

Adaptation and anticipation effects to life events in the United Kingdom

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Abstract

We analyze how individual happiness is affected over time by nine major life events using a panel of British individuals. Our aim is to test for the existence of adaptation and anticipation effects. Adaptation effects are found for all the life events considered with the possible exception of unemployment. Anticipation effects precede events that are easily predicted such as marriage, separation and the birth of a child.

Keywords: adaptation effects; anticipation effects; happiness; life satisfaction; United Kingdom.

1 Introduction

The adaptation hypothesis is one of the most prevalent notions in the study of happiness and subjective well-being. It states that major life events such as marriage, changes in employment status or changes in income have only a temporary effect on individual happiness. Happiness may increase or decrease following one such event, but the hypothesis predicts that after a period of no more than a few years individuals will "adapt" to their new

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living conditions and happiness will return to its previous level. Many researchers, especially in psychology, have taken the adaptation hypothesis to its final consequences and have advanced that individual happiness is almost fully determined by person-specific personality traits, themselves a function of genetic or cultural factors, and that life events cause no more than short term disturbances in a "setpoint" level of happiness¹. Economists have been somewhat more cautious in this area and have contributed to the debate with empirical studies which tend to confirm the existence of adaptation effects in diverse circumstances.

In this paper we use a common methodology to test for the existence of adaptation to several life events in a large panel of British individuals. The events we consider are: marriage, couple formation, separation, divorce, widowhood, unemployment, birth of a child, health improvements and health deteriorations. The preceding list covers most of the major determinants of individual happiness as established by a rich literature developed over the last three decades².

Adaptation effects have been most often invoked when analyzing the effects of income on happiness. People adapting to ever increasing levels of income would be a satisfactory explanation of the well-known Easterlin Paradox (Easterlin 1974, 1995), the observation that average levels of happiness have not increased in developed nations over the last few decades despite much economic growth. Adaptation to income has received considerable empirical support in the literature (see Clark 1999, Di Tella et al. 2003, Burchardt 2005, Grund and Sliwka 2007 and Di Tella et al. 2007).

Less well established in the literature, however, is the existence of adaptation effects to life events other than changes in income. Much of the earlier

¹The literature can be traced back at least to Brickman and Campbell (1971) and their "hedonic treadmill" hypothesis. More recent examples of this literature in psychology include Myers and Diener (1995), Lykken and Tellegen (1996) and Kahneman et al. (1999).

²See Argyle (1999), Di Tella and MacCulloch (2006) and Blanchflower (2008) for recent surveys of the literature. Layard (2005) offers an insightful book-length treatment of the subject.

research has failed to be conclusive because of an important methodological problem: it was carried out using cross-sectional datasets³. Cross-sectional results are likely to suffer from omitted variable bias, since unobserved person-specific characteristics such as genetic background or family values are likely to be correlated with the occurrence of events such as marriage or unemployment. Panel data provides a credible methodology to control for these factors with the inclusion of person-specific fixed effects. In addition to this, panel data makes possible the estimation of anticipation effects: changes in happiness that precede the occurrence of major life events; as if the sole thought of a future marriage or birth of a child is enough to make people happier⁴. It is precisely to the more recent panel data studies of adaptation effects that we turn our attention below.

Several papers have studied adaptation to marriage using the well-known German Socio Economic Panel (GSOEP). Lucas et al. (2003), Lucas and Clark (2006) and Stutzer and Frey (2006) all coincide in identifying a positive effect of marriage on happiness that begins one or two years before the marriage takes place and lasts for at least a few years afterwards. According to these authors, full adaptation to marriage takes place and erodes all gains in happiness after as little as two years. Zimmerman and Easterlin (2006), using the same dataset, find that the adaptation to marriage does take place but may fall short from being complete. They argue that about one quarter of the initial happiness effect remains in the long run. To the best of our knowledge no similar tests of adaptation to marriage have been carried out for countries other than Germany.

Lucas et al. (2005) apply the methodology of Lucas et al. (2003) to the case of adaptation to unemployment. Their tests, once again using German data, find no evidence of adaptation to unemployment; individuals continue to experience lower happiness even after several years of being

³See Frederick and Loewenstein (1999) for a review of this literature.

⁴Adaptation effects can be estimated with a cross-section since we can always ask people how many years have passed since they married, divorced, etc. To estimate anticipation effects we would need to know how many years will pass before they marry, divorce, etc.

unemployed. Clark (2006), who investigates adaptation to unemployment using British, German and American data, comes to similar conclusions. Finally, Lucas (2005) also studies adaptation to divorce using the GSOEP and finds that there is partial adaptation: about 50% of the initial fall in happiness disappears after a few years but individuals do not seem to return to their pre-divorce levels of happiness. Moreover, the nadir of happiness is found to be one year before the actual divorce takes place.

With the aim of obtaining a broader view of the size of adaptation and anticipation effects, Clark et al. (2008) study adaptation to six life events in the GSOEP. The paper has the merit of applying a common methodology to the analysis of all events, so different outcomes cannot be explained by changes in econometric methods. Clark et al. (2008) find evidence supporting full adaptation to marriage, divorce, widowhood, birth of a child and layoff. The exception to the rule is the case of unemployment, where they find modest adaptation effects that do not eliminate the initial loss in happiness.

In this paper we contribute to the literature by estimating adaptation and anticipation effects to a large number of important life events using the British Household Panel Survey (BHPS). Our paper is similar to Clark et al. (2008), but by considering a different dataset it offers the possibility of comparing the results for two major European societies, Germany and the UK. Moreover, the BHPS allows us to include in our analysis some important life events that are not present in Clark et al. (2008); namely couple formation (without marriage), separations, health improvements and health deteriorations. We estimate the effects of these events on men and women separately. We find adaptation effects to all the life events that we consider with the possible exception of unemployment.

The rest of the paper is organized as follows. The next section presents the data and carries out some preliminary regressions that confirm previous results in the literature. Section 3 describes the econometric methodology we use to study adaptation and anticipation effects. Section 4 presents and

discusses our results for each life event under consideration and compares these results with those obtained by Clark et al. (2008).

2 Data and baseline results

The British Household Panel Survey is a yearly survey that follows about 9,000 households and 15,000 individuals in the United Kingdom. The data has been used in numerous socioeconomic studies including several analyses of happiness. We have at our disposal the first fifteen years of data, covering the period 1991-2005, but our endogenous variable is available only since the year 1996.

Our endogenous variable is a measure of life satisfaction taking values between 1 and 7 according to the answers given to the question "how dissatisfied or satisfied are you with your life overall?". This type of measure is standard in the happiness literature, although the scale in which answers are measured changes from survey to survey. For the BHPS, 1 is coded as "not satisfied at all" while 7 corresponds to "completely satisfied". Following the literature, we will interpret this variable as a measure of happiness.

Table 1 presents the distribution of our happiness measure for the population as a whole and for males and females separately. As is usual for this type of measure, a clear majority of people chose values in the top half of the scale; implying that most people are rather satisfied with their lives. The distributions for men and women are very similar, with almost the same mean (5.24 for men and 5.23 for women) and slightly more dispersion in the female distribution.

Table 2 regresses our measure of happiness against a set of explanatory variables whose importance has been repeatedly confirmed in the literature. These and all regressions in this paper include person-specific fixed effects and time dummies. The largest effects on happiness are associated with variables describing the individual's marital status, employment status and health; while variables such as income, education, religion, age and number

of children play somewhat smaller roles. The regression is run for all individuals in column 1 and repeated for males and females separately in columns 2 and 3.

With the exception of age, number of children and income, all control variables are binary. Five variables are used to identify the individual’s marital status (married, living as a couple, widowed, divorced and separated); the excluded category corresponds to people who have never married and are not living as a couple. Similarly, we use four dummy variables to measure health status (excellent, good, fair and poor). These correspond to four of the five possible answers to a question in which individuals self-assess their health status; the fifth answer (very poor) being our excluded category. A similar logic applies to the construction of our variables for education (excluded category is people with no education diploma), religion (excluded category is people who are not religious) and region of residence (excluded category is England outside London). Our income variable has been adjusted to account for inflation and household composition.

Table 2 can be taken as our baseline results; it confirms results obtained previously in the literature and shows that the differences between male and female individuals are relatively minor. Health, unemployment and marital status have similar consequences on men and women, although men seem to suffer more from a divorce or a separation. Income appears to have a larger effect on the happiness of men than on that of women, whereas the opposite is true in the case of religious attitudes.

3 Methodology

We study adaptation and anticipation effects to nine different life events. For each life event that we consider, the following empirical specification is used (taking as example the case of marriage):

$$H_{it} = \alpha_i + \gamma_t + BX_{it} + \sum_{s=-4}^{-1} \theta_s m_{sit} + \theta_0 m_{0it} + \sum_{s=1}^5 \theta_s m_{sit} + \varepsilon_{it} \quad (1)$$

Here, H_{it} is our measure of happiness, α_i and γ_t are fixed effects and time dummies and B is the set of parameters associated with the vector of control variables X_{it} , which includes the variables presented in our baseline regressions. The variable m_{0it} is a dummy variable taking the value of 1 if individual i marries on year t . Variables m_{sit} , with $s = 1..4$, will be referred to as adaptation variables. These are dummy variables that take the value of 1 if individual i has been married for s years on year t ⁵. The variable m_{5it} is defined slightly differently since it takes the value of 1 for individuals who have been married for 5 or more years on year t . Coefficients θ_0 to θ_5 will thus register the contemporaneous and lagged effects of marriage on happiness. In the presence of adaptation effects, we would expect θ_0 to be positive and the θ_s coefficients to diminish progressively. Coefficient θ_5 , whose value corresponds to the long term effect of marriage on happiness, would be close to zero under full adaptation.

Additionally, equation (1) also takes into account anticipation effects; that is, the possibility that an event such as a marriage has an influence on happiness before it actually takes place. Variables m_{sit} , with $s = -4.. -1$, will be called anticipation variables. These are dummy variables that serve to identify the fourth, third, second and first year before a marriage takes place under some additional conditions. To understand the importance of these additional conditions, consider an individual who will marry for a second time. It is of course perfectly possible that three years before his second marriage this individual is married. In that case, it would not be adequate to use this person to uncover the anticipation effects that a marriage has three years before its occurrence: at that point in time this person would still be under the effects of another marriage. Thus, a variable like m_{-3it} takes the value of 1 when an individual will get married in three years time, provided he is not currently married. Similar additional conditions are required to account for the anticipation effects of other life events, and these are described in table 3.

⁵Note that this is not the same as saying that individual i had a marriage s years ago. For this variable to take the value of 1 the individual must have remained married for s years. Thus, the m_{sit} variables are not just the lagged versions of m_{0it} .

Equation (1) is similar to the specifications used by Clark et al. (2008) with one notable difference. Clark et al. (2008) run two separate regressions for each life event, one with only adaptation effects and another one with only anticipation effects, whereas we run a single regression that includes all anticipation and adaptation effects. We favor the approach used here because the methodology of Clark et al. (2008) may suffer from omitted variable bias if both anticipation and adaptation effects exist in the data.

We note, finally, that when analyzing adaptation and anticipation to marriage with equation (1) we need to extract the dummy variable for married individuals from the vector of control variables X_{it} to avoid a problem of multicollinearity. The same is true for every other life event under analysis. When analyzing the case of health improvements or health deteriorations, all four health related dummy variables are excluded from the control set.

4 Empirical results

The adaptation and anticipations effects that we estimate for 9 separate life events are presented in tables 4a and 4b. Table 4a groups the five life events that correspond to changes in marital status: marriage, divorce, separation, widowhood and couple formation. Table 4b contains the analysis for unemployment, health improvements and deteriorations and birth of a child⁶.

Tables 4a and 4b report for each regression all coefficients θ_s , giving the complete pattern of anticipation, contemporaneous effect and adaptation to each life event. The coefficients for the control variables are not included for conciseness but their values are very similar to those reported in our baseline regressions. Below we comment on the results for each life event in turn.

⁶In the BHPS, we deduce the birth of a child when the number of children living in the household increases by one. This, however, not only includes births but also adoptions and occasions when children from previous unions are added to the household.

For the case of marriage, we find - in accordance with the rest of the literature - a large and positive contemporaneous effect of marriage on happiness. The effect is considerably larger for women than for men (0.317 and 0.162 respectively). Women enjoy an anticipation effect on at least one year preceding their marriage, whereas this effect is not present in men. The adaptation following a marriage is very swift for men and slow (but still complete) for women. The positive effect on life satisfaction is no longer significant after 1 year for men and after 4 years for women. The coefficient capturing the effect after five years or more of being married is small and of similar value for men and women.

The case of couple formation presents a much more uniform picture for men and women. The increase in happiness brought about by the formation of a couple is similar for both sexes (0.140 for men and 0.160 for women) and both sexes adapt to it fully. Female happiness falls back to normal after 2 years and male happiness after only 1 year. Contrary to the case of marriage, there are no anticipation effects to couple formation; arguably because this is a more unpredictable event than marriage.

A separation produces large losses in happiness for both men and women; but it is men who appear to suffer the most. Anticipation effects are clearly present over 2 or 3 years, as separation is likely to follow a period of marital problems. The year of separation brings a happiness effect of -0.693 for men and -0.457 for women. Adaptation is full and does not take too long: the effect is no longer statistically significant after 3 years for men and after 2 years for women.

A divorce produces negative effects that are of smaller magnitude than those of a separation; possibly because it allows its participants to refocus their personal lives more definitely. Although the effects remain negative for a number of years, they are no longer statistically significant after just 1 year for both men and women.

Widowhood sees once again negative effects on happiness that are larger for men than for women. Men also experience a statistically significant antic-

ipation effect one year before the event, possibly from seeing their partner's health deteriorating. The contemporaneous effect is -0.170 for women and -0.412 for men. Adaptation, however, appears to be quite swift: the effects are no longer statistically significant after 1 year for both sexes.

Unemployment produces a pattern of happiness effects quite unlike other events. There are large negative effects on the year of the event: -0.361 for men and -0.248 for women. One year after the event the effect remains very similar for men and almost doubles in size for women. In the following years the effects lose statistical significance, but the size of the coefficients remains very large and similar to those obtained when falling into unemployment. We are therefore reluctant to conclude that individuals adapt to unemployment; the lack of statistical significance when estimating the effects after 2 or more years may be due to a small number of observations.

We turn next to changes in health status. A health improvement produces important happiness gains on the year it takes place and on the 3 years that follow for both men and women. Adaptation appears to take place very slowly and only after 4 years, when the effects finally become statistically not significant.

Health deteriorations produce a similar picture to health improvements with opposite signs. The effects are negative and remain largely unchanged over the first 3 years following the event (4 years for women). Eventually the effect becomes smaller and not significant after 5 or more years.

Finally, the birth of a child appears to bring important happiness gains for women, with a large anticipation effect one year before the child's arrival and a similarly large effect on the year of the birth. For men there is also an anticipation effect about half the size of the one observed for women but the contemporaneous effect, although positive, is not statistically significant. These gains are quickly eroded, and the effects become statistically not significant and often negative after only one year.

To sum up, we have found adaptation effects for all the life events considered here with the possible exception of unemployment. Adaptation tends to be quick: effects usually become statistically not significant after only 1 or 2 years. The exception is for health improvements and deteriorations, where the effects clearly remain in place 3 years after the event and become not significant only during the fourth or fifth year, and marriage in the case of women, where the positive effects also survive about 3 years. Anticipation effects have been found in the year preceding some events that can be easily predicted: marriage, separation and the birth of a child.

We note that these results are quite similar to those obtained by Clark et al. (2008) using German data.

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Table 1
Distribution of Life Satisfaction in the BHPS

	(1) All individuals		(2) Men		(3) Women	
	<i>number</i>	<i>%</i>	<i>number</i>	<i>%</i>	<i>number</i>	<i>%</i>
1 (not satisfied at all)	1782	1.58	693	1.35	1089	1.78
2	2504	2.22	1090	2.12	1414	2.31
3	6740	5.98	2989	5.80	3751	6.12
4	15787	14.00	6753	13.11	9034	14.75
5	32697	28.99	15758	30.59	16939	27.65
6	36392	32.27	17387	33.75	19005	31.02
7 (completely satisfied)	16878	14.97	6844	13.29	10034	16.38
Mean	5.23		5.24		5.23	
Standard deviation	1.30		1.26		1.34	

Table 2
Baseline results, determinants of happiness in Britain

	<i>Dependent variable: Life Satisfaction</i>		
	(1) <i>All individuals</i>	(2) <i>Males</i>	(3) <i>Females</i>
Age	-0.013	-0.011	-0.013
Age ²	-0.00001*	0.0	-0.0002**
Health: excellent	0.978**	0.954**	0.999**
Health: good	0.855**	0.856**	0.852**
Health: fair	0.621**	0.624**	0.617**
Health: poor	0.345**	0.341**	0.346**
Married	0.061*	0.069	0.060
Living in couple	0.124**	0.123**	0.127**
Widowed	-0.150*	-0.135	-0.151*
Divorced	-0.100*	-0.112 ⁺	-0.090
Separated	-0.323**	-0.423**	-0.260**
Unemployed	-0.281**	-0.310**	-0.247**
Number of children	-0.016 ⁺	-0.012	-0.023 ⁺
Education: postgrad	0.143	0.159	0.118
Education: university	0.109	0.021	0.166
Education: hnd, hnc	0.151	0.024	0.270 ⁺
Education: A level	0.179*	0.131	0.220*
Education: O level	0.143 ⁺	0.159	0.141
Education: CSE	0.147	0.187	-0.108
Religious: high	0.100**	0.067	0.114*
Religious: mid	0.020	-0.008	0.037 ⁺
Log of Income	0.056**	0.069*	0.050 ⁺
London	-0.043	-0.066	-0.026
Scotland	0.064	0.111	0.030
Wales	0.096	0.206 ⁺	0.001
Northern Ireland	-0.076	--	-0.093
Fixed effects	Yes	Yes	Yes
Time dummies	Yes	Yes	Yes
Observations	88928	40475	48453
R ²	0.64	0.65	0.64

Note: ⁺, * and ** denote statistical significance at the 10%, 5% and 1% level using robust standard errors.

Table 3
Conditions for the creation of adaptation and anticipation variables

Life event	Condition for adaptation variables (s = 1 ...5)	Condition for anticipation variables (s = -4...-1)
Marriage	Individual remains married	Individual is not married
Couple formation	Individual remains living as a couple	Individual is not living as a couple
Divorce	Individual remains a divorcee	Individual is either married, separated or living as a couple
Separation	Individual remains separated	Individual is either married or living as a couple
Widowhood	Individual remains a widower	Individual is not a widower
Unemployment	Individual remains unemployed	Individual is not unemployed
Birth of a child	No other child is born	No condition
Health improvement	Health remains at the improved level	Health is below the improved level
Health deterioration	Health remains at the deteriorated level	Health is above the deteriorated level

Table 4a
Adaptation and anticipation effects in the United Kingdom: marital status.

	<i>Marriage</i>		<i>Forming a couple</i>		<i>Separation</i>		<i>Divorce</i>		<i>Widowhood</i>	
	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>
<i>t - 4</i>	-0.086	0.002	-0.208	-0.065	-0.279	0.014	-0.109	-0.211	0.051	0.091
	-0.092	-0.09	(0.091)*	-0.084	-0.17	-0.139	-0.142	-0.149	-0.144	-0.134
<i>t - 3</i>	-0.046	0.023	-0.181	-0.174	-0.152	-0.273	-0.049	-0.197	-0.171	-0.148
	-0.068	-0.072	(0.071)*	(0.070)*	-0.123	(0.121)*	-0.142	-0.128	-0.127	-0.122
<i>t - 2</i>	-0.035	0.103	-0.131	-0.091	-0.386	-0.255	-0.35	-0.226	-0.132	-0.017
	-0.065	-0.064	(0.065)*	-0.063	(0.105)**	(0.099)**	(0.131)**	(0.102)*	-0.133	-0.109
<i>t - 1</i>	0.009	0.174	0.017	0.014	-0.465	-0.443	-0.025	-0.116	-0.269	-0.176
	-0.06	(0.056)**	-0.053	-0.053	(0.103)**	(0.084)**	-0.107	-0.079	(0.123)*	-0.109
<i>t (year of the event)</i>	0.162	0.317	0.14	0.16	-0.693	-0.457	-0.25	-0.178	-0.412	-0.17
	(0.061)**	(0.057)**	(0.052)**	(0.050)**	(0.102)**	(0.086)**	(0.093)**	(0.073)*	(0.154)**	-0.116
<i>t + 1</i>	0.095	0.276	0.058	0.133	-0.385	-0.305	-0.123	-0.157	-0.144	-0.116
	-0.065	(0.061)**	-0.058	(0.059)*	(0.128)**	(0.106)**	-0.105	-0.089	-0.155	-0.139
<i>t + 2</i>	0.104	0.243	0.095	0.016	-0.438	-0.063	-0.049	-0.11	0.126	-0.141
	-0.069	(0.066)**	-0.068	-0.067	(0.157)**	-0.137	-0.109	-0.096	-0.163	-0.15
<i>t + 3</i>	0.085	0.185	0.011	-0.017	-0.043	-0.048	-0.113	-0.057	-0.21	0.098
	-0.072	(0.069)**	-0.078	-0.077	-0.209	-0.205	-0.138	-0.103	-0.187	-0.159
<i>t + 4</i>	0.122	0.09	-0.012	-0.074	-0.072	-0.205	-0.035	0.078	-0.155	0.07
	-0.074	-0.071	-0.092	-0.092	-0.232	-0.254	-0.152	-0.118	-0.172	-0.183
<i>t + 5 and later</i>	0.047	0.044	-0.018	0.039	0.718	0.005	0.074	0.081	-0.179	0.034
	-0.071	-0.07	-0.079	-0.084	(0.324)*	-0.301	-0.136	-0.104	-0.174	-0.163
<i>Observations</i>	37791	45155	37791	45155	37791	45155	37791	45155	37791	45155
<i>R</i> ²	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64

Note: regression coefficients are in bold and robust standard errors appear below them. All regressions include fixed effects, time dummies and the full list of controls. The signs * and ** denote statistical significance at the 5% and 1% level.

Table 4b

Adaptation and anticipation effects in the United Kingdom: unemployment, health and birth of a child.

	<i>Unemployment</i>		<i>Health improvement</i>		<i>Health deterioration</i>		<i>Birth of a child</i>	
	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>	<i>men</i>	<i>women</i>
<i>t - 4</i>	-0.074	0.073					-0.001	0.041
	-0.105	-0.118					-0.052	-0.058
<i>t - 3</i>	-0.013	0.09	-0.072	0.017	-0.005	0.063	-0.005	0.18
	-0.083	-0.08	-0.09	-0.076	-0.084	-0.069	-0.045	(0.045)**
<i>t - 2</i>	-0.038	-0.021	0.022	-0.086	0.034	0.053	-0.023	0.072
	-0.064	-0.074	-0.044	-0.045	-0.04	-0.038	-0.042	-0.042
<i>t - 1</i>	-0.14	-0.092	-0.041	-0.057	0.011	0.018	0.077	0.181
	(0.054)**	-0.062	-0.027	(0.025)*	-0.024	-0.024	(0.037)*	(0.038)**
<i>t (year of the event)</i>	-0.361	-0.248	0.102	0.13	-0.127	-0.147	0.067	0.141
	(0.055)**	(0.058)**	(0.016)**	(0.016)**	(0.016)**	(0.016)**	-0.043	(0.044)**
<i>t + 1</i>	-0.321	-0.468	0.109	0.16	-0.12	-0.134	0.034	-0.002
	(0.100)**	(0.124)**	(0.021)**	(0.020)**	(0.023)**	(0.023)**	-0.046	-0.045
<i>t + 2</i>	-0.353	-0.158	0.12	0.209	-0.145	-0.115	-0.005	-0.082
	(0.168)*	-0.188	(0.029)**	(0.028)**	(0.030)**	(0.033)**	-0.049	-0.048
<i>t + 3</i>	-0.186	-0.592	0.083	0.119	-0.091	-0.118	0.036	-0.042
	-0.156	-0.342	(0.038)*	(0.040)**	(0.045)*	(0.045)**	-0.051	-0.05
<i>t + 4</i>	-0.387	-0.377	0.094	0.096	-0.062	-0.142	-0.048	-0.105
	-0.275	-0.631	-0.057	-0.058	-0.058	(0.065)*	-0.059	-0.056
<i>t + 5 and later</i>	-0.297	-2.914	0.062	0.024	-0.075	-0.056	0.009	-0.026
	-0.241	(0.855)**	-0.075	-0.097	-0.087	-0.076	-0.054	-0.054
<i>Observations</i>	37883	45242	32647	38974	32647	38974	37883	45242
<i>R²</i>	0.64	0.64	0.64	0.64	0.64	0.64	0.64	0.64

Note: regression coefficients are in bold and robust standard errors appear below them. All regressions include fixed effects, time dummies and the full list of controls. The signs * and ** denote statistical significance at the 5% and 1% level.