0056	0.0024
4 $(Q_{93})-(Q_{91})$	-0.0217**	0.0401**	0.0004
Standard Error ⁽²⁾	0.0074	0.0071	0.0027

Note: All variables are measured in DKK at 1990 price levels. Matching is done using replacement. * significant at the 10% level. ** significant at the 5% level.

(1) Size of low liquid asset group: 19,729. Size of matched high liquid asset group: 11,885.

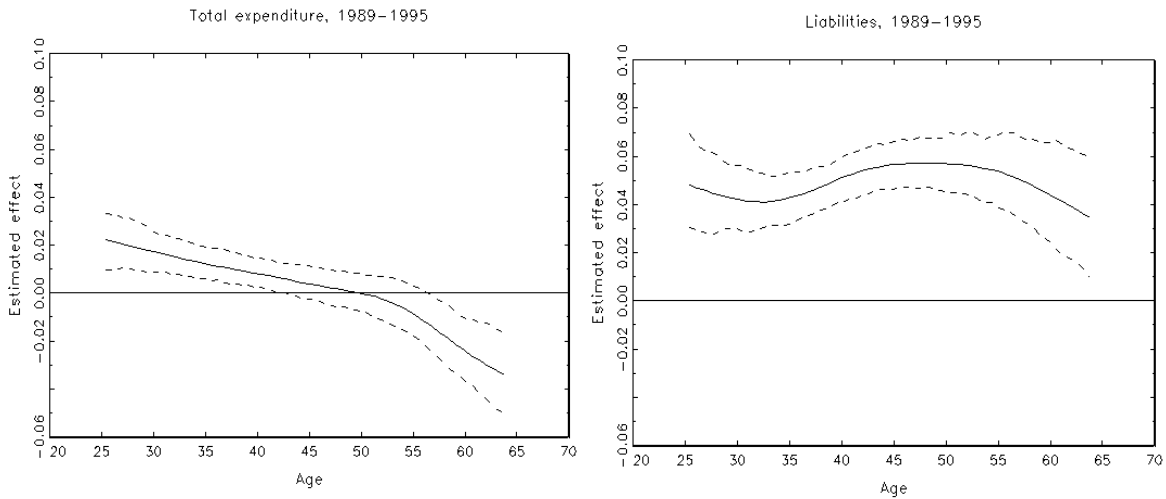
(2) Standard errors are calculated according to Theorem 7 in Abadie and Imbens (2006).

Figure A8. Kernel regression of estimated expenditure and liability effect of the reform for low liquid asset house owners on equity to value (ETV) in 1991. Estimates based on the period 1993-1994 relative to 1990-1991 (solid line) and 1993-1995 relative to 1989-1991 (broken line).



Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance.

Figure A9. Kernel regressions of estimated total expenditure and liability effect of the reform for low liquid asset house owners on age. Estimates based on the period 1993-1995 relative to 1989-1991.



Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance. Confidence intervals are bootstrap point wise confidence intervals based on 500 replications, cf. Härdle (1990).

3.2. Low liquid asset households defined as having liquid assets corresponding to one month of disposable income or less in both 1990 and 1991

Table A10. Probit estimates for house owners.

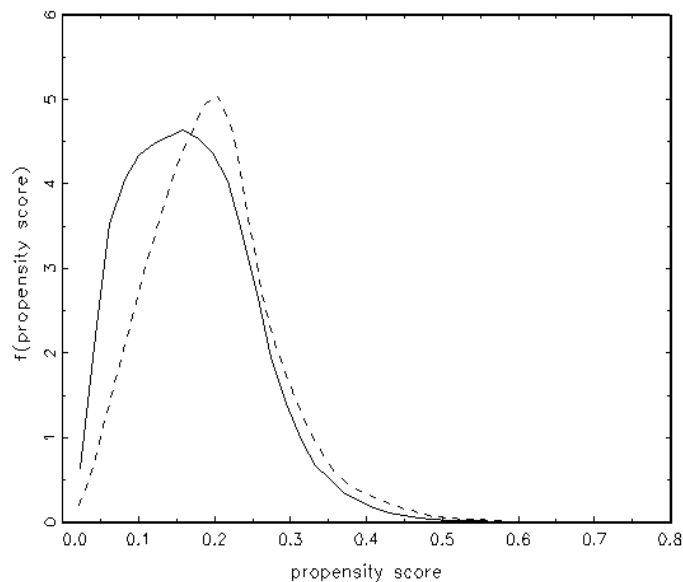
Variable	Param.		Std.err
Housing equity/House value	-0.0404	*	0.0243
(Housing equity/House value) ²	-0.2514	**	0.0327
ln(House value)	-3.3522	**	0.6693
ln(House value) ²	0.1136	**	0.0259
ln(Gross income)	-1.0399	**	0.4155
ln(Gross income) ²	0.0416	**	0.0162
Age	0.0283	**	0.0078
Age ²	-0.0004	**	0.0001
Single	-0.0810	**	0.0356
UI membership	-0.0165		0.0229
Size of house	0.0001		0.0002
(Size of house) ²	0.0000		0.0000
Labour supply, male	0.0851	**	0.0327
Labour supply, female	0.0484	**	0.0247
Self employed, male	0.3111	**	0.0368
Self employed, female	0.2347	**	0.0354
Education, short	-0.0434	**	0.0168
Education, medium	-0.1185	**	0.0222
Education, long	-0.2089	**	0.0340
1 child	0.1474	**	0.0207
2 children	0.2383	**	0.0213
3 children	0.3702	**	0.0299
4 children	0.4967	**	0.0623
Constant	29.4226	**	4.5766

Note: The dependent variable takes the value 1 if the household holds low levels of liquid assets in 1991. All monetary values are measured in DKK 1990 price levels. ** significant at the 5% level.

Table A11. Balance of individual characteristics. Two-sample t-test.

Variable	E(X _{Low})	E(X _{High})	t
Housing equity/House value	0.3226	0.3224	0.0026
ln(House value)	12.9155	12.9248	-0.0978
ln(Gross income)	12.8688	12.8846	-0.1672
Age	44.4777	44.6057	-0.3000
Single	0.0602	0.0547	0.0776
UI membership	0.8713	0.8584	0.1499
Size of house	137.7258	138.7417	-1.0627
Labour supply, male	0.7749	0.7678	0.0750
Labour supply, female	0.7913	0.7925	-0.0125
Self employed, male	0.1635	0.1753	-0.1313
Self employed, female	0.0867	0.0934	-0.0848
Education, short	0.4982	0.4946	0.0349
Education, medium	0.1614	0.1640	-0.0301
Education, long	0.0496	0.0554	-0.0843
1 child	0.2325	0.2267	0.0602
2 children	0.3988	0.4056	-0.0660
3 children	0.1092	0.1091	0.0014
4 children	0.0191	0.0182	0.0173

Figure A10. Kernel densities of propensity scores for low and unmatched high (broken line) liquid asset house owners.



Note: Bandwidth set to $1.06\sigma n^{-1/5}$.

Table A12. Estimates of the average effect of the reform on owners holding low levels of liquid assets in 1990 and 1991, for total expenditure, liabilities, and disposable income

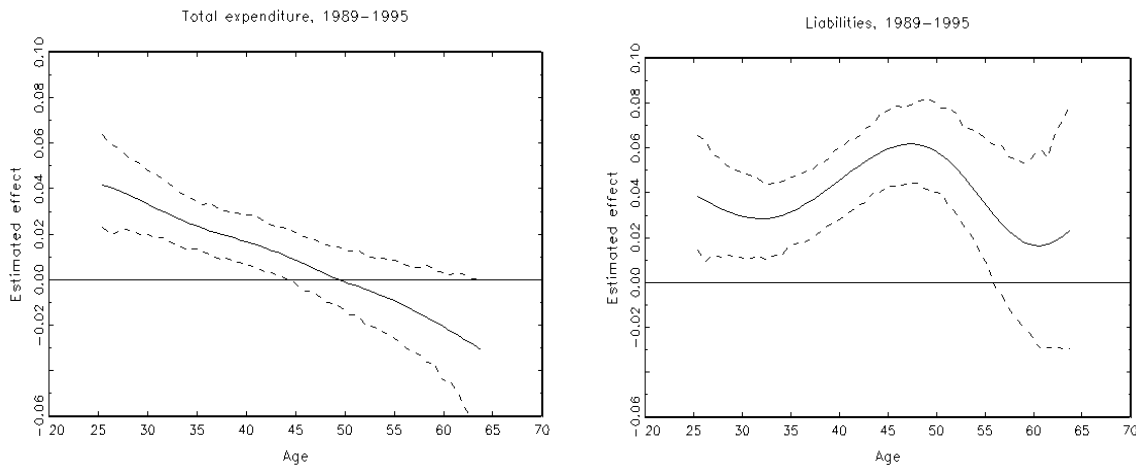
	Average effect of the reform for low liquid asset households ⁽¹⁾		
	(1)	(2)	(3)
	Q=Expenditure	Q=Liabilities	Q=Income
1 $[(Q_{96}+Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89}+Q_{88})]/4$	0.0112**	0.0578**	0.0022
Standard Error ⁽²⁾	0.0045	0.0077	0.0032
2 $[(Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89})]/3$	0.0087*	0.0436**	0.0034
Standard Error ⁽²⁾	0.0052	0.0079	0.0032
3 $[(Q_{94}+Q_{93})-(Q_{91}+Q_{90})]/2$	-0.0122	0.0255**	0.0080
Standard Error ⁽²⁾	0.0075	0.0081	0.0032
4 $(Q_{93})-(Q_{91})$	0.0015	0.0202**	0.0093**
Standard Error ⁽²⁾	0.0107	0.0092	0.0036

Note: All variables are measured in DKK at 1990 price levels. Matching is done using replacement. * significant at the 10% level. ** significant at the 5% level.

(1) Size of low liquid asset group: 8,534. Size of matched high liquid asset group: 7,012.

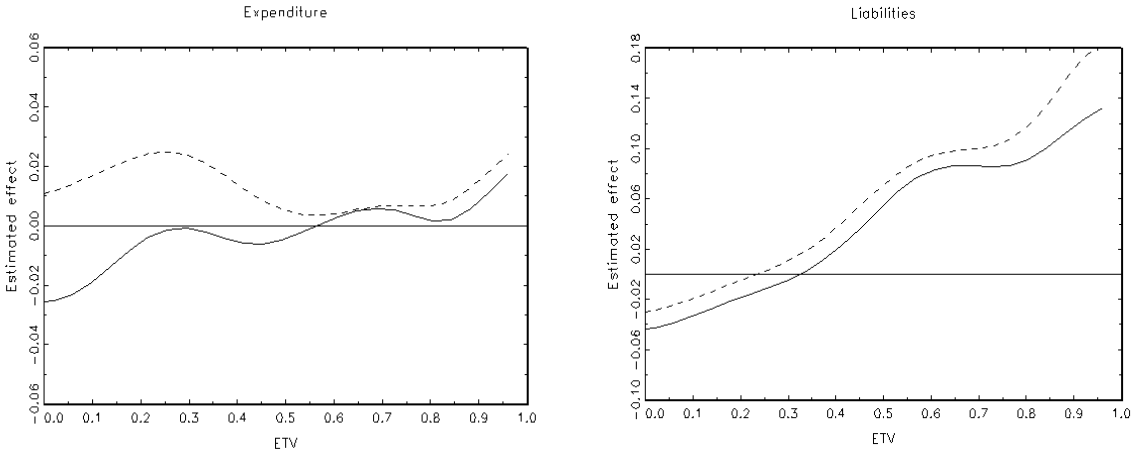
(2) Standard errors are calculated according to Theorem 7 in Abadie and Imbens (2006).

Figure A11. Kernel regressions of estimated total expenditure and liability effect of the reform for the low liquid asset house owners on age. Estimates based on the period 1993-1995 relative to 1989-1991.



Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance. Confidence intervals are bootstrap point wise confidence intervals based on 500 replications, cf. Härdle (1990).

Figure A12. Kernel regression of estimated expenditure and liability effect of the reform for the low liquid asset house owners on equity to value (ETV) in 1991. Estimates based on the period 1993-1994 relative to 1990-1991 (solid line) and 1993-1995 relative to 1989-1991 (broken line).



Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance.

3.3. Low liquid asset households defined as having liquid assets corresponding to one month of disposable income or less in 1991 and as subsequently experiencing an unemployment shock

Table A13. Probit estimates for house owners.

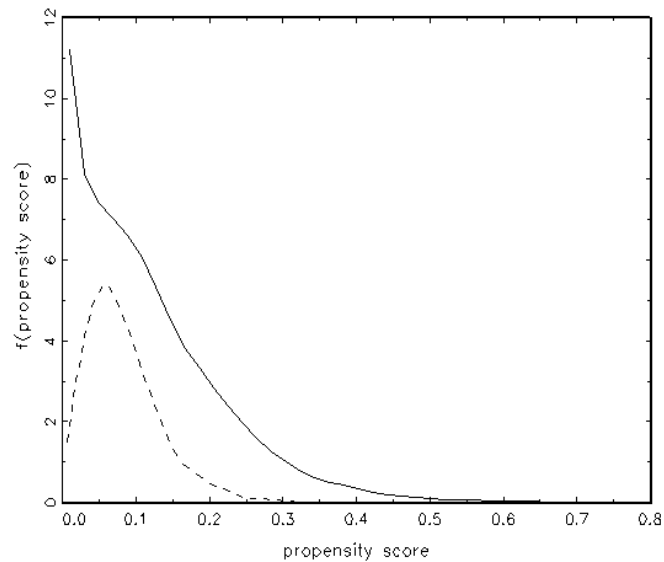
Variable	Param.	Std.err
Housing equity/House value	-0.0264	0.0322
(Housing equity/House value) ²	-0.3241 **	0.0447
ln(House value)	-3.6604 **	0.9913
ln(House value) ²	0.1227 **	0.0387
ln(Gross income)	-0.1218	0.7991
ln(Gross income) ²	-0.0204	0.0316
Age	-0.0292 **	0.0103
Age ²	0.0002	0.0001
Single	-0.4980 **	0.0575
UI membership	1.1616 **	0.0791
Size of house	0.0000	0.0004
(Size of house) ²	0.0000	0.0000
Labour supply, male	0.3127 **	0.0504
Labour supply, female	0.3158 **	0.0365
Self employed, male	0.1995 **	0.0590
Self employed, female	-0.1485 **	0.0656
Education, short	-0.0554 **	0.0216
Education, medium	-0.3089 **	0.0330
Education, long	-0.1813 **	0.0563
1 child	0.0796 **	0.0282
2 children	0.1446 **	0.0288
3 children	0.2724 **	0.0399
4 children	0.3929 **	0.0838
Constant	29.7150 **	7.5799

Note: The dependent variable takes the value 1 if the household holds low levels of liquid assets in 1991. All monetary values are measured in DKK, 1990 price levels. ** significant at the 5% level.

Table A14. Balance of individual characteristics. Two-sample t-test.

Variable	E(X _{Low})	E(X _{High})	t
Housing equity/House value	0.2705	0.2614	0.0759
ln(House value)	12.8152	12.8032	0.1040
ln(Gross income)	12.7765	12.7778	-0.0126
Age	42.9623	42.6295	0.6127
Single	0.0368	0.0414	-0.0564
UI membership	0.9934	0.9892	0.0767
Size of house	129.5864	129.8413	-0.2322
Labour supply, male	0.8895	0.8764	0.1260
Labour supply, female	0.8875	0.8781	0.0904
Self employed, male	0.5578	0.5564	0.0110
Self employed, female	0.0922	0.0942	-0.0202
Education, short	0.0237	0.0294	-0.0775
Education, medium	0.2347	0.2227	0.1006
Education, long	0.4071	0.4216	-0.1128
1 child	0.1056	0.1068	-0.0112
2 children	0.0177	0.0226	-0.0705
3 children	0.0702	0.0822	-0.1267
4 children	0.0200	0.0283	-0.1152

Figure A13. Kernel densities of propensity scores for low and unmatched high (broken line) liquid asset house owners.



Note: Bandwidth set to $1.06\sigma n^{-1/5}$.

Table A15. Estimates of the average effect of the reform on owners holding low levels of liquid assets in 1991 and having subsequently experienced an unemployment shock, for total expenditure, liabilities, and disposable income

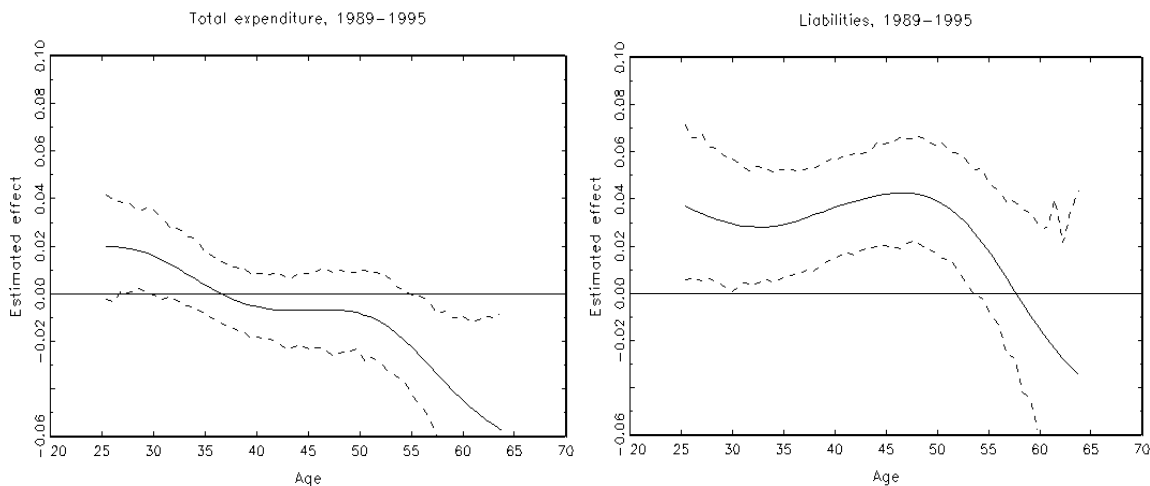
	Average effect of the reform for low liquid asset households ⁽¹⁾		
	(1)	(2)	(3)
	Q=Expenditure	Q=Liabilities	Q=Income
1 $[(Q_{96}+Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89}+Q_{88})]/4$	-0.0013	0.0379**	-0.0264**
Standard Error ⁽²⁾	0.0055	0.0096	0.0044
2 $[(Q_{95}+Q_{94}+Q_{93})-(Q_{91}+Q_{90}+Q_{89})]/3$	-0.0063	0.0294**	-0.0206**
Standard Error ⁽²⁾	0.0063	0.0092	0.0042
3 $[(Q_{94}+Q_{93})-(Q_{91}+Q_{90})]/2$	-0.0183**	0.0264**	-0.0160**
Standard Error ⁽²⁾	0.0080	0.0089	0.0041
4 $(Q_{93})-(Q_{91})$	0.0034	0.0341**	-0.0158**
Standard Error ⁽²⁾	0.0125	0.0096	0.0045

Note: All variables are measured in DKK at 1990 price levels. Matching is done using replacement. * significant at the 10% level. ** significant at the 5% level.

(1) Size of low liquid asset group: 3,503. Size of matched high liquid asset group: 3,109.

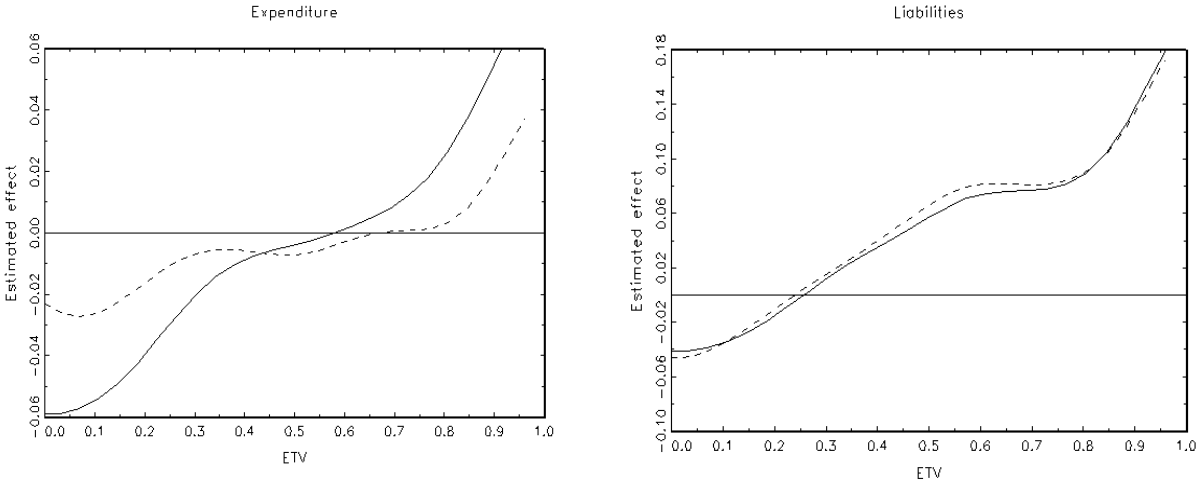
(2) Standard errors are calculated according to Theorem 7 in Abadie and Imbens (2006).

Figure A14. Kernel regressions of estimated total expenditure and liability effect of the reform for the low liquid asset house owners on age. Estimates based on the period 1993-1995 relative to 1989-1991.



Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance. Confidence intervals are bootstrap point wise confidence intervals based on 500 replications, cf. Härdle (1990).

Figure A15. Kernel regression of estimated expenditure and liability effect of the reform for the low liquid asset house owners on equity to value (ETV) in 1991. Estimates based on the period 1993-1994 relative to 1990-1991 (solid line) and 1993-1995 relative to 1989-1991 (broken line).



Note: Bandwidths have initially been chosen by generalized cross validation. The kernel regressions presented in both panels are over-smoothed relative to the cross validated level. This is only of presentational importance.