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## A Duration Analysis of Terrorist Strategy in Domestic Conflict: Evidence from Northern Ireland 1971 - 1994

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Neil T. N. Ferguson

# **A Duration Analysis of Terrorist Strategy in Domestic Conflict: Evidence from Northern Ireland 1971 - 1994**

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# A Duration Analysis of Terrorist Strategy in Domestic Conflict: Evidence from Northern Ireland 1971 - 1994<sup>1,2</sup>

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## **Abstract:**

This paper employs a dataset from The Troubles in Northern Ireland to empirically test the interactions of terrorists operating in domestic conflicts. Specifically, it assesses the theoretical claims that organisations 'match' strategies, choosing their action according to the activity of their rivals. By employing duration analysis, I also test the implications of the qualitative literature specific to this conflict. I test the suggestion that Loyalists acted as a reactive force, aiming to deter Republican attacks on Northern Ireland's Protestant community. Republicans are claimed to have operated a broader strategy, aimed at imposing maximum physical and psychological damage. The results present evidence that supports these qualitative writings, whilst showing that organisations operated different strategies in different locations and at different times. By mapping the conflict to Northern Ireland's Westminster parliamentary constituencies, I also provide evidence that interaction occurred locally, rather than nationally, which reflects the organisational structure of the Loyalist organisations.

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<sup>1</sup> The author would like to thank Professor Mark Shaffer at Heriot-Watt University for his guidance and patience, Professor Stephen Jenkins for his methodological input and the commentators at numerous conferences and presentations whose input has been valuable but who are too many to name individually.

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## **Introduction:**

On 14 July 1969, Francis McClosky, a Catholic civilian, was killed during street disturbances in Dungiven, County Derry, Northern Ireland. Mr McClosky died after being struck by members of the Royal Ulster Constabulary (RUC), Northern Ireland's civilian police force. This death occurred during a violent spillover of a Northern Ireland Civil Rights Association (NICRA) demonstration.

The Parliament of Northern Ireland and many Protestant civilians viewed this organisation, and its demands for an end to the horizontal inequalities faced by the Catholic minority, as a threat to the Protestant state and had reacted forcefully. Whilst NICRA itself was a nominally peaceful organisation, its demonstrations and the response to them from Northern Irish Protestants had frequently descended into communal street riots in the late-1960s. According to Sutton (1994), this was the first death directly pertaining to The Troubles.

The riots associated with these demonstrations acted as a precursor to the more severe, low-intensity, triangular conflict that would become the predominant feature of the Northern Irish political landscape for the next thirty years. Colloquially known as "The Troubles", this conflict, between Loyalist paramilitary organisations, Republican paramilitary organisations and British security forces endured from the death of Mr McClosky in 1969 until the signing of the Belfast (Good Friday) Agreement in 1998 and would claim the lives of in excess of 3,500 people (Sutton, 1994).

Given the nature of three strategic 'players' which I shall henceforth refer to as Loyalists, Republicans and Security Forces and the reliability of the conflict data, The Troubles provides a rich background for the study of both domestic terrorist threats and triangular conflicts. Whilst the economics of terrorism literature has grown markedly and rapidly in the fifteen years since the latest wave of a series of high-profile, high-casualty, high-impact attacks against Western targets began, there remains a significant paucity of evidence on both domestic terrorism and triangular conflicts.

In a comprehensive literature review, for example, Schneider, Brück and Meiericks (2010) show that only 10% of in excess of 250 cited papers relate to domestic terrorists, whilst none relate to triangular conflicts. Both Rosendorff and Sandler (2005) and Enders and Sandler (2006) show that domestic terrorism is responsible for a vast proportion of terrorist incidents, whilst triangular conflicts have arisen in Colombia, Iraq and Northern Ireland, to name three recent or current examples.

The relative lack of empirical work in this area has been justified on the basis of data availability. Commonly used databases in the econometric study of terrorism, such as ITERATE (Mickolous, *et al*, 2008) only include information on transnational attacks and whilst the Global Terrorism Database (GTD), START (2011) contains data on domestic, as well as transnational incidents, this data has only been available for the last five years. Despite these notions, however, the data used in this paper has been available for almost twenty years, whilst the likes of Jaeger and Paserman (2006) have also used local sources to collect information on deaths relating to Second Intifada.

Accordingly, whilst the notion of data availability may suggest certain difficulties in creating cross-country comparison studies and justify the lack of research in this area, the relative poverty of research on individual domestic terrorist conflicts, and particularly conflicts outside of the Middle East, should not be justified by this apparent lack of data.

In the case of Northern Ireland, the Sutton (1994) data has already been used by the likes of Honaker (2006), Besley and Mueller (2012) and Ferguson and Michaelsen (2012), this author is aware of no other econometric study that looks directly at the interactions of the strategic players in Northern Ireland. Accordingly, this paper is amongst the first to look at the full spectrum of terrorist strategy in triangular conflicts, as well as the first to look directly at Northern Ireland.

Ferguson (2012) models the potential interactions of domestic terrorists theoretically, suggesting that in domestic conflicts, terrorist organisations aim to match their strategy with that of their rivals. The suggestion in Northern Ireland is that Loyalists and Republicans would increase their violence in response to increased militancy from their rivals but would also respond to decreases in their rivals' violence. In the context of the subgames of Ferguson's model, the relationship between the paramilitary organisations and the British Security Forces can also be understood in the same manner.

Even in terms of the transnational literature, econometric studies of terrorist strategies and interactions are relatively rare and many of the notions introduced only arise in the theoretical setting. Landes (1978) presented an early contribution, with a statistical analysis of US skyjackings, whilst Jaeger and Paserman (2006) look at the interactions that occurred in the second Intifada. Brophy-Bearmann and Conybeare (1994) use data from earlier in the Israeli-Palestinian conflict to empirically test a rational expectations approach to attack and retaliation, whilst Lee (1998) looks at the response of terrorists to government counter-terrorism measures. More recently, Barros, Gil-Alana and Passos (2006) have looked at the timing of ETA attacks, Berribe and Lakadawalla (2007) look at the location of attacks in Israel and Blomberg, Engel and Sawyer (2010) look at the lifespan of terrorist organisations.

## **Background:**

Darby (1995) traces the nature of the conflict in Northern Ireland back to the Plantation of Ulster<sup>3</sup> in 1609 and concludes that the problems identifiable from this time weren't merely territorial but were also based on cultural and religious differences. The Irish were, largely, a Catholic people, whilst the implanted landowners from England and Scotland held Protestant beliefs. Divisions along these broadly religious lines remained prevalent in the politics of Ireland until the Anglo-Irish agreement of 1921 partitioned Ireland<sup>4</sup>, although what began as

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<sup>3</sup> Although the terms 'Ulster' and 'Northern Ireland' are frequently used synonymously in the present day, the historical definition of Ulster was as one of the four provinces of Ireland and is located in north of the island. In addition to the six counties of Northern Ireland, which are all in Ulster, the province also includes three counties of the Republic of Ireland – Cavan, Donegal and Monaghan.

<sup>4</sup> The partition of Ireland split the island into two constituent states; the largely independent south of the island, then known as the Irish Free State and Northern Ireland. Northern Ireland was designed to be the 'largest maintainable Protestant state' that could be created on the island.

an Irish-English problem developed into a Protestant-Catholic problem between 1921 and 1969.

Fitzduff and O'Hagan (2000) note both the Protestant-Catholic division and also the real and perceived horizontal inequalities faced by the large Catholic minority in Northern Ireland, which entrenched the religious and cultural differences. Such inequality led, first of all, to the formation of the non-violent NICRA but the aggressive response of the Parliament of Northern Ireland, which perceived the movement as a threat to the 'Protestant' state, led, to street disturbances and the formation of "Loyalist" vigilantes, who aimed to protect Protestant civilians from Republican violence. Calling themselves "defence associations", these organisations eventually formed into Loyalist terrorist organisations.

Darby (2003) states that during the period of The Troubles, the pattern of violence changed noticeably – what began as communal rioting between the two communities in Northern Ireland in the late-1960s eventually moved towards a, "triangular, low-intensity conflict." The British Army entered Northern Ireland in 1969 with a brief to restore peace but quickly became a target for Republican terror attacks. Although there was also some low-level interaction between the Army and Loyalists, members of the security forces were seldom targets for these groups.

During the 1970s, a number of new paramilitary organisations formed. The Ulster Defence Association (UDA), for example, came together as an umbrella organisation for the self-styled defence associations that had arisen in Protestant communities. In these years, pre-existing groups, such as the Irish Republican Army (IRA) and Ulster Volunteer Force (UVF) also increased their profile, by engaging a series of bombing and shooting attacks.

Whilst the aims of NICRA were widely considered to be based on delivering equality for Catholics in Northern Ireland, the Republican paramilitary organisations held deeper goals that involved the reunification of Ireland. Loyalist paramilitaries, on the other hand, opposed this view and wished to maintain the status quo of union with the United Kingdom. Although illegal and carrying out illegal acts, Loyalist paramilitaries, therefore acted as pro-government vigilantes and attempted to impose costs on Republicans through retaliative attacks.

The nature of this strategy is widely discussed in the qualitative literature, with the likes of Dillon (1992), O'Brien (1995) and Taylor (1996) stating that the long-term aims of the Loyalist organisations in Northern Ireland was to protect the Protestant communities from Republican attacks. O'Brien, in particular, claims that the stated political aim of the UDA was to match Republican strategy, particularly in the use of violence to deter Republican violence. Should Republicans cease their armed campaigns, the UDA's stated strategy was to follow suit. O'Brien highlights this by the Combined Loyalist Military Command (CLMC) calling a ceasefire in October 1994, 43 days after the PIRA's ceasefire that same August.

The qualitative literature supports a more varied Republican strategy, aimed at imposing maximum physical and psychological damage on the enemy. Interaction with Loyalists was not designated as an important part of strategy. Thus, whilst the qualitative literature suggests that Loyalists should match their strategies with that of Republican organisations, the reverse of this relationship is not, necessarily, true. Accordingly, should Republicans engage in a long

period of relative peacefulness, the qualitative literature suggests that Loyalists will follow suit. The impact on Republican strategy of a long period of relative Loyalist peacefulness, however, is undetermined from the qualitative literature.

Similarly, interesting questions must also be raised about the interactions of both sets of terrorist organisations and the Security Forces. In neither case is the qualitative literature particularly suggestive, however. Whilst the Security Forces were obviously targets for the Republican organisations, precisely how Republicans responded to Security Force action is unknown. Similarly, as Loyalists viewed themselves to be, broadly, on the same 'side' as the Security Forces, formalising the nature of interaction here is difficult as there was little open conflict and significant suggestion of collusion between Loyalists and Security Forces.

The final background consideration is on the organisational structure of the paramilitary organisations. The Loyalist organisations, in particular, were organised as quasi-autonomous local "battalions" and whilst the larger Republican organisations had a more clearly defined hierarchy, how they coordinated their activities is not explicitly known. Whilst the particular impact of this structure may be unclear, it is suggestive of a role of geographic disaggregation of the data and the potential introduction of spatial econometric techniques as a means to understand if interactions took place across space, as well as time.

Accordingly, whilst the primary motivation of this paper is to understand how terrorist organisations in domestic conflicts, in general, interact with their rivals, this paper will also offer answers interesting questions that pertain directly to the conflict in Northern Ireland. As such, this paper is both one of the first to empirically test the interactions of rival organisations in domestic conflicts and the first to analyse the strategies employed by the organisations who operated in the Northern Irish conflict.

The rest of this paper is structured as follows; in the next section, I discuss the data that is used for this study, including the limitations of using data from Northern Ireland in this kind of study. In section four, I discuss the econometric methodology I use to overcome these data issues. In section five, I discuss the results and their implications and, finally, I provide some concluding remarks in Section 5.

### **Data:**

The conflict data used in this work is sourced from Malcolm Sutton's book; "Bear in Mind these Dead: An Index of Deaths from the Conflict in Ireland" (Sutton, 1994). This book documents each death directly related to The Troubles. The pertinent information in this index includes the name of the organisation that perpetrated the attack, the status of the victim (for example, members of Security Forces, civilian, etc.) and the religion of the victim, when applicable. Most importantly, for this study, the Sutton index also contains both the exact date on which each death occurred and accurate geographic information on the location of each attack. This geographic information readily facilitates geographic mapping of the conflict and the implementation of spatial techniques, which account for organisational structure.

In fact, the geographic information in Sutton (1994) is so specific that it enables the mapping of the conflict to significantly higher levels of geographic disaggregation than used in this



paper. Accordingly, despite the fact that the GTD (START, 2011) contains information on over 3,300 individual incidents, compared with just over 2,000 in Sutton, the Sutton data remains preferable for this study, as the GTD provides only minimal geographic data. In the case of attacks that occurred in larger urban conurbations, the city or town name is provided in the GTD, with only a county name for attacks that occurred in rural areas. Sutton provides street addresses for a majority of attacks.

I use a restricted sample of the Sutton index that runs from 1 January 1971 until 31 August 1994. Although the common suggestion, as noted in the introduction to this paper, is that Francis McClosky was the first victim of The Troubles, his death in July 1969 occurred during street disturbances, which were common in the late-1960s. It was only in the early-1970s that the more familiar bombing and shooting campaigns began in earnest. The UDA, for example, only began operations in 1971, whilst the first death attributable to IRA strategic action occurred in June 1970. Accordingly, 1 January 1971 provides a logical period for the beginning of the sample.

This notion fits with the civil war literature, which suggests that civil wars only begin after a threshold of violence is exceeded, rather than on the date on which the first associated incident occurs. In the case of Northern Ireland, 1 January 1971 is a logical point to begin, as it is the earliest point at which the broad outlines of the conflict could be defined. Similarly, the Provisional IRA ceasefire of 31 August 1994 signalled an effective end to the conflict this paper aims to study.

Whilst notable incidents have occurred since this date, including the Real IRA bombing that killed 29 people in Omagh in 1998 and, more recently, the murder of PC Ronan Kerr in 2011, violence dropped off significantly following the ceasefire. This suggests a significant structural break occurred in the pattern of violence at this time. Figure 1 provides an illustration of the dramatic impact of the ceasefires in 1994 on the number of terrorist incidents occurring in Northern Ireland.

I look only at attacks that occurred within the geographic borders of Northern Ireland, given the potential interest in spatial, as well as temporal, interaction of the organisations. Although notable attacks did occur outside of Northern Ireland, some 95% of the deaths included in Sutton (1994) occurred in the country. Other exclusions of data include situations in which the 'side' of the perpetrator organisation was unknown, or when incidents could not be accurately mapped. The final dataset used in this paper includes some 2,900 deaths that occurred in just over 2,000 individual events across 9,009 days. This constitutes almost 85% of all deaths included in the index.

I present a daily time-series due to the rapid retaliation structures that appear to exist when the data is inspected and use the geographic data available to map each death to one of Northern Ireland's eighteen Westminster parliamentary constituencies. In order to further disaggregate the conflict into its strategic players, I split attacks into those carried out by groups with Loyalist affiliations and those with Republican affiliations. Accordingly, an attack can, in principle, be carried out on any one of 9,009 days in any one of 18 geographic locations by

one of two organisational groupings. This suggests that data variation may be a notable problem.

The data used in this paper includes approximately 1,300 incidents perpetrated by Republican organisations and 650 perpetrated by Loyalists, which could have occurred at any one of over 150,000 points in space and time. Indeed, these problems are confirmed by the application of OLS and panel data techniques to the dataset. In order to overcome these data variation issues, I employ duration analysis, which treats each pair of attacks, or more specifically, the duration between these two attacks, as an observation. This contrasts with the daily unit of observation inherent in the use of traditional linear techniques. The presentation of this data in a panel formation is suited to duration analysis.



Figure 1: Terrorists incidents in Northern Ireland by year (Source: GTD, START (2011)).

Whilst the use of duration techniques in the economics of terrorism isn't a recent development, with the first contribution being that of Atkinson, Sandler and Tschirhart (1987), it has rarely been employed since. At the time of writing, this author is aware of approximately ten papers in the literature that adopt this technique. Whilst recent contributions have come from, Berribe and Lakadawalla (2007), Barros Gil-Alana and Passos (2006) and Blomberg, Engel and Sawyer (2010), these papers do not look explicitly look at the interaction of terrorist organisations, although some strategic concepts can be implied.

To the author's knowledge, the work presented here constitutes the first paper that attempts to use duration analysis to study the interactions of terrorist organisations and their rivals and also the first that finds interest in the impact of covariates, rather than in terms of duration dependence. In this respect, this work represents a significant contribution to the literature,

not only in terms of the use of a relatively uncommon modelling technique but as the first to apply this technique to the interaction of rival organisations.

I construct the duration ‘peace’ from this panel. I define ‘peace’ as the time elapsed between each pair of attacks attributable to a paramilitary organisation on one ‘side’ of the conflict. In this paper, I split the ‘sides’ of terrorist organisations by their political affiliations, into Republicans and Loyalists. The main Republican players are the PIRA and the Irish Nationalist Liberation Army (INLA), whilst the main Loyalists players include the UDA, the UVF and the Ulster Freedom Fighters (UFF). Data for smaller groups and from fatalities where only the political affiliation of the perpetrator, but not the organisation itself, is known are also included in this analysis.

Duration	Covariate	Definition
Republican	tlave	Average number of deaths caused by Loyalist paramilitaries, per day.
	tsave	Average number of deaths caused by British Security Forces, per day.
	trbave	Average number of deaths caused by Republican paramilitaries, per day, in contiguous regions <sup>5</sup>
	tlbave	Average number of deaths caused by Loyalist paramilitaries, per day, in contiguous regions.
	tsbave	Average number of deaths caused by British Security Forces, per day, in contiguous regions.
Loyalist	trave	Average number of deaths caused by Republican paramilitaries, per day.
	tsave	Average number of deaths caused by British Security Forces, per day.
	trbave	Average number of deaths caused by Republican paramilitaries, per day, in contiguous regions
	tlbave	Average number of deaths caused by Loyalist paramilitaries, per day, in contiguous regions.
	tsbave	Average number of deaths caused by British Security Forces, per day, in contiguous regions.

*Table 1: Definitions of the main covariates included in the analysis.*

I generate two ‘peace duration’ series; one for the duration between attacks associated with Loyalist organisations and the second for the duration between attacks associated with

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<sup>5</sup> For this work, I define contiguous regions as Westminster Parliamentary Constituencies that have physical borders to other Westminster Parliamentary Constituencies.

Republican organisations. In order to evaluate the potential strategic relationships between the rival terrorist organisations and their interaction with security forces, I use the data in Sutton (1994) to generate two sets of five covariates of interest; one for each duration series. These covariates are fully defined in Table 1 and summary statistics are provided in Table 2.

Control data for economic and geographic controls, including population, population split, unemployment and GDP are included as additional covariates, as are a series of location specific dummy variables to control for regional fixed effects. In order to control for the nature of violence, which saw an increase in intensity in the early-70s and a gradual tailing off through the 80s and 90s, I include a quadratic time trend. Finally, I include three temporal dummy variables in order to control for different ‘phases’ of Republican strategy. The first accounts for the strategies that were employed before the signing of the Sunningdale Agreement in 1973, the second for the time between the signing of this agreement and the election of Bobby Sands to the Westminster parliament in 1981 and the final for the time between Sands’ election and the official beginning of the ‘Ballot Box and Armalite’ mixed strategy, which began in 1986.

Duration	Covariate	Obs.	Mean	Std. Dev.	Min	Max
Republicans		1261	127.549	419.453	1	9009
	tlave	1261	0.030	0.197	0	6
	tsave	1261	0.016	0.173	0	5
	trbave	1261	0.076	0.176	0	2.75
	tlbave	1261	0.050	0.135	0	1.364
	tsbave	1261	0.025	0.147	0	3
Loyalists		690	234.364	680.598	1	7108
	trave	690	0.050	0.160	0	2
	tsave	690	0.017	0.182	0	4
	trbave	690	0.100	0.230	0	3
	tlbave	690	0.091	0.163	0	1.33
	tsbave	690	0.028	0.110	0	1.33

*Table 2: Summary Statistics for Duration Variables and Main Covariates*

## Econometric Methodology:

In this section, I apply a set of duration modelling techniques to the panel described in the previous section. In the simplest sense, duration models look at the probability of changing ‘state’ in some small window of time, contingent of having remained in the initial state up to the start of this window. In this case, given that the duration variable is ‘peace’, the initial state is the state of peace, whilst the change is to a state of violence. I define the change to occur at each point where a fatality occurs. Peace is, therefore, the duration of the spell between two fatal incidents.

More formally, the length of a spell, in this case the period without a violent attack, is defined as the “realisation of a continuous random variable,  $T$ , with a cumulative distribution function (cdf)  $F(t)$  and probability density function (pdf)  $f(t)$ .” (Jenkins, 2005). The cdf is also known as the failure function, with the survivor function defined:  $S(t) = 1 - F(t)$ ;  $t$  is the time elapsed since entry into this state.

More formally, the failure and survivor functions can be defined:

$$F(t) = \Pr(T \leq t) \quad (1)$$

$$S(t) = 1 - F(t) = \Pr(T > t) \quad (2)$$

The probability density function is then the slope of the failure function, which can be defined:

$$f(t) = \lim_{\Delta t \rightarrow 0} \frac{\Pr(t \leq T \leq t + \Delta t)}{\Delta t} = \frac{\partial F(t)}{\partial t} = -\frac{\partial S(t)}{\partial t} \quad (3)$$

As  $\Delta t$  is an infinitesimally small duration, Equation (3) can be interpreted as the probability of exiting the current state in this tiny window of time. From this, it is possible to define the hazard rate, which is in essence the probability of a state change, contingent on the state having not changed up until that time. In other words, the hazard rate shows the ‘transition intensity’ of moving from one state to another.

The hazard rate is defined:

$$\theta(t) = \frac{f(t)}{1 - F(t)} = \frac{f(t)}{S(t)} \quad (4)$$

The baseline hazard gives the conditional probability of a state change in a particular window of time, when all covariates are set equal to zero. In this case, the baseline hazard essentially implies the underlying strategy of a terrorist organisation. The introduction of covariates then allows us to examine their impact on the baseline hazard, or on the intuitive level, how the underlying strategy of a terrorist organisation is affected by the presence of the covariates.

Furthermore, the baseline hazard also allows inspection of duration dependence. In the literature, a series is said to exhibit positive duration dependence if the probability of exiting a state increases with time. For example, a series would have positive duration dependence if the probability of failure at time  $t+1$ , conditional on having survived until time  $t$  is larger than the probability of failure at time  $s+1$ , conditional on having survived until time  $s$  for all  $s < t$ . A series exhibits negative duration dependence if the probability of failure decreases in time.

Neither economic theory, nor the qualitative literature, provides any strong justification for imposing the structure of duration dependence on this model. As stated before, the baseline hazard functions in this paper proxy terrorist strategy; this distribution of violence is not discussed in the qualitative literature. As such, I use the Cox Proportional Hazards (PH) Model to parametrically estimate duration dependence. As robustness checks, I impose Gamma, Gompertz, Log-Logistic, Log-Normal and Weibull distributions on the baseline hazard and use accelerated failure time (AFT) models.

The PH specification is as follows:

$$\theta(t, X_i) = \theta_0(t) \exp(\beta' X_i) \quad (5)$$

In other words, the probability of exit at a particular time, conditional on having survived in a state until that time, is equal to a multiplicative relationship between the baseline hazard function and the covariates in the model. The advantage of the Cox model is that it allows one to estimate the relationship between the baseline hazard and covariates without making any assumption about the shape of the baseline hazard. Furthermore, it also allows an interpretation of marginal effects.

This is particularly important for this work as the interest is not in the shape of duration dependence itself but on the impact of the covariates. This makes the Cox PH model particularly suited to this study. I use the Breslow method for tied failures in the main analysis for computational ease and derivation of the Schoenfeld residuals, which allows testing of the proportional hazards assumption. I use the Efron, Exact Marginal Likelihood and Exact Partial Likelihood methods as further robustness checks.

In interpreting the output of the Cox model, the hazard rate is compared to 1. If a covariate has a hazard rate that is not significantly different to one, it is shown not to affect the baseline hazard. Looking at the PH specification in Equation (5), this is sensible – the 'transition intensity' is the same as in the baseline hazard if the hazard ratio of a covariate is 1. If it has a value greater than one, it increases the probability of exit, thus decreasing the duration of survival and if it has a value less than one, it has the effect of increasing the duration of survival.

I apply the Cox model to two series. The first series is the duration between each Republican attack and the previous Republican attack within a Westminster parliamentary constituency. The second is the duration between a Loyalist attack and the previous Loyalist attack within a constituency. I generate a series of five covariates of interest for each duration series. These covariates are the average level of violence by each of the involved groups between each pair of attacks in the location and in contiguous regions and are fully defined in Table 1.



Thus, for Republicans, I test the impact of average Loyalist violence in the region (tlave), average Security Forces violence in the region (tsave), and average Republican (trbave), Loyalist (tlbave) and Security Forces (tsbave) in contiguous regions. For Loyalists, I replace average Loyalist violence with average Republican violence (trave) within the region. I define contiguity as having a land border with another constituency.

Given that the baseline hazard effectively measures the underlying strategies employed by the terrorist organisations, any deviation from the baseline is suggestive of how overall strategy is affected by the actions of rival and opposition groups. It should not be unreasonable to expect that the duration between Loyalist attacks, say, will decrease when average Republican violence is high given the theoretical and qualitative literature.

It is plausible to expect that some incidents will be correlated over space and time. As can be seen from Figure 1, deaths attributable to the conflict vary dramatically by year, whilst Figure 2 shows the number of deaths, per constituency, within my time-series, which also varies intensely. Accordingly, different organisations may have operated different strategies, not only at different times but in different locations.

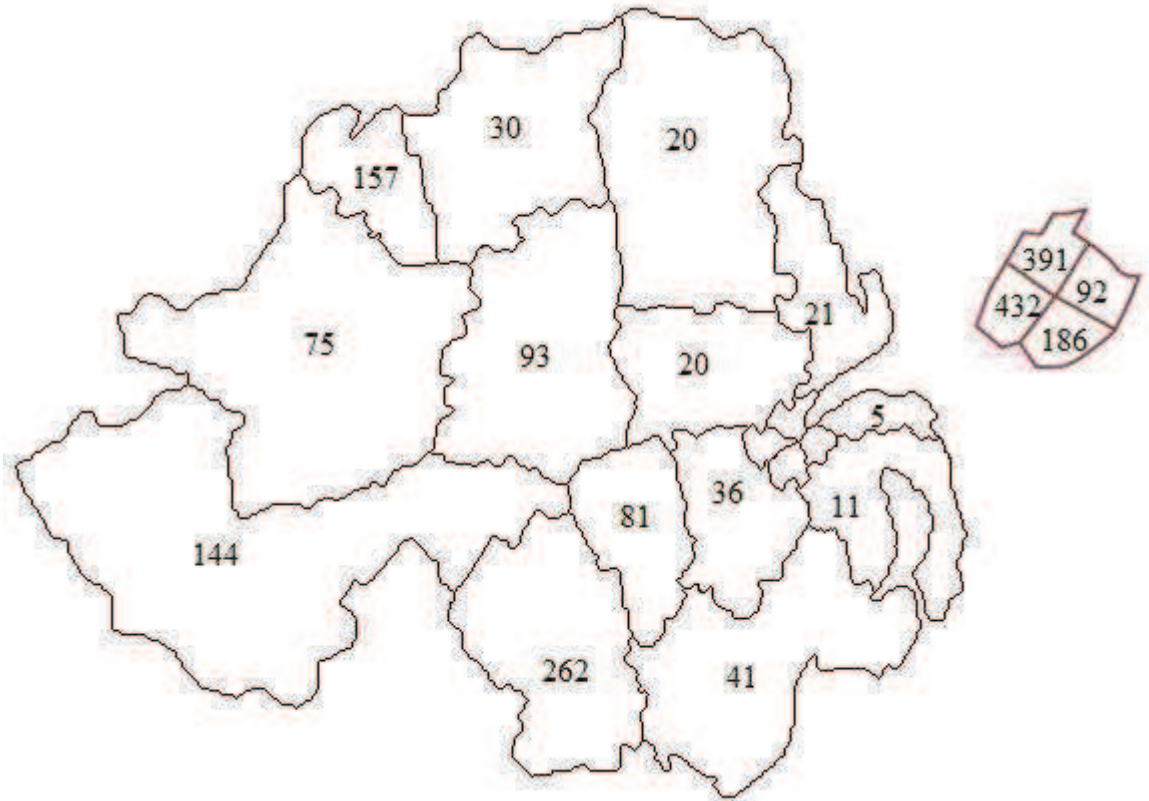


Figure 2: Deaths from the Conflict in Northern Ireland by Westminster Constituency

To overcome these variations, I work with four main modelling specifications. Firstly, I look at a model where I introduce a series of year and location controls. In controlling for location,

I include a dummy variable for each of my geographic units<sup>6</sup>, population (pop) and the percentage of Catholics in the population (split). In controlling for year, I include the log of unemployment (lnunemppc) and the log of GDP per capita (lngdppc) as well as a quadratic time trend. Finally, I introduce dummy variables to account for potential structural breaks in Republican strategy (sunn, sands and dail), which represent the Sunningdale Agreement in 1973, Bobby Sands' election to the Westminster parliament in 1981 and Sinn Féin's recognition of the Dáil Éireann in 1986.

In the second model, I stratify by year and include the location controls. In the third, I stratify by location and include the economic year-controls. Finally, I stratify by both year and location, whilst excluding the location and year controls. Stratification allows a new baseline hazard for each stratum but imposes that the effect of the covariates remains the same on each baseline hazard. In effect, this allows terrorist organisations to adopt different strategies in different locations and / or in different years but imposes that their interaction with rival organisations remains the same across space and time.

I use Stata's inbuilt 'phtest' to test the proportional hazards assumption. The PH assumption that underpins the Cox model states that the hazard rate must stay constant over time. This means that the hazard ratio between a treated and a non-treated group remains constant over time. As the average level of violence, the 'treatment' in this case, changes for each new duration pair, graphical methods of testing this assumption are infeasible. Accordingly, the PH test is used. The PH test is, essentially, a test of a nonzero slope of the Schoenfeld residuals that are derived from the Cox model. The null hypothesis of a zero slope is tantamount to testing that the log hazard-ratio function is constant over time. A rejection of this null hypothesis suggests deviation from the PH assumption.<sup>7</sup>

## **Results:**

The output for the key variables in these models is documented in Tables 3 and 4. Table 3 shows how the hazard ratios for the duration between Republican attacks responds to changes in the key covariates, whilst Table 4 shows the impact on the duration between Loyalist attacks. Full results from the Cox PH analyses can be found in the Appendix. A hazard ratio of 1 suggests that the covariate has no effect on the duration being discussed. Thus, significance is tested as being significantly different to 1.

The results presented in Tables 3 and 4 use the Breslow method for tied failures and present the hazard ratio of each of the covariates of interest in this model. Results from other methods are also presented in the Appendix, as are cluster-robust variance-covariance estimators and the results from the AFT models, which are used as robustness checks. The universal PH tests reject the null in both the Republican and Loyalist models, when I use the single set up that does not involve any stratification. The PH tests do not reject the null in any of the three set ups using stratification. This suggests that stratification is an appropriate tool to use in this situation.

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<sup>6</sup> Abadie (2006) shows that geographic controls are important in terrorism studies and also suggests that they reduce the explanatory power of economic variables.

<sup>7</sup> A full discussion of the duration techniques discussed in this chapter and throughout this thesis can be found in Jenkins (2005)



	No strat. Year and loc controls	Strat by year & loc controls	Strat by loc and year controls	Strat by year and loc
tlave	1.977***	1.751***	2.1289***	1.758***
tsave	1.627***	1.579***	1.6729***	1.526**
trbave	1.486**	1.239	1.382*	1.081
tlbave	2.065**	1.8079**	1.974**	1.590
tsbave	2.243***	2.369***	2.239***	2.537***
log-likelihood	-7302.677	-3706.554	-4625.126	-1590.513

\*\*\*, \*\* and \* show significance at 1%, 5% and 10% respectively

*Table 3: Results for Cox PH model on the duration between Republican attacks*

	No strat. Year and loc controls	Strat by year & loc controls	Strat by loc and year controls	Strat by year and loc
trave	4.302***	4.051***	4.999***	3.868***
tsave	1.487*	1.377	1.566**	1.333
trbave	1.226	1.077	1.198	1.038
tlbave	4.402***	2.623**	4.159***	2.561**
tsbave	0.999	0.973	1.024	0.871
log-likelihood	-3464.351	-1690.007	-2180.681	-799.770

\*\*\*, \*\* and \* show significance at 1%, 5% and 10% respectively

*Table 4: Results for Cox PH model on the duration between Republican attacks*

To interpret the marginal effects of the hazard ratio, I compare the listed hazard ratio to one. A hazard ratio greater than one suggests a positive correlation between the covariate and the duration of interest, whilst a hazard ratio lower than one suggests a negative correlation. Perhaps more importantly, however, it is also possible to interpret the scale of the hazard ratios. For example, referring to the first result presented in Table 3; the effect that the covariate ‘tlave’ has on the hazard ratio of the duration between Republican attacks in a

model with no stratification and year and location controls is 1.977, which is shown to be significant at 1%.

This hazard ratio means that, should the average number of deaths attributable to Loyalist organisations increase by one, the conditional probability of Republicans changing their state from to peace to violence increases 97%. Whilst this is a startling statistic in itself, the hazard ratio of 4.302, which is depicted as the impact of the average level of Republican militancy on Loyalist action, is even stronger. This immediate finding fits strongly with the qualitative literature, which suggested that Loyalist strategy was aimed at interacting directly with the actions of Republicans, whilst Republicans operated a broader strategy and had other goals.

Perhaps the most striking result is that the results show evidence both of Loyalists interacting with Republicans and Republicans interacting with Loyalists. Given the scale of the hazard ratio, however, it appears that interaction plays a significantly larger role in Loyalist strategy than Republican strategy, supporting the qualitative literature that Republicans operated a much broader strategy. This result is surprising, however, as it shows that Republicans did deviate from their own underlying strategy in response to the strategies employed by Loyalists, which was an undetermined outcome, when discussed in the context of the qualitative literature. More importantly, the results show these interactions to be localised within constituencies, representing the local organisation of Loyalist paramilitaries.

This notion is apparently confirmed by the fact that Republicans interact with Security Forces, both within and extra-region, whilst there are no significant findings which suggest Loyalists do the same. This suggests that Republicans react to Security Forces action across a broader geographic spectrum than they do with Loyalists, reflecting their more national / centralised organisational structure, whilst Loyalists, believing themselves, broadly, to be on the same side as Security Forces, opted not to directly interact with Security Forces.

Another interesting feature of these results is the cross-border spillovers of Loyalist violence. Loyalists are shown to positively interact with Loyalist violence in contiguous regions. This outcome fits with the theoretical outcomes from Gang and Epstein (2007), who discuss 'rent-seeking' leaders concerned with their popularity and may suggest that Loyalists competed with each other in order to garner support from their local communities. The dominant PIRA did not suffer the same issues in winning the hearts and minds of the Republican communities in which they operated, which explains why this result only pertains to Loyalist interaction.

Thus far, however, these results do not infer causality. In essence, they show that Republican and Loyalist violence are positively correlated within regions. In an attempt to shed light on the direction of causality, I introduce three 'sub-models' using further restricted aspects of the panel. For these purposes, I split Republican attacks into attacks against 'civilian' and 'military' targets.

Due to the nature of the UDR as an amateur reserve force of the British Army, unique to Northern Ireland and the RUC as a civilian police service, I regard these organisations, as well as civilian society, as 'civilian' targets. British Army and Territorial Army targets are the 'military' targets. I run these new models using the Cox PH model with stratification by region and year and using the Breslow method for tied failure times. The models are as follows:

- Duration between total Republican attacks on military targets, using in-region averages of total Republican attacks on civilian targets ( $trnonarmyave$ ), total Loyalist attacks ( $tlave$ ) and total Security Forces attacks ( $tsave$ ) and bordering total Republican attacks on civilian and military targets ( $trarmyave$  &  $trnonarmyave$ ), total Loyalist attacks ( $tlbave$ ) and total Security Forces attacks ( $tsbave$ ) as covariates.
- Duration between total Republican attacks on military targets, using in-region averages of total Republican attacks on civilian targets ( $trarmyave$ ), total Loyalist attacks ( $tlave$ ) and total Security Forces attacks ( $tsave$ ) and bordering total Republican attacks on civilian and military targets ( $trarmyave$  &  $trnonarmyave$ ), total Loyalist attacks ( $tlbave$ ) and total Security Forces attacks ( $tsbave$ ) as covariates.
- Duration between total Loyalist attacks, using in-region averages of total Republican attacks on civilian and military targets ( $trarmyave$  &  $trnonarmyave$ ) and total Security Forces attacks ( $tsave$ ) and bordering total Republican attacks on civilian and military targets ( $trarmyave$  &  $trnonarmyave$ ), total Loyalist attacks ( $tlbave$ ) and total Security Forces attacks ( $tsbave$ ) as covariates.

These models are designed to pick up on the intuition of both the qualitative and theoretical literature discussed earlier in this paper. This application is particularly strong when dealing with Republican attacks against Security Forces. These attacks seem explicitly strategic, as they target the forces of the incumbent government. As such, there are few strong reasons to suspect that Loyalist violence should affect the frequency of these attacks.

Indeed, the only economic reasons to suggest why such interactions may occur arise in situations where Loyalist violence causes a significant change on Republican strategy. There are two feasible situations in which this could occur; firstly, that Loyalist violence imposes such significant costs on Republicans that they substitute from civilian to military targets, in order to avoid Loyalist reprisals. Perhaps more realistically, however, it may also be possible that Republicans substitute resources that they would prefer to expend attacking military targets to attack civilian targets in retaliation to Loyalist violence.

Despite the results from the baseline models in Tables 5 and 6, there is also little in the qualitative literature to suggest that Republicans' attacks on civilians would be affected by Loyalist violence but the notion is more intuitively tractable, especially in the context of the qualitative literature and the theoretical work of Ferguson (2012), who suggests strategy matching of rivals.

There is strong justification, however, to suggest that there should be definite causality between Republican attacks on civilians and Loyalist violence. The stated aim of Loyalists was to protect Northern Ireland's Protestant community from Republican attacks, which provides a logical and tractable suggestion of causality. Although Loyalists also desired to maintain the union with Great Britain, it is not explicitly clear why it would be expected that Loyalists' attacks should also be correlated with Republican violence against military targets. The results are shown below in Table 5.

The first result of note is the confirmation that Loyalists interact only with Republican attacks against civilian targets. This shows that Republicans can act without Loyalist retaliation, so long as they only attack military targets. The findings of the baseline model of the duration between Loyalist violence are not violated here, suggesting that there is a definite causal relationship between Republican strategic action and Loyalist violence.

Republican strategy is more difficult to interpret. The first thing to note is that the coefficient on 'tlave' is apparently affecting Republican attacks on security forces. The size of the coefficient is extremely large, however, as is the standard error (19.901). This is the result of near multicollinearity relating particularly to the variable 'tsbave' but seems to occur between 'trarmybave', 'trnonarmybave' and 'tsbave'. Inspection of the data reveals that the collinear variables have a tendency to be zero at the same time.

	Republican Duration	Army	Republican Duration	Civilian	Loyalist Duration
trarmybave	-----		0.459 (0.336)		0.942 (0.716)
trnonarmybave	0.738 (0.950)		-----		4.899*** (1.930)
tlave	14.897* (19.901)		1.624** (0.309)		-----
tsave	0.481 (0.631)		2.156** (0.814)		1.354 (0.353)
trarmybave	0.368 (0.629)		1.001 (0.949)		0.457 (0.358)
trnonarmybave	1.075 (0.603)		1.224 (0.634)		1.326 (0.416)
tlbave	0.969 (0.806)		2.336* (1.139)		2.325** (1.044)
tsbave	8.520*** (6.467)		4.086 (2.863)		1.336 (0.812)

\*\*\*, \*\* and \* show significance at 1%, 5% and 10% respectively; Standard errors in parentheses.

*Table 5: Results from Cox PH Model on Restricted Data Subsets*

Most typically and not unexpectedly, this occurs when the duration between attacks is low, meaning reduced time in which attacks can occur between the two attacks generating the duration variable. Given the nature of the data, I assume this is a random correlation. The

easiest way to address this multicollinearity is to drop one of these three variables and discuss the impacts.

The result of dropping each of these variables is reported in Table 6. The results show that when this multicollinearity is accounted for, *tlave* presents a more sensible coefficient and standard error and is no longer significant. These results suggest that a majority of this effect comes from *tsbave*. It is worth noting, however, that when *tlave* is removed, *tsbave* remains strongly significant, suggesting it does play an important role in determining Republican strategy.

I also show that Loyalist violence is a significant driver of Republican attacks on civilians. It is harder, here, to discuss causality. Given the establishment of a definite underlying Republican strategy and using the suggestions of the qualitative literature, it appears that likely that both military and civilians were targeted by Republican strategy. It is the attacks on civilians from this underlying strategy that draws a definite response from Loyalists. Following this retaliation, Republicans may or may not continue to retaliate.

	Dropping <i>trarmybave</i>	Dropping <i>trnonarmybave</i>	Dropping <i>tsbave</i>	Dropping All	Dropping <i>tlave</i>
<i>trnonarmybave</i>	0.623 (0.784)	0.747 (0.956)	6.440* (6.979)	4.919 (5.301)	0.940 (1.158)
<i>tlave</i>	12.128* (15.776)	15.857** (19.715)	9.471* (12.367)	5.459 (5.960)	-----
<i>tsave</i>	0.393 (0.505)	0.462 (0.589)	0.842 (0.999)	0.687 (0.799)	0.608 (0.795)
<i>trarmybave</i>	-----	0.389 (0.644)	0.209 (0.357)	-----	0.910 (1.450)
<i>trnonarmybave</i>	0.981 (0.538)	-----	1.009 (0.568)	-----	1.632 (0.891)
<i>tlbave</i>	0.842 (0.688)	0.957 (0.793)	1.267 (1.018)	1.066 (0.856)	1.205 (0.954)
<i>tsbave</i>	8.857*** (6.675)	8.441*** (6.346)	-----	-----	7.084*** (5.125)

\*\*\*, \*\* and \* show significance at 1%, 5% and 10% respectively; Standard errors in parentheses.

*Table 6: Results from Collinearity Explorations*

Whilst the interpretation of this result is imperfect, it does seem to shed at least a little more light on the direction of causality. The result from the Loyalist analysis, in particular, suggests

that the relationship with Republican violence against civilian targets is more than a random correlation, given that Republican violence against the British Army does not appear to cause Loyalist violence. The sensible hazard ratio on Republican attacks against civilians, however, slightly convolutes this interpretation, as it suggests that causality could run in both directions.

In the immediate context of the Northern Irish conflict and the strategy matching notion of Ferguson (2012), perhaps most importantly, these results show that Loyalists appear to have the impact of increasing Republican militancy. Republicans deviate from their underlying strategies to attack civilians more frequently in response to increase Loyalist militancy but do not, subsequently, appear to reduce their attacks against the Security Forces.

As such, despite a stated aim to wish to end the conflict in Northern Ireland, Loyalists appear to have had the impact of increasing the intensity of the conflict, both through their own military actions and in terms of the response these military actions drew from Republicans. This finding fits with the notions introduced by Ferguson (2012) in a theoretical setting, who shows that violent responses to terrorism can actually increase exacerbate the conflict. Similar logic can be applied to the role of the Security Forces, who also seem to have the impact of intensifying the violence.

### **Concluding Remarks:**

In this paper, I examine the claims of the significant qualitative literature in respect to the conflict in Northern Ireland. By employing models of duration and survival, I confirm that Republicans and Loyalists appear to match strategy. Should one group be engaged in a period of high militancy, this has the effect of reducing the duration between attacks by the other organisation. I show that the presence of significant action from rival organisations causes both Republicans and Loyalists to deviate from their underlying strategies and to attack more regularly than they otherwise would. This deviation can be interpreted as a direct interaction between the groups.

I also uncover evidence of the interaction between rival Loyalist groups that spills over from neighbouring constituencies. Finally, we see a very strong interaction between Republican violence and action by British Security Forces that spills over borders. Coupled with the findings that Loyalists only retaliate locally, we see an indication of the organisational structure of the organisations involved reflected in their strategies. This work, therefore, provides a complete statistical picture of violence and strategic action of Northern Ireland's terrorist organisations.

Models carried out for robustness also show that both Republican and Loyalist violence exhibits negative duration dependence, meaning that the longer the duration since the last attack, the less likely the state is to change. This seems to add further confirmation of the strategy 'matching' of involved organisations. Finally, I also show that the strategies employed by the organisations in Northern Ireland varies by both location and year, this means that, for example, Republicans operated a different strategy in Belfast West in 1972 and 1981 but also that they operated different strategies in Belfast West and Belfast North in

1972. This gives a confirmation of the changing pattern of violence as discussed in the qualitative literature.

Perhaps the most interesting outcome of this research is that it presents evidence that seems to stand in contrast to the characterisation of The Troubles as a triangular conflict. In fact, these results actually imply that the true pattern of violence could be more accurately characterised as two, simultaneous “binary” conflicts that occurred in the same location; the first is the conflict between Republicans and British Security Forces and the second between Loyalists and Republicans.

The results also fit with the theoretical findings of Ferguson (2012) who suggests that the presence of violent adversaries can actually escalate a conflict. These results indicate that Loyalists had the effect of intensifying a conflict they sought to end. This is shown by the fact that Republicans deviated from their underlying strategy to attack civilians more frequently in response to Loyalist militancy. This impact isn't, however, met by a corresponding decrease in the frequency of attacks that Republicans perpetrated against Security Forces, suggesting an overall increase in Republican militancy. Similarly, this work also shows that counter-terrorist violence carried out by the Security Forces had the effect of increasing the intensity of Republican violence, with Republicans deviating from their own strategies to attack more frequently in response to increase violence attributable to the Security Forces.

Therefore, this paper provides a validation for the employment of duration analysis as a means to study the interaction of rival terrorist organisations. Furthermore, it also shows the usefulness of the accurate conflict data of Sutton (1994) in the study of terrorist strategy. The paper is also the first to provide a full statistical overview of the strategies of rival organisations in Northern Ireland and shows how they responded to each other and to Security Forces. These notions of interactions can equally be applied to conflicts in countries such as Colombia and Iraq.

Further study may introduce a third equation that looks at the duration between Security Forces violence, as impacted by the regional and extra-regional attacks of Loyalist and Republican organisations. This, however, is beyond the scope of this paper, which aims to model the interactions and reactions of terrorist organisations, only.



## References:

- Abadie, A. (2006). "Poverty, Political Freedom and the Roots of Terrorism." American Economic Review **96**(2): 50-56
- Atkinson, S., T. Sandler and J. Tschihart (1987). "Terrorism in a Bargaining Framework." Journal of Law and Economics **30**(1): 1-21
- Barros, C., L. Gil-Alana and J. Passos (2006). "The Timing of ETA Attacks." Journal of Policy Modelling **28**(3): 335-346
- Becker, G. (1966). "Crime and Punishment: An Economic Approach" Journal of Political Economy (2): 169-217
- Berribi, C. and D. Lakdawalla (2007). "How Does Terrorism Risk Vary Across Space and Time? An Analysis Based on the Israeli Experience." Defence and Peace Economics **18**(2): 113-131
- Berribi, C. and E. Klor (2006). "On Terrorism and Electoral Outcomes: Theory and Evidence from the Israeli-Palestinian Conflict." Journal of Conflict Resolution (**50**): 899-925
- Besley, T. and H. Mueller (2012). "Measuring the Peace Dividend: The Impact of Violence on House Prices in Northern Ireland." American Economic Review (forthcoming)
- Blomberg, S., R. Engel and R. Sawyer (2010). "On the Duration and Sustainability of Terrorist Organisations" Journal of Conflict Resolution **54**: 303-330
- Brophy-Baermann, B. and J. Conybeare (1994). "Retaliating Against Terrorism: Rational Expectations and the Optimality of Rules Versus Discretion." American Journal of Political Science **38**(1): 196-210
- Darby, J. (1995). "Conflict in Northern Ireland: A Background Essay." Facets of the Conflict in Northern Ireland. S. Dunn, Macmillan Press: London
- Darby, J. (2003). "Northern Ireland: The Background to the Peace Process." CAIN: <http://cain.ulst.ac.uk/events/peace/darby03.htm>
- Dillon, M. (1992). "The Shankill Butchers". Routledge: London
- Enders, W. and T. Sandler (2006). "The Political Economy of Terrorism" Cambridge University Press: Cambridge
- Epstein, G. and I. Gang (2007). "Who Is the Enemy?" Defence and Peace Economics **18**(6): 469-484
- Ferguson, N. (2012). "On the Strategy and Interactions of Domestic Terrorists." Mimeo
- Ferguson, N. and M. Michaelsen (2012). "Human Capital Accumulation Withing the Post-Conflict Generation in Northern Ireland." Mimeo



Fitzduff and O'Hagan (2009). "The Northern Ireland Troubles." Incore Background Paper CAIN: <http://cain.ulst.ac.uk/othelem/incorepaper.htm>

Global Terrorism Database (2011). National Consortium for the Study of Terrorism (START): <http://www.start.umd.edu/gtd>

Honaker, J. (2010) "Unemployment and Violence in Northern Ireland: A Missing Data Model for Ecological Inference." Working Paper

Jaeger, D and M. Paserman (2006). "Israel, the Palestinian Factions and the Cycle of Violence." IZA Discussion Papers 1923

Jenkins, S. (2005) "Survival Analysis":  
<http://www.iser.essex.ac.uk/files/teaching/stephenj/ec968/pdfs/ec968lnotesv6.pdf>

Landes, W. (1978). "An Economic Analysis of US Aircraft Hijackings." Journal of Law and Economics **21**(1): 1-31

Lee, D. (1988). "Free Riding and Paid Riding in the Fight Against Terrorism." American Economic Review **78**(2): 22-26

Micklous, E., T. Sandler, J. Murdock and P. Flemming (2008). "International Terrorism: Attributes of Terrorist Events (ITERATE), 1968-2007: <http://www.handle.net/1902.1/11574>

O'Brien, B. (1995). "The Long War: The IRA and Sinn Fein." Syracuse University Press: New York

Rappoport, D. (1992). "Terrorism" Routledge Encyclopedia of Government and Politics, Volume 2. M. Hawkesworth and M. Kogan, Routledge: London

Rosendorff, B.P. and T. Sandler (2005). "The Political Economy of Transnational Terrorism." The Journal of Conflict Resolution **49**(2): 171-182

Schelling, T. (1960). "The Strategy of Conflict." Harvard University Press: Cambridge

Schelling, T. (1958). "The Strategy of Conflict: Prospectus for a Reorientation of Game Theory." Journal of Conflict Resolution **2**: 203-264

Schneider, F., T. Bruck and D. Meierrieks. "The Economics of Terrorism and Counter-Terrorism: A Survey." Economics of Security Working Paper 45

Sutton, M. (1994). "Bear in Mind these Dead: An Index of Deaths from the Conflict in Ireland." Beyond the Pale Publications: Belfast

Taylor, P. (1996). "Loyalists." Bloomsbury Publishing: London

Thompson, J. (1989). "Deprivation and Political Violence in Northern Ireland, 1922-1985. A Time-Series Analysis." Journal of Conflict Resolution **33**(4): 676-699

White, R. (1993). "On Measuring Political Violence: Northern Ireland, 1969 to 1980." American Sociological Review **58**: 575-585

## Appendix 1: Full List of Baseline Regression Covariates

Covariate Name:	Definition:
tlave	Average deaths per day attributable to Loyalist within a region, between two Republican attacks
trave	Average deaths per day attributable to Republicans with a region, between two Loyalist attacks
tsave	Average deaths per day attributable to Security Forces within a region between two Republican or Loyalist attacks
trbave	Average deaths per day attributable to Republicans contiguous areas, between two Republican or Loyalist attacks
tlbave	Average deaths per day attributable to Loyalists in contiguous areas, between two Republican or Loyalist attacks
tsbave	Average number of deaths, per day, attributable to Security Forces in contiguous areas, between two Republican or Loyalist attacks
lngdppc	Natural logarithm of GDP, measured as Gross Value Added, per capita for the whole of Northern Ireland
lnunemp	Natural logarithm of unemployment for Northern Ireland
year	Annual time trend
year2	Annual time trend = $\text{year}^2/10$
year3	Annual time trend = $\text{year}^3/100$
year4	Annual time trend = $\text{year}^4/1000$
sun	Dummy variable taking value of 1 for attacks that occurred before the Sunningdale Agreement was signed and zero otherwise
sands	Dummy variable taking value of 1 for attacks that occurred between the Sunningdale Agreement and Bobby Sands' election to Westminster and zero otherwise
dail	Dummy variable taking value of 1 for attacks that occurred between Bobby Sands' election and Sinn Fein's recognition of The Dail in 1986 and zero otherwise
pop	Population of electoral constituency
split	Percentage of Catholics in the population of the constituency

east	Regional dummy variable for the East Belfast constituency
north	Regional dummy variable for the North Belfast constituency
south	Regional dummy variable for the South Belfast constituency
west	Regional dummy variable for the West Belfast constituency
eantrim	Regional dummy variable for the East Antrim constituency
ederry	Regional dummy variable for the East Londonderry constituency
fst	Regional dummy variable for the Fermanagh and South Tyrone constituency
foyle	Regional dummy variable for the Foyle constituency
lagan	Regional dummy variable for the Lagan Valley constituency
midulster	Regional dummy variable for the Midulster constituency
newry	Regional dummy variable for the Newry and Armagh constituency
nantrim	Regional dummy variable for the North Antrim constituency
ndown	Regional dummy variable for the North Down constituency
santrim	Regional dummy variable for the South Antrim constituency
sdown	Regional dummy variable for the South Down constituency
strangford	Regional dummy variable for the Strangford constituency
tyrone	Regional dummy variable for the West Tyrone constituency

## Appendix 2: Output from Cox Proportional Hazards Models with Duration between Republican Attacks as Duration Variable

Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Full year and location controls; Unclustered standard errors

```

No. of subjects =          1261                Number of obs   =          1261
No. of failures =          1243
Time at risk    =          160839
Log likelihood   =   -7302.6774
LR chi2(32)     =          745.46
Prob > chi2     =          0.0000
  
```

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
tlave	1.976532	.2308268	5.83	0.000	1.572163	2.484909
tsave	1.626694	.2524189	3.14	0.002	1.200114	2.204903
trbave	1.485565	.2837227	2.07	0.038	1.021701	2.160029
tlbave	2.065119	.6078143	2.46	0.014	1.159888	3.676836
tsbave	2.243208	.4546504	3.99	0.000	1.507818	3.337259
lngdppc	1.601091	.6525185	1.15	0.248	.7202979	3.558934
lnunemppc	2.301009	.9138572	2.10	0.036	1.056475	5.01161
year	3.071627	.810535	4.25	0.000	1.831281	5.152072
year2	.1516859	.0530652	-5.39	0.000	.0764125	.3011107
year3	2.729988	.5262519	5.21	0.000	1.871014	3.983312
year4	.8397612	.0300075	-4.89	0.000	.7829598	.9006834
sun	1.20816	.4456102	0.51	0.608	.586371	2.489295
sands	.8155083	.2561354	-0.65	0.516	.4406386	1.509296
dail	1.021908	.2100074	0.11	0.916	.6831018	1.528756
pop	1.000005	1.91e-06	2.52	0.012	1.000001	1.000009
split	.9813163	.0115216	-1.61	0.108	.9589923	1.00416
east	.3764515	.1533939	-2.40	0.017	.169382	.8366635
north	2.382834	.4393664	4.71	0.000	1.660131	3.420151
south	1.467019	.2940548	1.91	0.056	.9904159	2.17297
west	5.585971	1.558272	6.17	0.000	3.2333	9.650534
eantrim	.0721786	.0495316	-3.83	0.000	.0188054	.2770344

ederry		.5235574	.1401539	-2.42	0.016	.3098144	.8847632
fst		2.573095	.6400469	3.80	0.000	1.58024	4.189756
foyle		4.227478	1.450943	4.20	0.000	2.157419	8.283775
lagan		.3764236	.123468	-2.98	0.003	.1979158	.7159345
midulster		1.848761	.4312168	2.63	0.008	1.170418	2.920253
newry		5.574305	1.394147	6.87	0.000	3.414313	9.100771
nantrim		1.199233	.0528756	4.12	0.000	1.099951	1.307477
ndown		4.64e-21	.	.	.	.	.
santrim		.1035239	.0597679	-3.93	0.000	.0333897	.3209731
sdown		1.040837	.3342477	0.12	0.901	.554668	1.953134
strangford		.0709002	.047205	-3.97	0.000	.0192275	.2614403
tyrone		1.936386	.580093	2.21	0.027	1.076448	3.483299

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Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Full year and location controls; Standard errors clustered by region-years.

No. of subjects = 1261 Number of obs = 1261  
 No. of failures = 1243  
 Time at risk = 160839  
 Wald chi2(32) = 1382.36  
 Log pseudolikelihood = -7302.6774 Prob > chi2 = 0.0000

(Std. Err. adjusted for 271 clusters in yearcon)

```
-----+-----
```

_____+		Robust					
_____+	_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
_____+	tlave	1.976532	.1648341	8.17	0.000	1.678485	2.327504
_____+	tsave	1.626694	.0875349	9.04	0.000	1.463867	1.807634
_____+	trbave	1.485565	.3984562	1.48	0.140	.8781801	2.513042
_____+	tlbave	2.065119	.4827712	3.10	0.002	1.306039	3.265381
_____+	tsbave	2.243208	.2519848	7.19	0.000	1.799915	2.795677
_____+	lngdppc	1.601091	.6070173	1.24	0.214	.7615569	3.366121
_____+	lnunemppc	2.301009	1.132158	1.69	0.090	.8772115	6.035765
_____+	year	3.071627	1.14425	3.01	0.003	1.480051	6.374705
_____+	year2	.1516859	.073365	-3.90	0.000	.0587827	.3914178
_____+	year3	2.729988	.7094479	3.86	0.000	1.640428	4.543226
_____+	year4	.8397612	.0396435	-3.70	0.000	.7655477	.9211691
_____+	sun	1.20816	.5237089	0.44	0.663	.5165931	2.825532
_____+	sands	.8155083	.2843083	-0.58	0.559	.4117907	1.615029
_____+	dail	1.021908	.2167145	0.10	0.919	.6743708	1.548548
_____+	pop	1.000005	1.90e-06	2.54	0.011	1.000001	1.000009
_____+	split	.9813163	.0117408	-1.58	0.115	.9585724	1.0046
_____+	east	.3764515	.150488	-2.44	0.015	.1719641	.8241007
_____+	north	2.382834	.5247014	3.94	0.000	1.5476	3.668841
_____+	south	1.467019	.3290452	1.71	0.088	.9451816	2.276963
_____+	west	5.585971	1.803423	5.33	0.000	2.966808	10.51739
_____+	eantrim	.0721786	.0436485	-4.35	0.000	.0220628	.2361321

ederry		.5235574	.1781301	-1.90	0.057	.2687569	1.019927
fst		2.573095	.7499575	3.24	0.001	1.453328	4.555626
foyle		4.227478	1.618393	3.77	0.000	1.996266	8.952501
lagan		.3764236	.1488959	-2.47	0.014	.1733726	.8172844
midulster		1.848761	.4646493	2.45	0.014	1.129661	3.025613
newry		5.574305	1.602841	5.98	0.000	3.172747	9.793684
nantrim		1.199233	.0558482	3.90	0.000	1.09462	1.313845
ndown		4.64e-21	.	.	.	.	.
santrim		.1035239	.0321916	-7.29	0.000	.0562798	.190427
sdown		1.040837	.3825989	0.11	0.913	.5063971	2.139311
strangford		.0709002	.0247281	-7.59	0.000	.0357908	.1404507
tyrone		1.936386	.6387349	2.00	0.045	1.014414	3.696312

-----

Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839
Log likelihood   =        -3706.554
LR chi2(23)     =          491.34
Prob > chi2     =          0.0000

```

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
tlave	1.750969	.2231454	4.40	0.000	1.363956	2.247794
tsave	1.579474	.2574579	2.80	0.005	1.147532	2.174004
trbave	1.238964	.2671674	0.99	0.320	.8119094	1.890644
tlbave	1.807378	.5378903	1.99	0.047	1.008613	3.23872
tsbave	2.368919	.5184038	3.94	0.000	1.542684	3.637671
pop	1.000005	2.05e-06	2.33	0.020	1.000001	1.000009
split	.9597636	.0160208	-2.46	0.014	.9288714	.9916831
east	.1584494	.0869282	-3.36	0.001	.0540638	.4643817
north	2.14136	.4442112	3.67	0.000	1.42598	3.215629
south	1.250864	.2841671	0.99	0.324	.8013768	1.952464
west	8.24314	2.973672	5.85	0.000	4.064676	16.71704
eantrim	.0237739	.0261409	-3.40	0.001	.0027552	.2051396
ederry	.4380819	.1301044	-2.78	0.005	.2447709	.7840625
fst	3.403458	1.007391	4.14	0.000	1.905342	6.079501
foyle	6.937544	3.188142	4.21	0.000	2.818622	17.07555
lagan	.2209076	.0924977	-3.61	0.000	.0972295	.5019066
midulster	2.152354	.5893751	2.80	0.005	1.258435	3.681261
newry	7.775257	2.478353	6.43	0.000	4.162894	14.52226
nantrim	1.295658	.0753563	4.45	0.000	1.15607	1.452101
ndown	7.08e-21	.	.	.	.	.
santrim	.0615008	.0429396	-3.99	0.000	.0156522	.2416494
sdown	1.588608	.6283888	1.17	0.242	.7316716	3.449193
strangford	.0189459	.0212995	-3.53	0.000	.002092	.1715773



tyrone | 2.886451 1.11354 2.75 0.006 1.355146 6.148116

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Stratification by year with location controls; Standard errors clustered by region-years.

```

No. of subjects      =          1261                Number of obs      =          1261
No. of failures     =          1243
Time at risk        =          160839
Log pseudolikelihood =      -3706.554
Wald chi2(23)       =          735.61
Prob > chi2         =          0.0000
  
```

(Std. Err. adjusted for 271 clusters in yearcon)

```

-----
          |              Robust
          | Haz. Ratio  Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
tlave   |  1.750969   .1851435    5.30  0.000    1.423227    2.154183
tsave   |  1.579474   .0809912    8.91  0.000    1.428451    1.746465
trbave  |  1.238964   .3152269    0.84  0.400    .7524702    2.03999
tlbave  |  1.807378   .4330942    2.47  0.014    1.130002    2.890805
tsbave  |  2.368919   .2695223    7.58  0.000    1.895419    2.960705
pop     |  1.000005   1.91e-06    2.50  0.012    1.000001    1.000009
split   |  .9597636   .0166589   -2.37  0.018    .9276619    .9929761
east    |  .1584494   .0904254   -3.23  0.001    .0517749    .4849111
north   |  2.14136    .4404456    3.70  0.000    1.430903    3.204565
south   |  1.250864   .2812401    1.00  0.319    .8050607    1.94353
west    |  8.24314    3.167273    5.49  0.000    3.88181    17.50455
eantrim |  .0237739   .0252046   -3.53  0.000    .0029763    .1899012
ederry  |  .4380819   .165223    -2.19  0.029    .2091817    .9174593
fst     |  3.403458   1.036827    4.02  0.000    1.873316    6.183437
foyle   |  6.937544    3.35543    4.00  0.000    2.688509    17.90194
lagan   |  .2209076   .1037513   -3.22  0.001    .0879905    .5546072
midulster | 2.152354   .5992884    2.75  0.006    1.247126    3.714643
newry   |  7.775257   2.559092    6.23  0.000    4.079025    14.82085
nantrim |  1.295658   .0740235    4.53  0.000    1.158403    1.449177
ndown   |  7.08e-21    .          .          .          .          .
  
```

santrim		.0615008	.0332986	-5.15	0.000	.021282	.1777258
sdown		1.588608	.6340282	1.16	0.246	.7265986	3.473275
strangford		.0189459	.0132929	-5.65	0.000	.0047896	.0749439
tyrone		2.886451	1.197647	2.55	0.011	1.279922	6.509459

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839
Log likelihood   =        -4625.126
LR chi2(14)     =          267.75
Prob > chi2     =          0.0000
  
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave |  2.128015   .2978582     5.40  0.000     1.617454   2.799738
      tsave |  1.67233    .2787619     3.08  0.002     1.206242   2.318512
      trbave |  1.381751   .2690507     1.66  0.097     .9433791   2.023827
      tlbave |  1.973731   .5748139     2.33  0.020     1.115298   3.492892
      tsbave |  2.239191   .4638074     3.89  0.000     1.492039   3.360485
      lngdppc | 1.085009   .4336222     0.20  0.838     .4957375   2.374733
      lnunemppc | 2.332901   .9397271     2.10  0.035     1.059302   5.137749
      year   |  2.969181   .8004688     4.04  0.000     1.750488   5.03633
      year2  |  .1681566   .0601846    -4.98  0.000     .08338     .3391297
      year3  |  2.647182   .5236534     4.92  0.000     1.7964     3.900898
      year4  |  .8387524   .030754     -4.80  0.000     .7805906   .9012479
      sunn   |  1.158981   .4260795     0.40  0.688     .5638276   2.382352
      sands  |  .8462475   .2682083    -0.53  0.598     .4546937   1.574983
      dail   |  1.020758   .2105933     0.10  0.921     .6812571   1.529449
-----
  
```

Stratified by con

Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Stratification by location with year controls; Standard errors clustered by region-years.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
  
```

Time at risk = 160839

Wald chi2(14) = 616.45

Log pseudolikelihood = -4625.126

Prob > chi2 = 0.0000

(Std. Err. adjusted for 271 clusters in yearcon)

---

		Robust				[95% Conf. Interval]	
_t	Haz. Ratio	Std. Err.	z	P> z			
tlave	2.128015	.3319337	4.84	0.000	1.56748	2.889	
tsave	1.67233	.1113721	7.72	0.000	1.467691	1.905502	
trbave	1.381751	.3794214	1.18	0.239	.8066673	2.36682	
tlbave	1.973731	.4555416	2.95	0.003	1.255535	3.102753	
tsbave	2.239191	.239447	7.54	0.000	1.815801	2.761303	
lngdppc	1.085009	.4392171	0.20	0.840	.4907525	2.398855	
lnunemppc	2.332901	1.108882	1.78	0.075	.9189685	5.922324	
year	2.969181	1.069473	3.02	0.003	1.465687	6.014949	
year2	.1681566	.0779513	-3.85	0.000	.0677841	.4171573	
year3	2.647182	.6600206	3.90	0.000	1.62388	4.315324	
year4	.8387524	.0380948	-3.87	0.000	.7673148	.916841	
sun	1.158981	.4598259	0.37	0.710	.5325516	2.522265	
sands	.8462475	.2797296	-0.51	0.614	.4427211	1.617576	
dail	1.020758	.1916158	0.11	0.913	.7065392	1.474721	

---

Stratified by con

Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Stratification by location and year; Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk   =          160839

LR chi2(5)      =          30.82
Log likelihood = -1590.5128                Prob > chi2     =          0.0000
  
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave |  1.758151   .3334585    2.98  0.003    1.21231   2.549757
      tsave |  1.526316   .2803683    2.30  0.021    1.064848  2.187768
      trbave |  1.080728   .2496465    0.34  0.737    .6872109  1.699584
      tlbave |  1.590392   .5145917    1.43  0.152    .8435037  2.998619
      tsbave |  2.536571   .6440165    3.67  0.000    1.542173  4.172158
-----
  
```

Stratified by yearcon

Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Stratification by location and year; Standard errors clustered by region-years.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk   =          160839

Wald chi2(5)   =          150.32
Log pseudolikelihood = -1590.5128                Prob > chi2     =          0.0000
  
```

(Std. Err. adjusted for 271 clusters in yearcon)

```

-----
      |                Robust
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
  
```

tlave	1.758151	.2892235	3.43	0.001	1.273591	2.427072
tsave	1.526316	.0767194	8.41	0.000	1.383118	1.684339
trbave	1.080728	.2645692	0.32	0.751	.6688621	1.746208
tlbave	1.590392	.4406968	1.67	0.094	.9239249	2.737611
tsbave	2.536571	.5234241	4.51	0.000	1.69278	3.80096

-----  
Stratified by yearcon

Output from Cox proportional hazards model; Duration between Republican attacks; Efron method for tied failures; Full year and location controls; Unclustered standard errors

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839

LR chi2(32)      =          764.84
Log likelihood   = -7283.8675              Prob > chi2      =          0.0000
  
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave |  2.213307   .2627236     6.69  0.000     1.75389    2.793064
      tsave |  1.678371   .2616739     3.32  0.001     1.236452   2.278234
      trbave |  1.483435   .2819243     2.08  0.038     1.022114   2.15297
      tlbave |  2.119172   .6224352     2.56  0.011     1.191666   3.768581
      tsbave |  2.581132    .53223      4.60  0.000     1.723027   3.86659
      lngdppc |  1.586008   .646325     1.13  0.258     .713553    3.525205
      lnunemppc |  2.320471   .9220255     2.12  0.034     1.065016   5.055872
      year   |  3.135243   .8280874     4.33  0.000     1.868314   5.261292
      year2  |  .1477533   .0517279    -5.46  0.000     .0743934   .293454
      year3  |  2.766644   .5336714     5.28  0.000     1.895662   4.037808
      year4  |  .8378252   .0299577    -4.95  0.000     .7811193   .8986476
      sunn   |  1.224848   .4520313     0.55  0.583     .5942178   2.524753
      sands  |  .8168422   .2566998    -0.64  0.520     .4412052   1.512292
      dail   |  1.023922   .2104849     0.11  0.908     .6843645   1.531955
      pop    |  1.000005   1.91e-06     2.53  0.011     1.000001   1.000009
      split  |  .9811839   .0115207    -1.62  0.106     .9588616   1.004026
      east   |  .3722642   .151706     -2.42  0.015     .1674818   .827437
      north  |  2.376027   .4383233     4.69  0.000     1.655099   3.410977
      south  |  1.462053   .2931012     1.89  0.058     .9870082   2.165736
      west   |  5.677294   1.583644     6.23  0.000     3.286279   9.807955
      eantrim |  .071639    .0491581    -3.84  0.000     .0186665   .2749391
      ederry |  .5227353   .1399396    -2.42  0.015     .3093212   .883393
      fst    |  2.591947   .6447149     3.83  0.000     1.591843   4.220384
  
```



foyle		4.279112	1.46872	4.24	0.000	2.183714	8.385164
lagan		.3751957	.1230652	-2.99	0.003	.1972702	.7135991
midulster		1.854245	.4325412	2.65	0.008	1.173834	2.929055
newry		5.651842	1.413516	6.93	0.000	3.461832	9.227288
nantrim		1.199847	.0529077	4.13	0.000	1.100504	1.308157
ndown		3.59e-21	.	.	.	.	.
santrim		.1024131	.0591188	-3.95	0.000	.0330364	.3174814
sdown		1.042854	.3349405	0.13	0.896	.5556958	1.957085
strangford		.0705289	.0469591	-3.98	0.000	.0191261	.2600808
tyrone		1.943023	.5821378	2.22	0.027	1.080076	3.495437

-----

Output from Cox proportional hazards model; Duration between Republican attacks; Efron method for tied failures; Full year and location controls; Standard errors clustered by region-years.

```

No. of subjects      =          1261                Number of obs      =          1261
No. of failures     =          1243
Time at risk        =          160839
                                                              Wald chi2(32)     =          1334.51
Log pseudolikelihood = -7283.8675                Prob > chi2       =          0.0000
  
```

(Std. Err. adjusted for 271 clusters in yearcon)

-----						
	Robust					
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
-----						
tlave	2.213307	.1785678	9.85	0.000	1.889589	2.592483
tsave	1.678371	.0937107	9.27	0.000	1.504394	1.872467
trbave	1.483435	.4176659	1.40	0.161	.8542995	2.575889
tlbave	2.119172	.5138934	3.10	0.002	1.317504	3.408633
tsbave	2.581132	.3007089	8.14	0.000	2.054201	3.243228
lngdppc	1.586008	.6098541	1.20	0.230	.7464487	3.36985
lnunemppc	2.320471	1.154938	1.69	0.091	.8748196	6.155082
year	3.135243	1.20272	2.98	0.003	1.478221	6.649716
year2	.1477533	.0733058	-3.85	0.000	.055876	.3907051
year3	2.766644	.7355599	3.83	0.000	1.643034	4.658647
year4	.8378252	.0403971	-3.67	0.000	.7622744	.920864
sun	1.224848	.5402403	0.46	0.646	.5159947	2.907497
sands	.8168422	.2865349	-0.58	0.564	.4107245	1.624523
dail	1.023922	.2183813	0.11	0.912	.674098	1.555286
pop	1.000005	1.92e-06	2.51	0.012	1.000001	1.000009
split	.9811839	.0118184	-1.58	0.115	.9582914	1.004623
east	.3722642	.1495823	-2.46	0.014	.1693649	.8182369
north	2.376027	.5255586	3.91	0.000	1.540183	3.665477
south	1.462053	.3287008	1.69	0.091	.9410113	2.271598
west	5.677294	1.849725	5.33	0.000	2.997855	10.75158
eantrim	.071639	.0432458	-4.37	0.000	.0219438	.2338772

ederry		.5227353	.1785486	-1.90	0.058	.2676334	1.020995
fst		2.591947	.7591559	3.25	0.001	1.459881	4.601874
foyle		4.279112	1.647911	3.77	0.000	2.011644	9.102407
lagan		.3751957	.1485437	-2.48	0.013	.1726866	.8151866
midulster		1.854245	.4681209	2.45	0.014	1.130508	3.041309
newry		5.651842	1.63375	5.99	0.000	3.207284	9.959618
nantrim		1.199847	.0561425	3.89	0.000	1.094704	1.315087
ndown		3.59e-21	.	.	.	.	.
santrim		.1024131	.0320903	-7.27	0.000	.0554165	.1892659
sdown		1.042854	.3850265	0.11	0.910	.5057731	2.15026
strangford		.0705289	.0247222	-7.57	0.000	.0354812	.1401959
tyrone		1.943023	.6443323	2.00	0.045	1.014397	3.721754

-----

Output from Cox proportional hazards model; Duration between Republican attacks; Efron method for tied failures; Stratification by year with location controls; Unclustered standard errors.

No. of subjects = 1261 Number of obs = 1261  
No. of failures = 1243  
Time at risk = 160839  
LR chi2(23) = 506.49  
Log likelihood = -3687.3008 Prob > chi2 = 0.0000

---

<hr/> _t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
<hr/> -----+						
tlave	1.944359	.2546403	5.08	0.000	1.504181	2.51335
tsave	1.656108	.2725616	3.07	0.002	1.199494	2.286541
trbave	1.232947	.2659664	0.97	0.332	.8078425	1.881751
tlbave	1.891448	.5642407	2.14	0.033	1.054074	3.394045
tsbave	2.664296	.5903626	4.42	0.000	1.725722	4.113336
pop	1.000005	2.05e-06	2.33	0.020	1.000001	1.000009
split	.9592546	.0160115	-2.49	0.013	.9283805	.9911556
east	.1547137	.0848644	-3.40	0.001	.0527987	.4533509
north	2.137291	.4434702	3.66	0.000	1.423136	3.209822
south	1.243734	.2825058	0.96	0.337	.796861	1.941208
west	8.434907	3.044556	5.91	0.000	4.157588	17.11272
eantrim	.023474	.0258127	-3.41	0.001	.0027201	.202579
ederry	.4376228	.1299769	-2.78	0.005	.2445048	.7832719
fst	3.461498	1.024818	4.19	0.000	1.937562	6.184044
foyle	7.106957	3.266958	4.27	0.000	2.886686	17.49717
lagan	.2185394	.0915151	-3.63	0.000	.0961794	.4965662
midulster	2.173753	.5955753	2.83	0.005	1.270557	3.719003
newry	7.953876	2.536316	6.50	0.000	4.257448	14.85964
nantrim	1.297144	.0754352	4.47	0.000	1.157409	1.45375
ndown	6.95e-21	.	.	.	.	.
santrim	.0601498	.0419759	-4.03	0.000	.0153185	.2361841
sdown	1.607687	.6361712	1.20	0.230	.7402461	3.49162
strangford	.0187051	.0210313	-3.54	0.000	.0020649	.1694406

---

tyrone | 2.920495 1.126979 2.78 0.005 1.370848 6.221908

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Republican attacks; Efron method for tied failures; Stratification by year with location controls; Standard errors clustered by region-years.

```

No. of subjects      =          1261                Number of obs      =          1261
No. of failures     =          1243
Time at risk        =          160839

Wald chi2(23)       =          770.76
Log pseudolikelihood = -3687.3008                Prob > chi2        =          0.0000
  
```

(Std. Err. adjusted for 271 clusters in yearcon)

```

-----
          |                Robust
          | Haz. Ratio  Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
tlave | 1.944359   .2028875    6.37  0.000    1.584734    2.385594
tsave | 1.656108   .0889933    9.39  0.000    1.490555    1.840048
trbave | 1.232947   .3328765    0.78  0.438    .7263289    2.092934
tlbave | 1.891448   .4747497    2.54  0.011    1.156497    3.093459
tsbave | 2.664296   .2834089    9.21  0.000    2.162906    3.281914
pop | 1.000005   1.93e-06    2.47  0.013    1.000001    1.000009
split | .9592546   .0166794   -2.39  0.017    .9271145    .992509
east | .1547137   .0884984   -3.26  0.001    .0504231    .4747096
north | 2.137291   .4428066    3.67  0.000    1.424002    3.207869
south | 1.243734   .2810133    0.97  0.334    .7987374    1.936648
west | 8.434907   3.270405    5.50  0.000    3.945028   18.03476
eantrim | .023474   .0248991   -3.54  0.000    .0029357    .1877008
ederry | .4376228   .1663961   -2.17  0.030    .2077064    .9220403
fst | 3.461498   1.05908    4.06  0.000    1.900336    6.305184
foyle | 7.106957   3.45062    4.04  0.000    2.744115   18.40624
lagan | .2185394   .1024292   -3.24  0.001    .0872112    .5476297
midulster | 2.173753   .6088005    2.77  0.006    1.255496    3.763616
newry | 7.953876   2.633083    6.26  0.000    4.157131   15.21822
nantrim | 1.297144   .0743664    4.54  0.000    1.15928    1.451404
ndown | 6.95e-21   .          .          .          .          .
  
```

santrim		.0601498	.0325199	-5.20	0.000	.0208465	.1735544
sdown		1.607687	.6438596	1.19	0.236	.7333401	3.524501
strangford		.0187051	.0131426	-5.66	0.000	.0047194	.0741367
tyrone		2.920495	1.217545	2.57	0.010	1.29001	6.611799

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Republican attacks; Efron method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839

LR chi2(14)     =          280.80
Log likelihood  = -4607.2396                Prob > chi2     =          0.0000
  
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave |  2.368582   .3426128    5.96  0.000    1.783869    3.14495
      tsave |  1.760453   .2993425    3.33  0.001    1.261504    2.456747
      trbave |  1.384791   .2702103    1.67  0.095    .9446956    2.02991
      tlbave |  2.037589   .5919116    2.45  0.014    1.153044    3.600703
      tsbave |  2.53996    .5326128    4.45  0.000    1.683975    3.831053
      lngdppc | 1.065678   .425863     0.16  0.874    .4869357    2.332279
      lnunemppc | 2.344484   .9442071    2.12  0.034    1.064726    5.162456
      year   |  3.038633   .8197836    4.12  0.000    1.790751     5.1561
      year2  |  .1636022   .058584    -5.06  0.000    .0810931    .3300611
      year3  |  2.684955   .5313367    4.99  0.000    1.821752    3.957171
      year4  |  .8366208   .0306872   -4.86  0.000    .7785861    .8989813
      sunn   |  1.18131    .43435     0.45  0.650    .5746319    2.428499
      sands  |  .8500913   .269458    -0.51  0.608    .456726    1.582251
      dail   |  1.023817   .2112204    0.11  0.909    .6833039    1.53402
-----
  
```

Stratified by con

Output from Cox proportional hazards model; Duration between Republican attacks; Efron method for tied failures; Stratification by location with year controls; Standard errors clustered by region-years.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
  
```



Time at risk = 160839

Wald chi2(14) = 626.52

Log pseudolikelihood = -4607.2396

Prob > chi2 = 0.0000

(Std. Err. adjusted for 271 clusters in yearcon)

		Robust				
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
tlave	2.368582	.3723703	5.48	0.000	1.74048	3.223352
tsave	1.760453	.1101583	9.04	0.000	1.557262	1.990157
trbave	1.384791	.4037749	1.12	0.264	.7819744	2.452314
tlbave	2.037589	.5029012	2.88	0.004	1.256117	3.305242
tsbave	2.53996	.2863343	8.27	0.000	2.03643	3.167994
lngdppc	1.065678	.4377291	0.15	0.877	.476424	2.383738
lnunemppc	2.344484	1.126208	1.77	0.076	.9144494	6.010834
year	3.038633	1.129794	2.99	0.003	1.466199	6.297433
year2	.1636022	.0779803	-3.80	0.000	.0642787	.4164002
year3	2.684955	.6865099	3.86	0.000	1.626654	4.431786
year4	.8366208	.0389066	-3.84	0.000	.7637372	.9164596
sun	1.18131	.477969	0.41	0.680	.5345149	2.610766
sands	.8500913	.2826182	-0.49	0.625	.4430761	1.630996
dail	1.023817	.1935036	0.12	0.901	.7068768	1.482864

Stratified by con

Output from Cox proportional hazards model; Duration between Republican attacks; Efron method for tied failures; Stratification by location and year; Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk   =          160839

LR chi2(5)      =          37.13
Log likelihood = -1574.4971                Prob > chi2     =          0.0000
  
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave |   1.902724   .3669473    3.34   0.001    1.303823   2.776727
      tsave |   1.60909    .3003046    2.55   0.011    1.116144   2.319744
      trbave |   1.072582   .2491158    0.30   0.763    .6803498   1.690943
      tlbave |   1.604602   .525905    1.44   0.149    .844088    3.050331
      tsbave |   3.008598   .7919895    4.18   0.000    1.795941   5.040065
  
```

Stratified by yearcon

Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Stratification by location and year; Standard errors clustered by region-years.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk   =          160839

Wald chi2(5)   =          226.62
Log pseudolikelihood = -1574.4971                Prob > chi2     =          0.0000
  
```

(Std. Err. adjusted for 271 clusters in yearcon)

```

-----
      |              Robust
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave |   1.902724   .3206772    3.82   0.000    1.36747    2.647487
  
```

tsave		1.60909	.0777846	9.84	0.000	1.463634	1.769
trbave		1.072582	.2776413	0.27	0.787	.6457946	1.781422
tlbave		1.604602	.4651996	1.63	0.103	.9090556	2.832332
tsbave		3.008598	.5749892	5.76	0.000	2.068647	4.375642

-----  
Stratified by yearcon

Output from Cox proportional hazards model; Duration between Republican attacks; Exact marginal likelihood method for tied failures; Full year and location controls; Unclustered standard errors

```

No. of subjects =          1261           Number of obs   =          1261
No. of failures =          1243
Time at risk    =          160839
Log likelihood   =   -5528.4045           LR chi2(32)      =          772.33
                                           Prob > chi2     =          0.0000
    
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
      tlave | 4.647962   1.396268     5.11   0.000    2.579634    8.374659
      tsave | 1.626627   .2705823     2.92   0.003    1.17407    2.253624
      trbave | 1.267085   .2469616     1.21   0.225    .8647727    1.856562
      tlbave | 2.015421   .5907015     2.39   0.017    1.134714    3.579688
      tsbave | 2.962647   .7031564     4.58   0.000    1.86061    4.717421
      lngdppc | 1.55382    .6337237     1.08   0.280    .6986173    3.455909
      lnunemppc | 2.363656   .938944     2.17   0.030    1.085053    5.148936
      year   | 3.253284   .8620993     4.45   0.000    1.935348    5.46871
      year2  | .141428    .0495974    -5.58   0.000    .0711259    .2812181
      year3  | 2.828057   .5462281     5.38   0.000    1.936787    4.129471
      year4  | .8345753   .0298814    -5.05   0.000    .7780166    .8952455
      sunn   | 1.247093   .4602353     0.60   0.550    .6050149    2.570584
      sands  | .8187176   .2572962    -0.64   0.524    .4422107    1.51579
      dail   | 1.023777   .2104107     0.11   0.909    .684326    1.531608
      pop    | 1.000005   1.91e-06     2.44   0.015    1.000001    1.000008
      split  | .9817861   .0115262    -1.57   0.117    .9594531    1.004639
      east   | .3791543   .1544881    -2.38   0.017    .1706043    .8426395
      north  | 2.288379   .4243552     4.46   0.000    1.591043    3.291351
      south  | 1.470661   .2947657     1.92   0.054    .9929    2.178309
      west   | 5.536582   1.545296     6.13   0.000    3.203804    9.56792
      eantrim | .0718488   .0492767    -3.84   0.000    .018734    .2755543
      ederry | .5195186   .1390927    -2.45   0.014    .3074013    .8780041
      fst    | 2.582427   .6421017     3.82   0.000    1.586291    4.2041
    
```

foyle		4.19945	1.441542	4.18	0.000	2.142896	8.229697
lagan		.3794258	.1244253	-2.96	0.003	.1995225	.7215425
midulster		1.832563	.4276227	2.60	0.009	1.159936	2.895237
newry		5.57332	1.394264	6.87	0.000	3.413273	9.100327
nantrim		1.200399	.0529224	4.14	0.000	1.101028	1.308738
ndown		3.59e-21	.	.	.	.	.
santrim		.1048215	.0605146	-3.91	0.000	.0338097	.3249815
sdown		1.028724	.3304048	0.09	0.930	.5481642	1.930577
strangford		.0710454	.047263	-3.98	0.000	.0192874	.2616968
tyrone		1.918846	.5749155	2.18	0.030	1.066614	3.452018

-----

Output from Cox proportional hazards model; Duration between Republican attacks; Exact marginal likelihood method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839

LR chi2(23)      =          515.00
Log likelihood   = -3344.3204                Prob > chi2      =          0.0000

```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave |  4.417761   1.364494     4.81   0.000     2.411545     8.09299
      tsave |  1.622915   .2879388     2.73   0.006     1.146238     2.297823
      trbave |  1.058878   .2294647     0.26   0.792     .6924455     1.61922
      tlbave |  1.801095   .5488339     1.93   0.053     .9911894     3.27278
      tsbave |  3.004227   .7425561     4.45   0.000     1.85072     4.876683
      pop    |  1.000005   2.05e-06     2.23   0.026     1.000001     1.000009
      split  |  .9605615   .0160355    -2.41   0.016     .9296412     .9925102
      east   |  .1605117   .0880677    -3.33   0.001     .054762     .4704722
      north  |  2.061514   .4293231     3.47   0.001     1.370624     3.100662
      south  |  1.257398   .2856708     1.01   0.313     .8055389     1.962723
      west   |  8.104255   2.927605     5.79   0.000     3.992295    16.45143
      eantrim | .0236438   .0259978    -3.41   0.001     .0027401     .2040162
      ederry  | .4339945   .1290411    -2.81   0.005     .2423224     .7772756
      fst     |  3.423229   1.013382     4.16   0.000     1.916257     6.115304
      foyle   |  6.842997   3.14627     4.18   0.000     2.778954    16.85044
      lagan   | .2223727   .0931828    -3.59   0.000     .0978126     .5055547
      midulster | 2.128581   .5834348     2.76   0.006     1.243883     3.642511
      newry   |  7.744909   2.470739     6.42   0.000     4.144485    14.47312
      nantrim |  1.296787   .0754319     4.47   0.000     1.15706     1.453389
      ndown   |  5.63e-21   .          .          .          .          .
      santrim | .0615883   .0429849    -3.99   0.000     .0156824     .2418721
      sdown   |  1.562228   .618365     1.13   0.260     .7191506     3.393667
      strangford | .0192813   .0216656    -3.51   0.000     .0021314     .1744205

```

tyrone | 2.839266 1.095821 2.70 0.007 1.332548 6.049636

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Republican attacks; Exact marginal likelihood method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839

LR chi2(14)      =          287.44
Log likelihood   = -4044.1238              Prob > chi2      =          0.0000

```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave |  4.627201   1.446778     4.90   0.000     2.507118   8.540081
      tsave |  1.712886   .3180278     2.90   0.004     1.190385   2.464729
      trbave |  1.208599   .2426078     0.94   0.345     .8154859   1.791216
      tlbave |  1.961391   .5709223     2.31   0.021     1.108654   3.470022
      tsbave |  2.934062   .7113857     4.44   0.000     1.82427    4.718996
      lngdppc |  1.056024   .4222505     0.14   0.892     .4823046   2.312204
      lnunemppc |  2.369154   .9538548     2.14   0.032     1.076187   5.215537
      year   |  3.131407   .8473666     4.22   0.000     1.842477   5.322023
      year2  |  .1579482   .0566547    -5.15   0.000     .078198    .3190316
      year3  |  2.730832   .5410809     5.07   0.000     1.851995   4.026708
      year4  |  .8342321   .0306338    -4.94   0.000     .7763006   .8964866
      sunn   |  1.200278   .4414522     0.50   0.620     .5837364   2.468008
      sands  |  .8509261   .269752     -0.51   0.611     .4571435   1.583912
      dail   |  1.023292   .2111388     0.11   0.911     .6829185   1.533312
-----

```

Stratified by con

Output from Cox proportional hazards model; Duration between Republican attacks; Exact marginal likelihood method for tied failures; Stratification by location and year; Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839

```



LR chi2(5) = 47.34  
 Prob > chi2 = 0.0000  
 Log likelihood = -1479.1372

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave |    5.46905   2.483961    3.74   0.000    2.245479    13.32033
      tsave |    1.557961  .3314794    2.08   0.037    1.026717    2.364081
      trbave |    .8956718  .2090401   -0.47   0.637    .5668755    1.415175
      tlbave |    1.445564  .4918667    1.08   0.279    .7420071    2.81622
      tsbave |    4.671186  1.82422    3.95   0.000    2.172755   10.04254
-----
  
```

Stratified by yearcon

Output from Cox proportional hazards model; Duration between Republican attacks; Exact partial likelihood method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```

No. of subjects =          1261                Number of obs   =          1261
No. of failures =          1243
Time at risk    =          160839

LR chi2(23)      =          515.45
Log likelihood   =   -3344.0961              Prob > chi2     =          0.0000

```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      tlave | 5.403087   1.997021     4.56  0.000     2.618373    11.14942
      tsave | 1.653632   .3518484     2.36  0.018     1.089748     2.509295
      trbave | 1.085862   .2652669     0.34  0.736     .6727185     1.752734
      tlbave | 1.813113   .5990621     1.80  0.072     .9488187     3.464705
      tsbave | 3.478055   1.062444     4.08  0.000     1.911258     6.329271
      pop    | 1.000005   2.07e-06     2.18  0.030           1     1.000009
      split | .9611857   .0161716    -2.35  0.019     .9300069     .9934098
      east   | .1614666   .08922      -3.30  0.001     .0546692     .4768949
      north  | 2.06882    .4339728     3.47  0.001     1.371411     3.120885
      south  | 1.257171   .2877804     1.00  0.317     .8026849     1.968992
      west   | 8.085343   2.944701     5.74  0.000     3.959941    16.50852
      eantrim | .0238274   .0262184    -3.40  0.001     .0027571     .205918
      ederry | .4344693   .1296407    -2.79  0.005     .2420863     .7797367
      fst    | 3.414908   1.0176       4.12  0.000     1.904284     6.123875
      foyle   | 6.783657   3.140956     4.13  0.000     2.737425    16.81069
      lagan   | .2237824   .0942939    -3.55  0.000     .0979851     .5110836
      midulster | 2.121828   .5848166     2.73  0.006     1.236239     3.641813
      newry   | 7.776603   2.494705     6.39  0.000     4.14694     14.58318
      nantrim | 1.295648   .0755987     4.44  0.000     1.155636     1.452624
      ndown   | 9.41e-21           .           .           .           .
      santrim | .0616694   .0431332    -3.98  0.000     .0156573     .2428974
      sdown   | 1.549932   .6166857     1.10  0.271     .7106196     3.380555
      strangford | .0196152   .022065     -3.49  0.000     .0021631     .1778698

```

tyrone | 2.817761 1.094679 2.67 0.008 1.315887 6.033783

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Republican attacks; Exact partial likelihood method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```
No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839

LR chi2(14)      =          288.27
Log likelihood   = -4043.7063          Prob > chi2      =          0.0000
```

```
-----
```

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
tlave	5.404763	1.888788	4.83	0.000	2.724642	10.72121
tsave	1.755351	.3833574	2.58	0.010	1.144108	2.693153
trbave	1.31609	.3076847	1.17	0.240	.8323116	2.081064
tlbave	2.035548	.6434575	2.25	0.025	1.095489	3.78229
tsbave	3.357001	.9686635	4.20	0.000	1.90694	5.909706
lngdppc	1.074394	.4325264	0.18	0.859	.4880783	2.365037
lnunemppc	2.360581	.9610025	2.11	0.035	1.062897	5.242599
year	3.095645	.8509133	4.11	0.000	1.806249	5.305479
year2	.1602401	.0583305	-5.03	0.000	.0785086	.3270582
year3	2.708723	.544047	4.96	0.000	1.827262	4.015396
year4	.8355224	.0310744	-4.83	0.000	.7767846	.8987017
sun	1.19007	.4424126	0.47	0.640	.5742954	2.466094
sands	.8476108	.270522	-0.52	0.604	.453449	1.584399
dail	1.020396	.2119214	0.10	0.923	.6791826	1.533031

```
-----
```

Stratified by con

Output from Cox proportional hazards model; Duration between Republican attacks; Exact partial likelihood method for tied failures; Stratification by location and year; Unclustered standard errors.

```
No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839

LR chi2(5)      =          47.77
```

Log likelihood = -1478.9261

Prob > chi2 = 0.0000

---

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
tlave	6.457472	3.122563	3.86	0.000	2.502979	16.65973
tsave	1.579734	.3815255	1.89	0.058	.9840296	2.536061
trbave	.9277626	.2392505	-0.29	0.771	.5596673	1.537956
tlbave	1.520503	.5435357	1.17	0.241	.7545834	3.063847
tsbave	5.288283	2.211876	3.98	0.000	2.329653	12.00433

---

Stratified by yearcon

## Appendix 3: Output from Cox Proportional Hazards Models with Duration between Loyalist Attacks as Duration Variable

Output from Cox proportional hazards model; Duration between Loyalist attacks; Breslow method for tied failures; Full year and location controls; Unclustered standard errors

```

No. of subjects =          690                Number of obs =          683
No. of failures =          672
Time at risk    =          153097
LR chi2(33)     =          528.01
Log likelihood  = -3464.3512                Prob > chi2     =          0.0000
  
```

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
trave	4.30158	1.22299	5.13	0.000	2.463889	7.50991
tsave	1.487064	.3303192	1.79	0.074	.9621736	2.298294
trbave	1.226039	.2633451	0.95	0.343	.8047699	1.867828
tlbave	4.401734	1.773844	3.68	0.000	1.998021	9.697226
tsbave	.9986294	.5200663	-0.00	0.998	.3598451	2.771362
lngdppc	1.877729	.8755912	1.35	0.177	.7528613	4.68329
lnunemppc	2.997707	1.559425	2.11	0.035	1.081407	8.309774
year	7.96721	3.563899	4.64	0.000	3.315478	19.14549
year2	.0317646	.0196589	-5.57	0.000	.0094436	.1068432
year3	6.330666	2.155085	5.42	0.000	3.248505	12.33716
year4	.7266092	.045424	-5.11	0.000	.6428179	.8213226
sun	.6136675	.3869361	-0.77	0.439	.1783301	2.111746
sands	.6269479	.3683509	-0.79	0.427	.1982096	1.983071
dail	1.10129	.412949	0.26	0.797	.5281146	2.296547
pop	.9999979	3.61e-06	-0.60	0.552	.9999908	1.000005
split	1.002683	.011966	0.22	0.822	.9795024	1.026412
east	1.674093	.6887527	1.25	0.210	.747446	3.749554
north	4.357684	.8941149	7.17	0.000	2.914776	6.514878
south	2.110602	.4731807	3.33	0.001	1.360108	3.27521
west	2.67864	.8678309	3.04	0.002	1.419516	5.054617
eantrim	.5665775	.2231391	-1.44	0.149	.2618332	1.22601

ederry		.3120892	.1277777	-2.84	0.004	.1398859	.6962794
fst		.7162925	.2491648	-0.96	0.337	.3622405	1.416393
foyle		.1444492	.1016339	-2.75	0.006	.0363759	.5736106
lagan		.6446846	.2325259	-1.22	0.224	.3179322	1.307254
midulster		.6667393	.2151946	-1.26	0.209	.3541808	1.255125
newry		.6551523	.2355251	-1.18	0.239	.3238457	1.325398
nantrim		.3879604	.1553496	-2.36	0.018	.176988	.8504154
ndown		.3078949	.2119579	-1.71	0.087	.0798779	1.186802
santrim		.5110949	.1963523	-1.75	0.081	.2407061	1.085215
sdown		.3472097	.1575372	-2.33	0.020	.1426861	.8448938
strangford		.2869535	.1336551	-2.68	0.007	.1151715	.714954
tyrone		.2759465	.1461464	-2.43	0.015	.0977266	.7791789

-----

Output from Cox proportional hazards model; Duration between Loyalist attacks; Breslow method for tied failures; Full year and location controls; Standard errors clustered by region-years.

No. of subjects = 690 Number of obs = 683  
 No. of failures = 672  
 Time at risk = 153097  
 Wald chi2(33) = 1053.40  
 Log pseudolikelihood = -3464.3512 Prob > chi2 = 0.0000

(Std. Err. adjusted for 195 clusters in yearcon)

-----						
	Robust					
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
-----						
trave	4.30158	.611329	10.27	0.000	3.255798	5.683272
tsave	1.487064	.1353164	4.36	0.000	1.244153	1.7774
trbave	1.226039	.2714383	0.92	0.357	.794425	1.89215
tlbave	4.401734	2.093704	3.12	0.002	1.73279	11.18154
tsbave	.9986294	.6321528	-0.00	0.998	.2887862	3.453284
lngdppc	1.877729	.8724597	1.36	0.175	.7553261	4.668006
lnunemppc	2.997707	1.53126	2.15	0.032	1.101506	8.15815
year	7.96721	3.638592	4.54	0.000	3.255113	19.50053
year2	.0317646	.0205835	-5.32	0.000	.00892	.1131156
year3	6.330666	2.220092	5.26	0.000	3.183779	12.58798
year4	.7266092	.0457471	-5.07	0.000	.642258	.8220387
sun	.6136675	.357464	-0.84	0.402	.1959316	1.922037
sands	.6269479	.3143926	-0.93	0.352	.23463	1.675249
dail	1.10129	.3253569	0.33	0.744	.6172047	1.965054
pop	.9999979	3.55e-06	-0.60	0.545	.9999909	1.000005
split	1.002683	.0117996	0.23	0.820	.979821	1.026079
east	1.674093	.7026068	1.23	0.220	.7354203	3.810867
north	4.357684	.8723687	7.35	0.000	2.943425	6.451468
south	2.110602	.4695657	3.36	0.001	1.364682	3.264234
west	2.67864	.8847547	2.98	0.003	1.402046	5.117598
eantrim	.5665775	.2149928	-1.50	0.134	.2693168	1.191942



ederry		.3120892	.1214046	-2.99	0.003	.1455982	.668962
fst		.7162925	.212532	-1.12	0.261	.4004325	1.281302
foyle		.1444492	.0794184	-3.52	0.000	.0491726	.4243333
lagan		.6446846	.2415714	-1.17	0.241	.3093081	1.343703
midulster		.6667393	.2227385	-1.21	0.225	.3464128	1.28327
newry		.6551523	.2738114	-1.01	0.312	.2887985	1.486242
nantrim		.3879604	.1475405	-2.49	0.013	.18411	.8175185
ndown		.3078949	.1214856	-2.99	0.003	.142084	.6672055
santrim		.5110949	.1963725	-1.75	0.081	.2406875	1.085299
sdown		.3472097	.1214003	-3.03	0.002	.1749739	.6889862
strangford		.2869535	.0972216	-3.68	0.000	.1477131	.5574474
tyrone		.2759465	.109555	-3.24	0.001	.1267316	.6008486

---

Output from Cox proportional hazards model; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by year with location controls; Unclustered standard errors.

No. of subjects = 690                              Number of obs = 683  
No. of failures = 672  
Time at risk = 161711  
LR chi2(24) = 357.33  
Log likelihood = -1690.0072                      Prob > chi2 = 0.0000

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
trave	4.050383	1.334866	4.24	0.000	2.123096	7.727207
tsave	1.377458	.342546	1.29	0.198	.8460615	2.242617
trbave	1.076596	.2597301	0.31	0.760	.6709641	1.727453
tlbave	2.623422	1.105576	2.29	0.022	1.148551	5.992196
tsbave	.9726027	.5342989	-0.05	0.960	.3313815	2.854583
pop	1	4.68e-06	0.01	0.991	.9999909	1.000009
split	.9899882	.0148392	-0.67	0.502	.961327	1.019504
east	1.221782	.62242	0.39	0.694	.4501533	3.316092
north	4.019656	.916519	6.10	0.000	2.571029	6.2845
south	1.842726	.4672543	2.41	0.016	1.121048	3.028986
west	3.157191	1.210367	3.00	0.003	1.489283	6.693058
eantrim	.5408894	.2404915	-1.38	0.167	.2262795	1.29292
ederry	.2528969	.1250291	-2.78	0.005	.0959666	.6664491
fst	.6896863	.2707101	-0.95	0.344	.3195544	1.488533
foyle	.1823813	.1449261	-2.14	0.032	.0384227	.8657101
lagan	.4839625	.2074976	-1.69	0.091	.2088629	1.121404
midulster	.9791205	.3490345	-0.06	0.953	.4868575	1.969112
newry	.8219089	.338298	-0.48	0.634	.3668334	1.841529
nantrim	.1721295	.0938787	-3.23	0.001	.0591036	.5012989
ndown	.1001369	.0890693	-2.59	0.010	.0175175	.5724228
santrim	.4873966	.2054744	-1.70	0.088	.2133226	1.113597
sdown	.3103503	.1687439	-2.15	0.031	.1069144	.9008825
strangford	.2278802	.1204753	-2.80	0.005	.0808528	.642271
tyrone	.3346991	.222449	-1.65	0.100	.0909757	1.231356

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Republican attacks; Breslow method for tied failures; Stratification by year with location controls; Standard errors clustered by region-years.

```

No. of subjects      =          690                Number of obs      =          683
No. of failures     =          672
Time at risk        =          161711

Wald chi2(24)       =          867.82
Log pseudolikelihood = -1690.0072                Prob > chi2        =          0.0000

```

(Std. Err. adjusted for 195 clusters in yearcon)

```

-----
          |                Robust
          | Haz. Ratio  Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
trave | 4.050383   1.083923    5.23  0.000    2.39721    6.843625
tsave | 1.377458   .1245896    3.54  0.000    1.153688    1.644632
trbave | 1.076596   .2252778    0.35  0.724    .7143955    1.622433
tlbave | 2.623422   1.286468    1.97  0.049    1.003363    6.859278
tsbave | .9726027   .6786856   -0.04  0.968    .2477217    3.818624
pop |          1  4.31e-06    0.01  0.990    .9999916    1.000009
split | .9899882   .0128925   -0.77  0.440    .965039    1.015582
east | 1.221782   .5974237    0.41  0.682    .4685707    3.185752
north | 4.019656   .9596612    5.83  0.000    2.51751    6.418101
south | 1.842726   .4769494    2.36  0.018    1.109547    3.060382
west | 3.157191   1.067915    3.40  0.001    1.626984    6.126584
eantrim | .5408894   .2111605   -1.57  0.115    .2516539    1.162554
ederry | .2528969   .1355412   -2.57  0.010    .0884582    .7230174
fst | .6896863   .216571    -1.18  0.237    .3727027    1.276264
foyle | .1823813   .1034697   -3.00  0.003    .059989    .554484
lagan | .4839625   .2126168   -1.65  0.099    .2045774    1.144895
midulster | .9791205   .3042353   -0.07  0.946    .5325351    1.800214
newry | .8219089   .3579957   -0.45  0.653    .3500008    1.930093
nantrim | .1721295   .1096322   -2.76  0.006    .0493981    .5997914
ndown | .1001369   .0804449   -2.86  0.004    .0207387    .4835107

```

santrim	.4873966	.1791341	-1.96	0.051	.2371582	1.001675
sdown	.3103503	.1331792	-2.73	0.006	.1338381	.7196552
strangford	.2278802	.0760061	-4.43	0.000	.1185225	.4381396
tyrone	.3346991	.1564525	-2.34	0.019	.1338958	.8366467

-----  
Stratified by year

Output from Cox proportional hazards model; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```
No. of subjects =          690                Number of obs =          683
No. of failures =          672
Time at risk   =          153097
Log likelihood = -2180.6814                LR chi2(14)   =          229.83
                                                Prob > chi2   =          0.0000
```

```
-----+-----
```

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
trave	4.999327	1.46087	5.51	0.000	2.819546	8.86429
tsave	1.565773	.3567959	1.97	0.049	1.00176	2.447338
trbave	1.198252	.2647509	0.82	0.413	.7771009	1.847648
tlbave	4.159486	1.69866	3.49	0.000	1.868203	9.260943
tsbave	1.023622	.5414718	0.04	0.965	.3629726	2.886723
lngdppc	1.296731	.5845815	0.58	0.564	.5359427	3.137484
lnunemppc	2.845773	1.517518	1.96	0.050	1.000678	8.092938
year	8.16687	3.81899	4.49	0.000	3.266006	20.42182
year2	.0346042	.022285	-5.22	0.000	.0097939	.1222646
year3	5.975643	2.114717	5.05	0.000	2.986437	11.95683
year4	.7342507	.0477506	-4.75	0.000	.6463802	.8340664
sun	.5652426	.3645899	-0.88	0.376	.1596604	2.001118
sands	.5668448	.3475925	-0.93	0.355	.1704129	1.885497
dail	.938654	.368694	-0.16	0.872	.4346723	2.026978

```
-----+-----
```

Stratified by con

Output from Cox proportional hazards model; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by location with year controls; Standard errors clustered by region-years.

```
No. of subjects =          690                Number of obs =          683
No. of failures =          672
```

Time at risk = 153097

Wald chi2(14) = 452.64

Log pseudolikelihood = -2180.6814

Prob > chi2 = 0.0000

(Std. Err. adjusted for 195 clusters in yearcon)

---

		Robust				
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
trave	4.999327	.8892711	9.05	0.000	3.527779	7.084704
tsave	1.565773	.1615076	4.35	0.000	1.279171	1.91659
trbave	1.198252	.2717648	0.80	0.425	.7682366	1.868967
tlbave	4.159486	2.002843	2.96	0.003	1.618736	10.68817
tsbave	1.023622	.6522837	0.04	0.971	.2935806	3.569042
lngdppc	1.296731	.4786613	0.70	0.481	.6289942	2.673334
lnunemppc	2.845773	1.389555	2.14	0.032	1.092872	7.410223
year	8.16687	3.474555	4.94	0.000	3.547448	18.80162
year2	.0346042	.0210691	-5.52	0.000	.0104922	.1141276
year3	5.975643	1.983744	5.39	0.000	3.117524	11.45406
year4	.7342507	.0441144	-5.14	0.000	.6526848	.8260098
sun	.5652426	.3273846	-0.98	0.325	.1816456	1.758915
sands	.5668448	.2953828	-1.09	0.276	.2041282	1.574075
dail	.938654	.2731294	-0.22	0.828	.5306681	1.660306

---

Stratified by con

Output from Cox proportional hazards model; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by location and year; Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk   =          161711
Log likelihood = -799.76735
LR chi2(5)     =          23.30
Prob > chi2    =          0.0003
  
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      trave |    3.86815   1.372527    3.81   0.000    1.929628    7.754132
      tsave |    1.33362   .3499387    1.10   0.273    .7974046    2.230413
      trbave |    1.038358  .2624772    0.15   0.882    .6326737    1.704177
      tlbave |    2.561241   1.138164    2.12   0.034    1.071997    6.119378
      tsbave |    .8714956  .5105516   -0.23   0.814    .276441    2.747438
-----
  
```

Stratified by yearcon

Output from Cox proportional hazards model; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by location and year; Standard errors clustered by region-years.

```

No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk   =          161711
Log pseudolikelihood = -799.76735
Wald chi2(5)   =          295.99
Prob > chi2    =          0.0000
  
```

(Std. Err. adjusted for 195 clusters in yearcon)

```

-----
      |                Robust
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
  
```



```

-----+-----
trave |    3.86815    1.211541    4.32    0.000    2.093625    7.146736
tsave |    1.33362     .131465    2.92    0.003    1.099316    1.617862
trbave |   1.038358     .238114    0.16    0.870    .6624478    1.627582
tlbave |   2.561241    1.265442    1.90    0.057    .9725102    6.745384
tsbave |   .8714956     .6447483   -0.19    0.853    .2044235    3.715349
-----

```

Stratified by yearcon

Output from Cox proportional hazards model; Duration between Loyalist attacks; Efron method for tied failures; Full year and location controls; Unclustered standard errors

```

No. of subjects =          690                Number of obs =          683
No. of failures =          672
Time at risk    =          153097

LR chi2(33)      =          541.92
Log likelihood   =      -3452.959          Prob > chi2      =          0.0000
    
```

```

-----+-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      trave |  5.284077   1.594987     5.52   0.000     2.924394     9.54778
      tsave |  1.636299   .3723443     2.16   0.030     1.047537     2.555971
      trbave |  1.177252   .2588228     0.74   0.458     .7651202     1.811377
      tlbave |  4.927679   1.994878     3.94   0.000     2.228689     10.8952
      tsbave |  .9168177   .4827242    -0.16   0.869     .3266684     2.573113
      lngdppc |  1.860206   .8675033     1.33   0.183     .7457697     4.639991
      lnunemppc |  3.003037   1.56358     2.11   0.035     1.082353     8.332062
      year   |  8.007773   3.583714     4.65   0.000     3.330995     19.25083
      year2  |  .031526   .0195278    -5.58   0.000     .0093631     .1061499
      year3  |  6.359295   2.166596     5.43   0.000     3.261421     12.3997
      year4  |  .7259668   .0454163    -5.12   0.000     .6421932     .8206685
      sunn   |  .6039336   .3809218    -0.80   0.424     .1754313     2.079081
      sands  |  .6243139   .3667356    -0.80   0.423     .1974189     1.974319
      dail   |  1.101357   .4129155     0.26   0.797     .5282012     2.296447
      pop    |  .999998   3.61e-06    -0.57   0.571     .9999909     1.000005
      split  |  1.002782   .0119871     0.23   0.816     .9795611     1.026554
      east   |  1.682691   .6931299     1.26   0.206     .7505496     3.7725
      north  |  4.395977   .9019333     7.22   0.000     2.94044     6.572015
      south  |  2.10452    .4719455     3.32   0.001     1.356027     3.266163
      west   |  2.638786   .8561572     2.99   0.003     1.397111     4.983994
      eantrim | .5662934   .2231219    -1.44   0.149     .2616162     1.225796
      ederry | .3123806   .1278985    -2.84   0.004     .1400152     .6969358
      fst    | .7102565   .247309     -0.98   0.326     .3589464     1.405403
    
```

foyle		.1425586	.100342	-2.77	0.006	.0358809	.5664013
lagan		.6423326	.2317768	-1.23	0.220	.3166764	1.302879
midulster		.6654468	.2147961	-1.26	0.207	.3534748	1.252761
newry		.6466755	.2326579	-1.21	0.226	.3194811	1.308964
nantrim		.3873853	.1551589	-2.37	0.018	.1766902	.8493246
ndown		.3076303	.2118213	-1.71	0.087	.0797862	1.186126
santrim		.5075426	.1950502	-1.76	0.078	.2389754	1.077933
sdown		.3462581	.1571787	-2.34	0.019	.1422361	.8429275
strangford		.2863051	.1334124	-2.68	0.007	.1148646	.7136279
tyrone		.2745796	.1454954	-2.44	0.015	.0971919	.775723

-----

Output from Cox proportional hazards model; Duration between Loyalist attacks; Efron method for tied failures; Full year and location controls; Standard errors clustered by region-years.

```

No. of subjects      =          690                Number of obs      =          683
No. of failures     =          672
Time at risk        =          153097
                                                              Wald chi2(33)     =          1180.29
Log pseudolikelihood =        -3452.959          Prob > chi2       =          0.0000

```

(Std. Err. adjusted for 195 clusters in yearcon)

-----						
	Robust					
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
-----						
trave	5.284077	1.057368	8.32	0.000	3.569767	7.821652
tsave	1.636299	.1841617	4.38	0.000	1.312387	2.040156
trbave	1.177252	.266156	0.72	0.470	.7558358	1.833627
tlbave	4.927679	2.518485	3.12	0.002	1.809682	13.41784
tsbave	.9168177	.629423	-0.13	0.899	.2387303	3.520939
lngdppc	1.860206	.8680387	1.33	0.183	.7453491	4.642609
lnunemppc	3.003037	1.572364	2.10	0.036	1.076165	8.379968
year	8.007773	3.681468	4.53	0.000	3.252244	19.71698
year2	.031526	.0206637	-5.27	0.000	.0087247	.1139168
year3	6.359295	2.256887	5.21	0.000	3.171913	12.74961
year4	.7259668	.0462336	-5.03	0.000	.6407779	.8224812
sun	.6039336	.3547589	-0.86	0.391	.1909773	1.909839
sands	.6243139	.3142673	-0.94	0.349	.2327689	1.674484
dail	1.101357	.3266364	0.33	0.745	.6158595	1.969583
pop	.999998	3.57e-06	-0.57	0.568	.999991	1.000005
split	1.002782	.0118849	0.23	0.815	.9797567	1.026349
east	1.682691	.7137208	1.23	0.220	.7327628	3.864072
north	4.395977	.8849303	7.36	0.000	2.962816	6.522381
south	2.10452	.4706659	3.33	0.001	1.357644	3.262273
west	2.638786	.8782742	2.92	0.004	1.374347	5.066545
eantrim	.5662934	.2157607	-1.49	0.136	.2683671	1.194961

ederry		.3123806	.1217601	-2.99	0.003	.145513	.6706044
fst		.7102565	.2123006	-1.14	0.252	.3953531	1.275984
foyle		.1425586	.0786456	-3.53	0.000	.0483514	.4203176
lagan		.6423326	.2414563	-1.18	0.239	.30746	1.341934
midulster		.6654468	.222507	-1.22	0.223	.3455374	1.281538
newry		.6466755	.2711234	-1.04	0.298	.2843243	1.470818
nantrim		.3873853	.147822	-2.49	0.013	.1833724	.8183749
ndown		.3076303	.1220069	-2.97	0.003	.1413971	.6692952
santrim		.5075426	.1950947	-1.76	0.078	.2389343	1.078119
sdown		.3462581	.1212176	-3.03	0.002	.1743462	.6876816
strangford		.2863051	.0974612	-3.67	0.000	.1469168	.5579391
tyrone		.2745796	.1095568	-3.24	0.001	.1256147	.6002002

---

Output from Cox proportional hazards model; Duration between Loyalist attacks; Efron method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```

No. of subjects =           690                 Number of obs   =           683
No. of failures =           672
Time at risk    =          161711
LR chi2(24)     =          364.48
Log likelihood  =   -1681.3949                 Prob > chi2     =           0.0000

```

-----						
-----	_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]
-----	+	-----	-----	-----	-----	-----
	trave	4.511152	1.521505	4.47	0.000	2.32915 8.737306
	tsave	1.493304	.3790132	1.58	0.114	.9080421 2.455785
	trbave	1.061492	.2621171	0.24	0.809	.6542249 1.722289
	tlbave	2.766335	1.175991	2.39	0.017	1.202409 6.364399
	tsbave	.9552967	.5318265	-0.08	0.935	.3208211 2.84455
	pop	1	4.68e-06	0.03	0.978	.999991 1.000009
	split	.9896145	.0148498	-0.70	0.487	.9609333 1.019152
	east	1.210793	.6174637	0.38	0.708	.445642 3.289683
	north	4.047992	.922921	6.13	0.000	2.589227 6.328622
	south	1.839346	.4664745	2.40	0.016	1.1189 3.023679
	west	3.16254	1.213344	3.00	0.003	1.490949 6.708248
	eantrim	.5407138	.2406388	-1.38	0.167	.2260214 1.293557
	ederry	.2530327	.1250883	-2.78	0.005	.096024 .6667661
	fst	.6913421	.2714851	-0.94	0.347	.3202081 1.492635
	foyle	.1839483	.1462221	-2.13	0.033	.0387319 .8736216
	lagan	.4800913	.2058858	-1.71	0.087	.2071517 1.112652
	midulster	.9832643	.3504849	-0.05	0.962	.4889441 1.97734
	newry	.8244323	.3394758	-0.47	0.639	.3678378 1.847794
	nantrim	.1723059	.0940235	-3.22	0.001	.0591314 .5020906
	ndown	.0996649	.0886628	-2.59	0.010	.0174303 .569874
	santrim	.4820499	.2032335	-1.73	0.083	.2109712 1.10144
	sdown	.3127192	.1700885	-2.14	0.033	.1076923 .9080808
	strangford	.2265241	.1198295	-2.81	0.005	.0803222 .6388418
	tyrone	.3379493	.224646	-1.63	0.103	.0918396 1.243578

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Loyalist attacks; Efron method for tied failures; Stratification by year with location controls; Standard errors clustered by region-years.

```

No. of subjects      =           690                Number of obs      =           683
No. of failures     =           672
Time at risk        =           161711

                                                Wald chi2(24)      =           777.60
Log pseudolikelihood =    -1681.3949                Prob > chi2        =           0.0000
  
```

(Std. Err. adjusted for 195 clusters in yearcon)

-----						
	Robust					
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
-----						
trave	4.511152	1.370553	4.96	0.000	2.487025	8.182666
tsave	1.493304	.1723553	3.47	0.001	1.190977	1.872375
trbave	1.061492	.2312369	0.27	0.784	.6926114	1.626835
tlbave	2.766335	1.443999	1.95	0.051	.9944576	7.695259
tsbave	.9552967	.7181097	-0.06	0.951	.2189164	4.168677
pop	1	4.33e-06	0.03	0.977	.9999916	1.000009
split	.9896145	.0129985	-0.79	0.427	.964463	1.015422
east	1.210793	.5986383	0.39	0.699	.4594313	3.190947
north	4.047992	.9699732	5.84	0.000	2.530906	6.474454
south	1.839346	.4785131	2.34	0.019	1.104638	3.062717
west	3.16254	1.078942	3.37	0.001	1.620457	6.172122
eantrim	.5407138	.2134422	-1.56	0.119	.2494381	1.17212
ederry	.2530327	.1356398	-2.56	0.010	.0884881	.7235502
fst	.6913421	.2179145	-1.17	0.242	.3727263	1.282319
foyle	.1839483	.1048526	-2.97	0.003	.0601868	.5621994
lagan	.4800913	.2116108	-1.66	0.096	.2023662	1.138963
midulster	.9832643	.3063863	-0.05	0.957	.5338692	1.810947
newry	.8244323	.3597845	-0.44	0.658	.3505002	1.939196
nantrim	.1723059	.1105692	-2.74	0.006	.0489871	.6060644
ndown	.0996649	.0801788	-2.87	0.004	.0205951	.482303



santrim	.4820499	.177366	-1.98	0.047	.2343689	.9914801
sdown	.3127192	.134718	-2.70	0.007	.1344191	.7275254
strangford	.2265241	.0760799	-4.42	0.000	.1172821	.4375192
tyrone	.3379493	.1586299	-2.31	0.021	.134681	.8480018

-----  
Stratified by year

Output from Cox proportional hazards model; Duration between Loyalist attacks; Efron method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          683
No. of failures =          672
Time at risk    =          153097

LR chi2(14)     =          238.95
Log likelihood  = -2170.3123                Prob > chi2     =          0.0000
  
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      trave |  6.052753   1.870612     5.83   0.000     3.302843    11.09221
      tsave |  1.695874   .3974603     2.25   0.024     1.071268     2.684657
      trbave |  1.140748   .2571372     0.58   0.559     .7333641     1.774435
      tlbave |  4.618626   1.899842     3.72   0.000     2.062417    10.34306
      tsbave |  .9452972   .5043809    -0.11   0.916     .3321956     2.689941
      lngdppc |  1.285227   .5792305     0.56   0.578     .5313213     3.108868
      lnunemppc |  2.856419   1.524292     1.97   0.049     1.003665     8.129335
      year   |  8.199716   3.834029     4.50   0.000     3.279393    20.50238
      year2  |  .0343579   .0221367    -5.23   0.000     .0097186     .1214654
      year3  |  6.004467   2.126033     5.06   0.000     2.99975     12.01888
      year4  |  .7335184   .0477256    -4.76   0.000     .6456967     .8332849
      sunn   |  .5620385   .3625874    -0.89   0.372     .1587198     1.99022
      sands  |  .5699698   .3494105    -0.92   0.359     .1714103     1.895251
      dail   |  .9421359   .3699634    -0.15   0.879     .436374     2.034081
-----
  
```

Stratified by con

Output from Cox proportional hazards model; Duration between Loyalist attacks; Efron method for tied failures; Stratification by location with year controls; Standard errors clustered by region-years.

```

No. of subjects =          690                Number of obs =          683
No. of failures =          672
  
```

Time at risk = 153097

Wald chi2(14) = 445.62

Log pseudolikelihood = -2170.3123

Prob > chi2 = 0.0000

(Std. Err. adjusted for 195 clusters in yearcon)

---

		Robust				
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
trave	6.052753	1.440581	7.57	0.000	3.796325	9.650338
tsave	1.695874	.2329682	3.84	0.000	1.29557	2.219863
trbave	1.140748	.2598522	0.58	0.563	.7299511	1.782731
tlbave	4.618626	2.366983	2.99	0.003	1.691545	12.61078
tsbave	.9452972	.6538125	-0.08	0.935	.2436895	3.666907
lngdppc	1.285227	.4768097	0.68	0.499	.621141	2.659312
lnunemppc	2.856419	1.421933	2.11	0.035	1.076692	7.57796
year	8.199716	3.511064	4.91	0.000	3.542582	18.97919
year2	.0343579	.0211143	-5.49	0.000	.0103022	.1145838
year3	6.004467	2.011977	5.35	0.000	3.113536	11.57964
year4	.7335184	.0444589	-5.11	0.000	.6513574	.8260432
sun	.5620385	.3288164	-0.98	0.325	.178557	1.769111
sands	.5699698	.2982076	-1.07	0.283	.2044109	1.589277
dail	.9421359	.2750849	-0.20	0.838	.5315935	1.669735

---

Stratified by con

Output from Cox proportional hazards model; Duration between Loyalist attacks; Efron method for tied failures; Stratification by location and year; Unclustered standard errors.

```
No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk   =          161711
Log likelihood = -790.30854
LR chi2(5)     =          25.48
Prob > chi2    =          0.0001
```

```
-----+-----
```

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
trave	4.181203	1.522109	3.93	0.000	2.048487	8.534328
tsave	1.414329	.3762822	1.30	0.193	.8396305	2.382388
trbave	1.020423	.2649786	0.08	0.938	.6134003	1.697525
tlbave	2.729447	1.222514	2.24	0.025	1.134549	6.566384
tsbave	.8622137	.5127787	-0.25	0.803	.2687729	2.765951

```
-----+-----
```

Stratified by yearcon

Output from Cox proportional hazards model; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by location and year; Standard errors clustered by region-years.

```
No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk   =          161711
Log pseudolikelihood = -790.30854
Wald chi2(5)   =          157.22
Prob > chi2    =          0.0000
```

(Std. Err. adjusted for 195 clusters in yearcon)

```
-----+-----
```

	Robust					
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	

```
-----+-----
```

trave	4.181203	1.485722	4.03	0.000	2.083726	8.389998
tsave	1.414329	.1682056	2.91	0.004	1.120256	1.785597
trbave	1.020423	.2464415	0.08	0.933	.6356339	1.638148
tlbave	2.729447	1.416075	1.94	0.053	.9873235	7.545533
tsbave	.8622137	.6974299	-0.18	0.855	.1766414	4.208597

-----  
Stratified by yearcon

Output from Cox proportional hazards model; Duration between Loyalist attacks; Exact marginal likelihood method for tied failures; Full year and location controls; Unclustered standard errors

No. of subjects = 690 Number of obs = 683  
No. of failures = 672  
Time at risk = 153097  
LR chi2(33) = 542.73  
Log likelihood = -2814.9195 Prob > chi2 = 0.0000

```
-----  
          _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]  
-----+-----  
          trave |    5.63247    1.907908     5.10   0.000     2.899801    10.94031  
          tsave |    1.725618    .4681244     2.01   0.044     1.013985     2.936689  
         trbave |    1.155802    .2596676     0.64   0.519     .7441298     1.795222  
         tlbave |    5.072123    2.06508      3.99   0.000     2.283647     11.2655  
         tsbave |    .8898687    .4718044    -0.22   0.826     .3147913     2.515528  
        lngdppc |    1.860747    .8678914     1.33   0.183     .7458802     4.642005  
 lnunemppc |    2.990881    1.558905     2.10   0.036     1.076803     8.307339  
         year |    7.939166    3.555936     4.63   0.000     3.300072    19.09969  
        year2 |    .0319198    .0197916    -5.56   0.000     .0094685     .1076071  
        year3 |    6.318935    2.154897     5.41   0.000     3.23866     12.32885  
        year4 |    .7267471    .0455047    -5.10   0.000     .6428149     .8216383  
         sunn |    .5995743    .3782152    -0.81   0.417     .1741405     2.064364  
        sands |    .6248613    .367046     -0.80   0.423     .1975989     1.975981  
         dail |    1.100156    .4125171     0.25   0.799     .5275766     2.294155  
         pop |    .999998    3.60e-06    -0.57   0.572     .9999909     1.000005  
        split |    1.002914    .0119985     0.24   0.808     .9796714     1.026709  
         east |    1.688406    .6960814     1.27   0.204     .7525771     3.787938  
        north |    4.392379    .9011499     7.21   0.000     2.938092     6.566503  
        south |    2.103168    .4717152     3.31   0.001     1.355064     3.264286  
         west |    2.610663    .84862      2.95   0.003     1.380575     4.936756  
 eantrim |    .5668652    .2233984    -1.44   0.150     .2618339     1.227252  
        ederry |    .3122526    .1278542    -2.84   0.004     .1399507     .6966859  
         fst |    .7074766    .2464536    -0.99   0.321     .3574301     1.400339
```

foyle		.1416203	.0997146	-2.78	0.006	.0356284	.5629307
lagan		.6426452	.2319309	-1.23	0.221	.3167906	1.303678
midulster		.6638283	.2143037	-1.27	0.204	.3525837	1.249825
newry		.6424862	.2313241	-1.23	0.219	.3172435	1.301173
nantrim		.3877905	.1553341	-2.36	0.018	.1768635	.8502683
ndown		.3078807	.2120174	-1.71	0.087	.0798391	1.18727
santrim		.5084339	.1954536	-1.76	0.078	.2393389	1.08008
sdown		.3449134	.1566219	-2.34	0.019	.1416405	.8399097
strangford		.2865347	.1335168	-2.68	0.007	.1149588	.7141878
tyrone		.2733462	.144887	-2.45	0.014	.096724	.7724882

-----

Output from Cox proportional hazards model; Duration between Loyalist attacks; Exact marginal likelihood method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          683
No. of failures =          672
Time at risk    =          161711

LR chi2(24)      =          364.99
Log likelihood   = -1545.0823              Prob > chi2      =          0.0000

```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      trave |  4.656547   1.651537     4.34   0.000   2.323638   9.331672
      tsave |  1.563588    .45067     1.55   0.121   .8887555   2.750823
      trbave |  1.051441    .263576     0.20   0.841   .6432876   1.71856
      tlbave |  2.824312   1.210093     2.42   0.015   1.21958    6.540559
      tsbave |  .9454564   .5300501    -0.10   0.920   .3150891   2.836937
      pop    |           1   4.68e-06     0.03   0.979   .9999909   1.000009
      split |  .9896691   .0148586    -0.69   0.489   .9609712   1.019224
      east   |  1.211841   .6183667     0.38   0.707   .4457618   3.294494
      north  |  4.046471   .9226506     6.13   0.000   2.588158   6.326478
      south  |  1.837282   .4660633     2.40   0.016   1.11751    3.020648
      west   |  3.144374   1.207634     2.98   0.003   1.481223   6.674952
      eantrim | .5407307   .2407453    -1.38   0.167   .2259473   1.294061
      ederry | .2531164   .1251354    -2.78   0.005   .0960515   .6670162
      fst    | .6905588   .2712503    -0.94   0.346   .3197792   1.491252
      foyle  | .183465    .1458743    -2.13   0.033   .0386151   .871665
      lagan  | .4802124   .2059724    -1.71   0.087   .2071747   1.11309
      midulster | .9818649   .3500392    -0.05   0.959   .4881964   1.974735
      newry  | .8221015   .3386487    -0.48   0.634   .366682    1.843153
      nantrim | .1722978   .094023     -3.22   0.001   .059126    .5020889
      ndown  | .0997908   .0887817    -2.59   0.010   .01745     .5706714
      santrim | .4820056   .2032661    -1.73   0.084   .2109078   1.101568
      sdown  | .3123427   .1699178    -2.14   0.032   .1075397   .9071812
      strangford | .2266017   .1198831    -2.81   0.005   .0803409   .6391302

```



tyrone | .3373548 .2242859 -1.63 0.102 .0916594 1.241644

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Loyalist attacks; Exact marginal likelihood method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```
No. of subjects =          690                Number of obs =          683
No. of failures =          672
Time at risk    =          153097
Log likelihood   =    -1902.5847
LR chi2(14)     =          239.71
Prob > chi2     =          0.0000
```

```
-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      trave |  6.513493   2.274868     5.37   0.000     3.284943   12.91517
      tsave |  1.75326   .4716995     2.09   0.037     1.034756   2.970672
      trbave |  1.118051   .2564929     0.49   0.627     .7131598   1.752816
      tlbave |  4.725321   1.95499     3.75   0.000     2.10023   10.63153
      tsbave |  .920486   .4948885    -0.15   0.878     .3209066   2.640315
      lngdppc |  1.285896   .5796396     0.56   0.577     .5315106   3.110996
      lnunemppc |  2.848929   1.522371     1.96   0.050     .9996048   8.119607
      year   |  8.144808   3.81075     4.48   0.000     3.255556   20.37683
      year2  |  .0346786   .0223622    -5.21   0.000     .0097988   .1227304
      year3  |  5.976829   2.117973     5.05   0.000     2.984253   11.97033
      year4  |  .7340775   .0477974    -4.75   0.000     .6461276   .833999
      sunn   |  .5595788   .3610424    -0.90   0.368     .1580021   1.9818
      sands  |  .5714093   .3502972    -0.91   0.361     .1718407   1.900065
      dail   |  .9421172   .369958     -0.15   0.879     .4363635   2.034049
-----
```

Stratified by con

Output from Cox proportional hazards model; Duration between Loyalist attacks; Exact marginal likelihood method for tied failures; Stratification by location and year; Unclustered standard errors.

```
No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk    =          161711
```

LR chi2(5) = 26.02  
 Prob > chi2 = 0.0001  
 Log likelihood = -730.35893

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      trave | 4.337032   1.668802    3.81   0.000    2.040176   9.219718
      tsave | 1.494876   .4570121    1.32   0.188    .8210631   2.721659
      trbave | 1.003543    .2671      0.01   0.989    .5956389   1.690789
      tlbave | 2.838642   1.288738    2.30   0.022    1.165915   6.911215
      tsbave | .8514315   .5155339   -0.27   0.791    .2598693   2.789616
-----
  
```

Stratified by yearcon

Output from Cox proportional hazards model; Duration between Loyalist attacks; Exact partial likelihood method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```

No. of subjects =          690                Number of obs   =          683
No. of failures =          672
Time at risk    =          161711

LR chi2(24)     =          366.00
Log likelihood  = -1544.5806              Prob > chi2      =          0.0000

```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      trave |  5.076374   1.968688     4.19   0.000     2.37381    10.85579
      tsave |  1.610808   .5776987     1.33   0.184     .7975711    3.253253
      trbave |  1.112922   .3152574     0.38   0.706     .6387708    1.939031
      tlbave |  2.982038   1.369813     2.38   0.017     1.21202    7.336968
      tsbave |  .9605623   .5858388    -0.07   0.947     .2906597    3.174433
      pop    |           1   4.69e-06     0.05   0.964     .999991    1.000009
      split |  .9893251   .0149028    -0.71   0.476     .9605432    1.01897
      east   |  1.194944   .6125811     0.35   0.728     .4375058    3.263706
      north  |  4.091324   .9372747     6.15   0.000     2.611341    6.410092
      south  |  1.824993   .4656102     2.36   0.018     1.106864    3.009041
      west   |  3.192457   1.233238     3.00   0.003     1.497298    6.806784
      eantrim | .5345147   .2386908    -1.40   0.161     .2227667    1.282534
      ederry | .2536993   .1255807    -2.77   0.006     .0961559    .6693644
      fst    | .6932608   .2731158    -0.93   0.352     .3203013    1.500495
      foyle  | .1857021   .1479198    -2.11   0.035     .038976    .8847816
      lagan  | .4786998   .2057856    -1.71   0.087     .2061318    1.111684
      midulster | .990058   .3542094    -0.03   0.978     .4910541    1.996144
      newry  | .8265756   .3415869    -0.46   0.645     .3677214    1.858002
      nantrim | .1712301   .0934756    -3.23   0.001     .0587359    .4991793
      ndown  | .0998911   .0889519    -2.59   0.010     .0174398    .5721534
      santrim | .4762631   .2014827    -1.75   0.080     .2078484    1.091307
      sdown  | .3151034   .1717286    -2.12   0.034     .1082819    .91696
      strangford | .2263427   .1199857    -2.80   0.005     .0800828    .6397257

```

tyrone | .3385449 .2253971 -1.63 0.104 .0918124 1.248335

-----

Stratified by year

Output from Cox proportional hazards model; Duration between Loyalist attacks; Exact partial likelihood method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          683
No. of failures =          672
Time at risk    =          153097
Log likelihood   =   -1901.9143                LR chi2(14)    =          241.06
                                                Prob > chi2    =          0.0000

```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
      trave |  7.600943   3.077159     5.01   0.000    3.437698   16.80611
      tsave |  1.879613   .6879566     1.72   0.085    .9173187   3.851381
      trbave |  1.278419   .366957     0.86   0.392    .7283575   2.243891
      tlbave |  5.069457   2.247543     3.66   0.000    2.126089   12.08764
      tsbave |  .9346227   .5711786    -0.11   0.912    .2821234   3.096233
      lngdppc |  1.303943   .5913671     0.59   0.558    .5360677   3.171739
      lnunemppc |  2.763809   1.498337     1.88   0.061    .9550991   7.997748
      year   |  8.041627   3.809367     4.40   0.000    3.177786   20.34994
      year2  |  .0354837   .0231668    -5.11   0.000    .0098694   .1275752
      year3  |  5.898106   2.114086     4.95   0.000    2.921544   11.90728
      year4  |  .7358698   .0484205    -4.66   0.000    .6468321   .8371636
      sunn   |  .5494816   .3562399    -0.92   0.356    .1542063   1.957961
      sands  |  .5691092   .3500961    -0.92   0.360    .1704379   1.900313
      dail   |  .9425444   .3714914    -0.15   0.881    .4353234   2.040759
-----

```

Stratified by con

Output from Cox proportional hazards model; Duration between Republican attacks; Exact partial likelihood method for tied failures; Stratification by location and year; Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          690
No. of failures =          672

```

Time at risk = 161711

LR chi2(5) = 26.51

Log likelihood = -730.11238

Prob > chi2 = 0.0001

```
-----
```

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
trave	4.808512	1.986135	3.80	0.000	2.140059	10.80428
tsave	1.562615	.579152	1.20	0.228	.7557376	3.230969
trbave	1.040333	.2944337	0.14	0.889	.5974019	1.811667
tlbave	2.849527	1.360929	2.19	0.028	1.117482	7.266163
tsbave	.8861537	.5707964	-0.19	0.851	.2507415	3.131784

```
-----
```

Stratified by yearcon

## Appendix 4: PH Test Results for Cox Proportional Hazards Models for Both Republican and Loyalist Equations

Test of proportional hazards assumption; Duration between Republican attacks; Breslow method for tied failures; Full location and year controls; Unclustered standard errors.

```
. estat phtest
```

```
Test of proportional-hazards assumption
```

```
Time: Time
```

```
-----
```

	chi2	df	Prob>chi2
global test	97.84	32	0.0000

```
-----
```

```
. estat phtest, detail
```

```
Test of proportional-hazards assumption
```

```
Time: Time
```

```
-----
```

	rho	chi2	df	Prob>chi2
tlave	0.00599	0.03	1	0.8678
tsave	0.00442	0.02	1	0.8842
trbave	0.01102	0.18	1	0.6744
tlbave	0.00326	0.02	1	0.8872
tsbave	0.00386	0.02	1	0.8918
lngdppc	0.05861	4.33	1	0.0375
lnunemppc	-0.02838	1.09	1	0.2966
year	-0.00154	0.00	1	0.9551
year2	-0.00916	0.11	1	0.7396
year3	0.00998	0.13	1	0.7181
year4	-0.00987	0.13	1	0.7217

```
-----
```



sunm		-0.00355	0.02	1	0.8945
sands		-0.01331	0.24	1	0.6225
dail		0.01774	0.41	1	0.5216
pop		0.02268	0.64	1	0.4226
split		0.03624	1.85	1	0.1732
east		0.06426	5.71	1	0.0169
north		0.02947	1.10	1	0.2953
south		0.04299	2.34	1	0.1261
west		-0.00847	0.10	1	0.7561
eantrim		0.04119	1.97	1	0.1601
ederry		0.07251	6.54	1	0.0106
fst		-0.00361	0.02	1	0.8952
foyle		-0.01234	0.21	1	0.6464
lagan		0.00026	0.00	1	0.9926
midulster		0.02705	0.96	1	0.3262
newry		-0.00209	0.01	1	0.9380
nantrim		-0.08958	9.73	1	0.0018
ndown		.	.	1	.
santrim		-0.02390	0.78	1	0.3759
sdown		-0.01822	0.46	1	0.4953
strangford		0.22675	56.14	1	0.0000
tyrone		0.00581	0.05	1	0.8286
-----+-----					
global test			97.84	32	0.0000
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Breslow method for tied failures; Full location and year controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	58.06	32	0.0032

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	0.00167	0.00	1	0.9626
tsave	0.01570	0.57	1	0.4505
trbave	0.01598	1.62	1	0.2038
tlbave	0.00575	0.05	1	0.8212
tsbave	0.01341	0.44	1	0.5089
lngdppc	0.05393	6.56	1	0.0104
lnunemppc	-0.02773	1.84	1	0.1747
year	-0.00478	0.12	1	0.7328
year2	0.00273	0.03	1	0.8541
year3	-0.00450	0.08	1	0.7725
year4	0.00635	0.16	1	0.6923
sunn	-0.01796	1.15	1	0.2838
sands	-0.03045	1.97	1	0.1609

dail		0.00291	0.01	1	0.9031
pop		0.02382	1.44	1	0.2299
split		0.03770	2.36	1	0.1243
east		0.06873	7.26	1	0.0070
north		0.03482	2.39	1	0.1218
south		0.03667	2.46	1	0.1169
west		-0.00408	0.04	1	0.8390
eantrim		0.05338	2.87	1	0.0901
ederry		0.08133	13.94	1	0.0002
fst		-0.00038	0.00	1	0.9868
foyle		-0.00205	0.01	1	0.9291
lagan		-0.00860	0.14	1	0.7041
midulster		0.03720	2.71	1	0.0997
newry		0.00523	0.05	1	0.8153
nantrim		-0.10484	17.13	1	0.0000
ndown		.	.	1	.
santrim		0.06326	5.82	1	0.0159
sdown		-0.00768	0.11	1	0.7363
strangford		0.10503	15.79	1	0.0001
tyrone		0.01394	0.38	1	0.5390
-----+-----					
global test			58.06	32	0.0032
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Breslow method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |                chi2      df      Prob>chi2  
-----+-----  
global test |                22.12      23      0.5128  
-----+-----
```

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |      rho      chi2      df      Prob>chi2  
-----+-----  
tlave      |      0.00313      0.01      1      0.9249  
tsave      |      0.00137      0.00      1      0.9633  
trbave     |     -0.00192      0.01      1      0.9349  
tlbave     |     -0.00263      0.01      1      0.9113  
tsbave     |      0.00222      0.01      1      0.9370  
pop        |      0.01718      0.34      1      0.5576  
split      |      0.01318      0.22      1      0.6423  
east       |      0.02472      0.82      1      0.3642  
north      |      0.01171      0.17      1      0.6838  
south      |      0.02125      0.54      1      0.4620  
west       |     -0.00356      0.02      1      0.8998  
eantrim    |      0.00099      0.00      1      0.9711  
ederry     |      0.03615      1.53      1      0.2164
```

fst		-0.00119	0.00	1	0.9661
foyle		-0.00628	0.05	1	0.8227
lagan		-0.03301	1.55	1	0.2130
midulster		0.00902	0.10	1	0.7479
newry		-0.00030	0.00	1	0.9915
nantrim		-0.03071	1.17	1	0.2793
ndown		.	.	1	.
santrim		0.00337	0.01	1	0.9077
sdown		-0.00244	0.01	1	0.9290
strangford		0.09151	8.91	1	0.0028
tyrone		0.00545	0.04	1	0.8440
-----+-----					
global test			22.12	23	0.5128
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Breslow method for tied failures; Stratification by year with location controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	20.79	23	0.5942

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	0.00321	0.01	1	0.9204
tsave	0.00558	0.02	1	0.8956
trbave	-0.00326	0.03	1	0.8543
tlbave	-0.00374	0.02	1	0.8857
tsbave	-0.00182	0.00	1	0.9492
pop	0.01304	0.23	1	0.6283
split	0.01515	0.33	1	0.5638
east	0.02693	1.13	1	0.2885
north	0.01646	0.34	1	0.5589
south	0.02280	0.66	1	0.4170
west	-0.00449	0.03	1	0.8588

eantrim		0.01769	0.44	1	0.5054
ederry		0.03421	2.37	1	0.1236
fst		-0.00507	0.04	1	0.8481
foyle		-0.00875	0.11	1	0.7361
lagan		-0.04445	4.00	1	0.0456
midulster		0.00649	0.06	1	0.8080
newry		-0.00229	0.01	1	0.9308
nantrim		-0.03588	1.68	1	0.1951
ndown		.	.	1	.
santrim		0.01585	0.24	1	0.6264
sdown		-0.00250	0.01	1	0.9250
strangford		0.05362	2.55	1	0.1103
tyrone		0.00420	0.03	1	0.8673
-----+-----					
global test			20.79	23	0.5942
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Breslow method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	7.64	14	0.9074

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	0.00241	0.01	1	0.9369
tsave	0.00303	0.01	1	0.9187
trbave	0.00700	0.07	1	0.7867
tlbave	0.00198	0.01	1	0.9325
tsbave	0.00193	0.00	1	0.9466
lngdppc	0.01611	0.32	1	0.5691
lnunemppc	-0.00968	0.12	1	0.7261
year	0.01087	0.16	1	0.6917
year2	-0.01754	0.40	1	0.5252
year3	0.01991	0.52	1	0.4715
year4	-0.02117	0.59	1	0.4438
sunn	-0.00473	0.03	1	0.8622
sands	-0.00653	0.06	1	0.8118



dail		0.01602	0.32	1	0.5693
-----+-----					
global test			7.64	14	0.9074
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Breslow method for tied failures; Stratification by location with year controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	9.97	14	0.7643

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	-0.00069	0.00	1	0.9774
tsave	0.01796	0.29	1	0.5914
trbave	0.01281	0.81	1	0.3691
tlbave	0.00608	0.06	1	0.8127
tsbave	0.01044	0.17	1	0.6811
lngdppc	0.00897	0.18	1	0.6751
lnunemppc	-0.01039	0.21	1	0.6502
year	0.00403	0.06	1	0.8015
year2	-0.00716	0.17	1	0.6767
year3	0.00867	0.24	1	0.6276
year4	-0.00962	0.28	1	0.5990

sun		-0.01632	0.72	1	0.3976
sands		-0.01654	0.48	1	0.4865
dail		0.01511	0.27	1	0.6026
-----+					
global test			9.97	14	0.7643
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Breslow method for tied failures; Stratification by year and location controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	0.01	5	1.0000

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	0.00043	0.00	1	0.9863
tsave	0.00024	0.00	1	0.9934
trbave	0.00084	0.00	1	0.9721
tlbave	0.00205	0.01	1	0.9311
tsbave	-0.00085	0.00	1	0.9751
global test		0.01	5	1.0000

Test of proportional hazards assumption; Duration between Republican attacks; Breslow method for tied failures; Stratification by year with location controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |                chi2      df      Prob>chi2  
-----+-----  
global test |                0.01      5      1.0000  
-----+-----
```

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |      rho      chi2      df      Prob>chi2  
-----+-----  
tlave      |      0.00061      0.00      1      0.9820  
tsave      |      0.00009      0.00      1      0.9985  
trbave     |      0.00094      0.00      1      0.9627  
tlbave     |      0.00218      0.01      1      0.9356  
tsbave     |     -0.00033      0.00      1      0.9895  
-----+-----  
global test |                0.01      5      1.0000  
-----+-----
```

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Full location and year controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |                chi2      df      Prob>chi2  
-----+-----  
global test |                97.81      32      0.0000  
-----+-----
```

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |      rho      chi2      df      Prob>chi2  
-----+-----  
tlave      |      0.00594      0.03      1      0.8668  
tsave      |      0.00466      0.02      1      0.8767  
trbave     |      0.01104      0.18      1      0.6740  
tlbave     |      0.00308      0.02      1      0.8934  
tsbave     |      0.00495      0.03      1      0.8599  
lngdppc    |      0.05873      4.35      1      0.0369  
lnunemppc  |     -0.02859      1.11      1      0.2922  
year       |     -0.00190      0.00      1      0.9445  
year2      |     -0.00872      0.10      1      0.7509  
year3      |      0.00954      0.12      1      0.7295  
year4      |     -0.00942      0.12      1      0.7332  
sunn       |     -0.00378      0.02      1      0.8875  
sands      |     -0.01340      0.25      1      0.6198
```

dail		0.01770	0.41	1	0.5221
pop		0.02280	0.65	1	0.4195
split		0.03606	1.84	1	0.1751
east		0.06436	5.73	1	0.0166
north		0.02945	1.10	1	0.2950
south		0.04302	2.35	1	0.1256
west		-0.00841	0.10	1	0.7577
eantrim		0.04143	2.00	1	0.1578
ederry		0.07261	6.56	1	0.0104
fst		-0.00350	0.02	1	0.8982
foyle		-0.01222	0.21	1	0.6493
lagan		0.00053	0.00	1	0.9850
midulster		0.02719	0.98	1	0.3232
newry		-0.00199	0.01	1	0.9409
nantrim		-0.08939	9.70	1	0.0018
ndown		.	.	1	.
santrim		-0.02370	0.77	1	0.3796
sdown		-0.01816	0.46	1	0.4965
strangford		0.22660	56.08	1	0.0000
tyrone		0.00600	0.05	1	0.8229
-----+-----					
global test			97.81	32	0.0000
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Full location and year controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	58.44	32	0.0029

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	0.00058	0.00	1	0.9863
tsave	0.01495	0.39	1	0.5315
trbave	0.01597	1.72	1	0.1894
tlbave	0.00699	0.09	1	0.7691
tsbave	0.00327	0.01	1	0.9208
lngdppc	0.05232	6.58	1	0.0103
lnunemppc	-0.02780	1.90	1	0.1686
year	-0.00520	0.15	1	0.6994
year2	0.00335	0.05	1	0.8149
year3	-0.00504	0.11	1	0.7363
year4	0.00681	0.19	1	0.6592



sunm		-0.01796	1.23	1	0.2677
sands		-0.03049	2.01	1	0.1565
dail		0.00270	0.01	1	0.9095
pop		0.02266	1.38	1	0.2398
split		0.03743	2.38	1	0.1231
east		0.06842	7.30	1	0.0069
north		0.03501	2.45	1	0.1175
south		0.03675	2.49	1	0.1148
west		-0.00447	0.05	1	0.8203
eantrim		0.05393	2.95	1	0.0859
ederry		0.08132	14.09	1	0.0002
fst		-0.00044	0.00	1	0.9846
foyle		-0.00216	0.01	1	0.9246
lagan		-0.00779	0.12	1	0.7301
midulster		0.03689	2.71	1	0.0998
newry		0.00499	0.05	1	0.8226
nantrim		-0.10412	17.24	1	0.0000
ndown		.	.	1	.
santrim		0.06273	5.78	1	0.0162
sdown		-0.00782	0.12	1	0.7306
strangford		0.10363	15.82	1	0.0001
tyrone		0.01379	0.37	1	0.5405
-----+-----					
global test			58.44	32	0.0029
-----					

note: robust variance-covariance matrix used.

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	22.15	23	0.5111

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	0.00306	0.01	1	0.9246
tsave	0.00136	0.00	1	0.9624
trbave	-0.00194	0.01	1	0.9338
tlbave	-0.00268	0.01	1	0.9085
tsbave	0.00221	0.01	1	0.9359
pop	0.01709	0.34	1	0.5585
split	0.01305	0.21	1	0.6451
east	0.02475	0.83	1	0.3629
north	0.01178	0.17	1	0.6812
south	0.02149	0.55	1	0.4563
west	-0.00345	0.02	1	0.9024
eantrim	0.00097	0.00	1	0.9718
ederry	0.03613	1.53	1	0.2163

fst		-0.00089	0.00	1	0.9745
foyle		-0.00618	0.05	1	0.8250
lagan		-0.03299	1.55	1	0.2125
midulster		0.00913	0.11	1	0.7443
newry		-0.00017	0.00	1	0.9951
nantrim		-0.03087	1.18	1	0.2765
ndown		.	.	1	.
santrim		0.00382	0.02	1	0.8955
sdown		-0.00230	0.01	1	0.9330
strangford		0.09138	8.89	1	0.0029
tyrone		0.00561	0.04	1	0.8391
-----+-----					
global test			22.15	23	0.5111

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Stratification by year with location controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	20.76	23	0.5956

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	0.00327	0.01	1	0.9179
tsave	0.00505	0.02	1	0.8954
trbave	-0.00326	0.04	1	0.8483
tlbave	-0.00365	0.02	1	0.8805
tsbave	0.00039	0.00	1	0.9911
pop	0.01271	0.24	1	0.6263
split	0.01482	0.32	1	0.5699
east	0.02678	1.12	1	0.2890
north	0.01621	0.34	1	0.5594
south	0.02272	0.67	1	0.4135
west	-0.00402	0.03	1	0.8714

eantrim		0.01768	0.44	1	0.5050
ederry		0.03431	2.43	1	0.1193
fst		-0.00464	0.03	1	0.8599
foyle		-0.00853	0.11	1	0.7411
lagan		-0.04400	3.91	1	0.0480
midulster		0.00678	0.07	1	0.7980
newry		-0.00199	0.01	1	0.9394
nantrim		-0.03565	1.68	1	0.1952
ndown		.	.	1	.
santrim		0.01560	0.23	1	0.6309
sdown		-0.00214	0.01	1	0.9356
strangford		0.05315	2.55	1	0.1104
tyrone		0.00459	0.03	1	0.8542
-----+-----					
global test			20.76	23	0.5956
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |                chi2      df      Prob>chi2  
-----+-----  
global test |                7.67      14      0.9058  
-----+-----
```

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |      rho      chi2      df      Prob>chi2  
-----+-----  
tlave      |      0.00234      0.01      1      0.9368  
tsave      |      0.00302      0.01      1      0.9152  
trbave     |      0.00700      0.08      1      0.7841  
tlbave     |      0.00190      0.01      1      0.9350  
tsbave     |      0.00238      0.01      1      0.9328  
lngdppc    |      0.01633      0.33      1      0.5631  
lnunemppc  |     -0.00947      0.12      1      0.7310  
year       |      0.01039      0.15      1      0.7033  
year2      |     -0.01711      0.39      1      0.5335  
year3      |      0.01949      0.50      1      0.4790  
year4      |     -0.02075      0.57      1      0.4511  
sunn       |     -0.00509      0.04      1      0.8514  
sands      |     -0.00662      0.06      1      0.8091
```

dail		0.01579	0.32	1	0.5741
-----+-----					
global test			7.67	14	0.9058
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Stratification by location with year controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	10.21	14	0.7466

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	-0.00102	0.00	1	0.9658
tsave	0.01775	0.31	1	0.5789
trbave	0.01292	0.90	1	0.3439
tlbave	0.00699	0.09	1	0.7676
tsbave	0.00031	0.00	1	0.9934
lngdppc	0.00940	0.21	1	0.6468
lnunemppc	-0.01027	0.21	1	0.6499
year	0.00270	0.03	1	0.8595
year2	-0.00567	0.12	1	0.7290
year3	0.00714	0.18	1	0.6756
year4	-0.00806	0.21	1	0.6444



sun		-0.01647	0.79	1	0.3731
sands		-0.01644	0.49	1	0.4850
dail		0.01447	0.26	1	0.6127
-----+-----					
global test			10.21	14	0.7466
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Stratification by year and location controls; Unclustered standard errors.

```
. estat phtest
```

```
Test of proportional-hazards assumption
```

```
Time: Time
```

```
-----  
|                chi2      df      Prob>chi2  
-----+-----  
global test |                0.01      5      1.0000  
-----
```

```
. estat phtest, detail
```

```
Test of proportional-hazards assumption
```

```
Time: Time
```

```
-----  
|      rho      chi2      df      Prob>chi2  
-----+-----  
tlave      |      0.00043      0.00      1      0.9861  
tsave      |      0.00022      0.00      1      0.9937  
trbave     |      0.00083      0.00      1      0.9718  
tlbave     |      0.00202      0.01      1      0.9306  
tsbave     |     -0.00093      0.00      1      0.9723  
-----+-----  
global test |                0.01      5      1.0000  
-----
```

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Stratification by year with location controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	0.01	5	1.0000

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
tlave	0.00058	0.00	1	0.9824
tsave	0.00009	0.00	1	0.9983
trbave	0.00096	0.00	1	0.9604
tlbave	0.00220	0.01	1	0.9317
tsbave	-0.00067	0.00	1	0.9794
global test		0.01	5	1.0000

note: robust variance-covariance matrix used.



Test of proportional hazards assumption; Duration between Loyalist attacks; Breslow method for tied failures; Full location and year controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	80.18	33	0.0000

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	0.00614	0.03	1	0.8555
tsave	-0.00389	0.01	1	0.9182
trbave	-0.00324	0.01	1	0.9194
tlbave	0.01950	0.43	1	0.5113
tsbave	-0.01106	0.11	1	0.7398
lngdppc	0.08683	5.76	1	0.0164
lnunemppc	-0.02076	0.31	1	0.5768
year	-0.02838	0.54	1	0.4641
year2	0.01154	0.09	1	0.7636
year3	-0.00339	0.01	1	0.9294
year4	-0.00269	0.00	1	0.9441
sunn	0.04534	1.55	1	0.2127
sands	0.04418	1.43	1	0.2320

dail		0.06969	3.60	1	0.0579
pop		-0.04779	1.47	1	0.2255
split		0.07464	3.72	1	0.0539
east		0.05649	2.06	1	0.1510
north		0.02028	0.28	1	0.5951
south		0.02943	0.59	1	0.4420
west		-0.05307	1.92	1	0.1663
eantrim		0.00162	0.00	1	0.9655
ederry		0.02119	0.29	1	0.5909
fst		0.00050	0.00	1	0.9892
foyle		-0.06117	2.62	1	0.1054
lagan		0.05436	2.04	1	0.1527
midulster		-0.05354	1.89	1	0.1690
newry		-0.04045	1.13	1	0.2886
nantrim		0.09249	5.52	1	0.0188
ndown		0.05626	2.08	1	0.1496
santrim		-0.04911	1.73	1	0.1880
sdown		0.03224	0.68	1	0.4086
strangford		0.05513	2.09	1	0.1484
tyrone		0.05903	2.21	1	0.1372
-----+-----					
global test			80.18	33	0.0000
-----					

Test of proportional hazards assumption; Duration between Loyalist attacks; Breslow method for tied failures; Full location and year controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	91.54	33	0.0000

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	-0.03756	0.80	1	0.3696
tsave	-0.01046	0.21	1	0.6434
trbave	0.00561	0.04	1	0.8464
tlbave	0.01353	0.40	1	0.5285
tsbave	-0.00203	0.01	1	0.9174
lngdppc	0.14216	20.25	1	0.0000
lnunemppc	-0.03798	1.23	1	0.2679
year	-0.04758	2.13	1	0.1441
year2	0.02580	0.63	1	0.4282
year3	-0.02049	0.38	1	0.5362
year4	0.01686	0.25	1	0.6178

sunm		0.02187	0.51	1	0.4772
sands		0.01835	0.24	1	0.6208
dail		0.04823	1.53	1	0.2157
pop		-0.04532	1.69	1	0.1939
split		0.08260	5.57	1	0.0182
east		0.06372	3.66	1	0.0557
north		0.02929	0.68	1	0.4110
south		0.04384	1.52	1	0.2170
west		-0.04277	1.86	1	0.1732
eantrim		0.00067	0.00	1	0.9848
ederry		0.03974	0.96	1	0.3278
fst		-0.00298	0.01	1	0.9314
foyle		-0.02672	0.43	1	0.5137
lagan		0.06695	3.51	1	0.0610
midulster		-0.03890	1.27	1	0.2603
newry		-0.02281	0.62	1	0.4295
nantrim		0.11797	8.86	1	0.0029
ndown		0.07504	3.32	1	0.0684
santrim		-0.06804	3.59	1	0.0581
sdown		-0.00779	0.04	1	0.8425
strangford		0.09936	6.02	1	0.0142
tyrone		0.00723	0.03	1	0.8590
-----+-----					
global test			91.54	33	0.0000
-----					

note: robust variance-covariance matrix used.



Test of proportional hazards assumption; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	12.88	24	0.9680

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	0.00124	0.00	1	0.9685
tsave	0.00046	0.00	1	0.9899
trbave	0.00073	0.00	1	0.9804
tlbave	0.00088	0.00	1	0.9765
tsbave	-0.00015	0.00	1	0.9962
pop	-0.01011	0.06	1	0.8047
split	0.03474	0.74	1	0.3909
east	0.03473	0.76	1	0.3838
north	0.01427	0.15	1	0.7017
south	0.01627	0.19	1	0.6652
west	-0.02303	0.35	1	0.5565
eantrim	0.03152	0.67	1	0.4135
ederry	-0.02317	0.38	1	0.5359

fst		-0.01845	0.25	1	0.6167
foyle		-0.03804	0.80	1	0.3711
lagan		-0.00034	0.00	1	0.9927
midulster		-0.00405	0.01	1	0.9203
newry		0.00180	0.00	1	0.9626
nantrim		-0.01577	0.20	1	0.6552
ndown		-0.00768	0.04	1	0.8332
santrim		-0.02143	0.31	1	0.5786
sdown		-0.00584	0.02	1	0.8835
strangford		0.04158	1.03	1	0.3102
tyrone		0.05716	1.80	1	0.1792
-----+-----					
global test			12.88	24	0.9680
-----					

Test of proportional hazards assumption; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by year with location controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	9.86	24	0.9951

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	-0.00323	0.01	1	0.9218
tsave	-0.00013	0.00	1	0.9962
trbave	-0.00052	0.00	1	0.9863
tlbave	0.00363	0.02	1	0.8799
tsbave	0.00170	0.01	1	0.9426
pop	-0.02048	0.31	1	0.5800
split	0.03573	0.68	1	0.4093
east	0.03122	0.75	1	0.3858
north	0.01721	0.26	1	0.6132
south	0.01784	0.25	1	0.6142
west	-0.02076	0.25	1	0.6176

eantrim		0.02877	0.49	1	0.4827
ederry		-0.02451	0.53	1	0.4656
fst		-0.01117	0.07	1	0.7850
foyle		-0.03236	0.39	1	0.5340
lagan		-0.00833	0.06	1	0.8140
midulster		-0.00308	0.00	1	0.9450
newry		0.02096	0.44	1	0.5055
nantrim		-0.01924	0.44	1	0.5093
ndown		-0.00530	0.02	1	0.8923
santrim		-0.00932	0.05	1	0.8160
sdown		-0.01043	0.05	1	0.8250
strangford		0.03188	0.56	1	0.4543
tyrone		0.03354	0.38	1	0.5362
-----+-----					
global test			9.86	24	0.9951
-----					

note: robust variance-covariance matrix used.

Test of proportional hazards assumption; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	0.70	14	1.0000

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	0.00356	0.01	1	0.9159
tsave	0.00080	0.00	1	0.9831
trbave	0.00308	0.01	1	0.9222
tlbave	0.00503	0.03	1	0.8655
tsbave	-0.00034	0.00	1	0.9920
lngdppc	0.00904	0.05	1	0.8162
lnunemppc	-0.00531	0.02	1	0.8888
year	-0.00877	0.05	1	0.8230
year2	0.00914	0.06	1	0.8141
year3	-0.00903	0.05	1	0.8161
year4	0.00877	0.05	1	0.8215
sunn	-0.00028	0.00	1	0.9940
sands	0.00290	0.01	1	0.9380

dail		0.00480	0.02	1	0.8984
-----+-----					
global test			0.70	14	1.0000
-----					

Test of proportional hazards assumption; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by location with year controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	0.93	14	1.0000

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	0.01437	0.14	1	0.7048
tsave	0.00807	0.10	1	0.7476
trbave	0.00968	0.11	1	0.7440
tlbave	-0.00187	0.01	1	0.9369
tsbave	0.00954	0.19	1	0.6663
lngdppc	0.01240	0.09	1	0.7689
lnunemppc	-0.00755	0.04	1	0.8457
year	-0.01005	0.07	1	0.7938
year2	0.01059	0.08	1	0.7778
year3	-0.01107	0.09	1	0.7706
year4	0.01138	0.09	1	0.7682

sun		-0.00481	0.02	1	0.8920
sands		0.00365	0.01	1	0.9281
dail		0.00218	0.00	1	0.9644
-----+-----					
global test			0.93	14	1.0000
-----					

note: robust variance-covariance matrix used.



Test of proportional hazards assumption; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by year and location controls; Unclustered standard errors.

```
. estat phtest
```

```
Test of proportional-hazards assumption
```

```
Time: Time
```

```
-----  
|                chi2    df    Prob>chi2  
-----+-----  
global test |                0.00    5    1.0000  
-----
```

```
. estat phtest, detail
```

```
Test of proportional-hazards assumption
```

```
Time: Time
```

```
-----  
|      rho      chi2    df    Prob>chi2  
-----+-----  
trave   |    0.00037    0.00    1    0.9908  
tsave   |    0.00002    0.00    1    0.9995  
trbave  |    0.00025    0.00    1    0.9930  
tlbave  |    0.00003    0.00    1    0.9992  
tsbave  |    0.00009    0.00    1    0.9978  
-----+-----  
global test |                0.00    5    1.0000  
-----
```

Test of proportional hazards assumption; Duration between Loyalist attacks; Breslow method for tied failures; Stratification by year with location controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |                chi2      df      Prob>chi2  
-----+-----  
global test |                0.00      5      1.0000  
-----+-----
```

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |      rho      chi2      df      Prob>chi2  
-----+-----  
trave      |      0.00042      0.00      1      0.9892  
tsave      |      0.00007      0.00      1      0.9977  
trbave     |      0.00002      0.00      1      0.9995  
tlbave     |     -0.00017      0.00      1      0.9946  
tsbave     |      0.00015      0.00      1      0.9948  
-----+-----  
global test |                0.00      5      1.0000  
-----+-----
```

note: robust variance-covariance matrix used.

Test of proportional hazards assumption; Duration between Loyalist attacks; Efron method for tied failures; Full location and year controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |                chi2      df      Prob>chi2  
-----+-----  
global test |                80.19      33      0.0000  
-----+-----
```

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

```
-----+-----  
                |      rho      chi2      df      Prob>chi2  
-----+-----  
trave      |      0.00550      0.03      1      0.8618  
tsave      |     -0.00298      0.01      1      0.9357  
trbave      |     -0.00310      0.01      1      0.9205  
tlbave      |      0.01925      0.43      1      0.5112  
tsbave      |     -0.01061      0.11      1      0.7446  
lngdppc     |      0.08673      5.76      1      0.0164  
lnunemppc   |     -0.02097      0.32      1      0.5718  
year        |     -0.02839      0.54      1      0.4629  
year2       |      0.01164      0.09      1      0.7609  
year3       |     -0.00355      0.01      1      0.9259  
year4       |     -0.00250      0.00      1      0.9480  
sunn        |      0.04536      1.56      1      0.2120  
sands       |      0.04412      1.43      1      0.2324
```

dail		0.06971	3.60	1	0.0578
pop		-0.04832	1.51	1	0.2197
split		0.07427	3.70	1	0.0544
east		0.05613	2.05	1	0.1524
north		0.02015	0.28	1	0.5970
south		0.02938	0.59	1	0.4419
west		-0.05268	1.90	1	0.1680
eantrim		0.00149	0.00	1	0.9681
ederry		0.02110	0.29	1	0.5920
fst		0.00050	0.00	1	0.9892
foyle		-0.06093	2.61	1	0.1065
lagan		0.05435	2.05	1	0.1522
midulster		-0.05354	1.89	1	0.1687
newry		-0.04038	1.13	1	0.2885
nantrim		0.09228	5.50	1	0.0190
ndown		0.05610	2.07	1	0.1505
santrim		-0.04896	1.73	1	0.1889
sdown		0.03251	0.70	1	0.4036
strangford		0.05502	2.09	1	0.1487
tyrone		0.05895	2.21	1	0.1373
-----+-----					
global test			80.19	33	0.0000
-----					

Test of proportional hazards assumption; Duration between Loyalist attacks; Efron method for tied failures; Full location and year controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	91.64	33	0.0000

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	-0.02923	0.83	1	0.3608
tsave	-0.00914	0.22	1	0.6416
trbave	0.00527	0.04	1	0.8514
tlbave	0.01297	0.43	1	0.5136
tsbave	-0.00247	0.02	1	0.8941
lngdppc	0.14030	20.11	1	0.0000
lnunemppc	-0.03678	1.25	1	0.2639
year	-0.04673	2.12	1	0.1451
year2	0.02537	0.63	1	0.4273
year3	-0.02024	0.39	1	0.5337
year4	0.01674	0.25	1	0.6142

sunm		0.02205	0.55	1	0.4569
sands		0.01839	0.25	1	0.6169
dail		0.04849	1.58	1	0.2089
pop		-0.04518	1.74	1	0.1870
split		0.08076	5.50	1	0.0190
east		0.06102	3.56	1	0.0591
north		0.02817	0.65	1	0.4191
south		0.04255	1.49	1	0.2224
west		-0.04101	1.79	1	0.1807
eantrim		0.00031	0.00	1	0.9928
ederry		0.03949	0.95	1	0.3291
fst		-0.00230	0.00	1	0.9455
foyle		-0.02540	0.40	1	0.5252
lagan		0.06671	3.51	1	0.0609
midulster		-0.03896	1.27	1	0.2595
newry		-0.02239	0.61	1	0.4349
nantrim		0.11743	8.86	1	0.0029
ndown		0.07427	3.30	1	0.0694
santrim		-0.06717	3.54	1	0.0599
sdown		-0.00776	0.04	1	0.8396
strangford		0.09809	5.97	1	0.0145
tyrone		0.00736	0.03	1	0.8530
-----+-----					
global test			91.64	33	0.0000
-----					

note: robust variance-covariance matrix used.

Test of proportional hazards assumption; Duration between Loyalist attacks; Efron method for tied failures; Stratification by year with location controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	12.87	24	0.9681

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	0.00114	0.00	1	0.9701
tsave	0.00046	0.00	1	0.9894
trbave	0.00071	0.00	1	0.9802
tlbave	0.00087	0.00	1	0.9765
tsbave	-0.00012	0.00	1	0.9970
pop	-0.01018	0.06	1	0.8030
split	0.03503	0.75	1	0.3851
east	0.03490	0.77	1	0.3796
north	0.01424	0.15	1	0.7017
south	0.01632	0.19	1	0.6636
west	-0.02328	0.36	1	0.5505
eantrim	0.03132	0.67	1	0.4146
ederry	-0.02313	0.38	1	0.5364

fst		-0.01862	0.26	1	0.6129
foyle		-0.03817	0.81	1	0.3686
lagan		-0.00002	0.00	1	0.9995
midulster		-0.00427	0.01	1	0.9158
newry		0.00155	0.00	1	0.9677
nantrim		-0.01586	0.20	1	0.6526
ndown		-0.00752	0.04	1	0.8365
santrim		-0.02097	0.30	1	0.5864
sdown		-0.00609	0.02	1	0.8784
strangford		0.04174	1.04	1	0.3074
tyrone		0.05683	1.79	1	0.1812
-----+-----					
global test			12.87	24	0.9681
-----					



Test of proportional hazards assumption; Duration between Loyalist attacks; Efron method for tied failures; Stratification by year with location controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	9.90	24	0.9949

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	-0.00258	0.01	1	0.9291
tsave	0.00024	0.00	1	0.9925
trbave	-0.00081	0.00	1	0.9772
tlbave	0.00328	0.02	1	0.8815
tsbave	0.00188	0.01	1	0.9307
pop	-0.02016	0.30	1	0.5824
split	0.03559	0.70	1	0.4013
east	0.03086	0.78	1	0.3781
north	0.01709	0.26	1	0.6134
south	0.01763	0.25	1	0.6153
west	-0.02092	0.26	1	0.6072

eantrim		0.02819	0.49	1	0.4823
ederry		-0.02442	0.53	1	0.4669
fst		-0.01145	0.08	1	0.7773
foyle		-0.03243	0.40	1	0.5259
lagan		-0.00795	0.05	1	0.8214
midulster		-0.00332	0.01	1	0.9405
newry		0.02047	0.43	1	0.5137
nantrim		-0.01936	0.45	1	0.5028
ndown		-0.00498	0.02	1	0.8986
santrim		-0.00839	0.04	1	0.8323
sdown		-0.01087	0.05	1	0.8154
strangford		0.03206	0.58	1	0.4462
tyrone		0.03239	0.37	1	0.5442
-----+-----					
global test			9.90	24	0.9949
-----					

note: robust variance-covariance matrix used.

Test of proportional hazards assumption; Duration between Loyalist attacks; Efron method for tied failures; Stratification by location with year controls; Unclustered standard errors.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	0.69	14	1.0000

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	0.00336	0.01	1	0.9156
tsave	0.00112	0.00	1	0.9755
trbave	0.00281	0.01	1	0.9269
tlbave	0.00491	0.03	1	0.8658
tsbave	-0.00025	0.00	1	0.9938
lngdppc	0.00911	0.06	1	0.8144
lnunemppc	-0.00542	0.02	1	0.8861
year	-0.00883	0.05	1	0.8212
year2	0.00922	0.06	1	0.8118
year3	-0.00912	0.06	1	0.8137
year4	0.00887	0.05	1	0.8190
sunn	-0.00024	0.00	1	0.9949
sands	0.00285	0.01	1	0.9390

dail		0.00478	0.02	1	0.8986
-----+					
global test			0.69	14	1.0000
-----					

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Stratification by year with location controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	0.95	14	1.0000

note: robust variance-covariance matrix used.

```
. estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	0.01290	0.18	1	0.6679
tsave	0.00830	0.13	1	0.7151
trbave	0.00931	0.10	1	0.7471
tlbave	-0.00262	0.01	1	0.9040
tsbave	0.00908	0.20	1	0.6532
lngdppc	0.01238	0.09	1	0.7625
lnunemppc	-0.00675	0.03	1	0.8563
year	-0.01002	0.07	1	0.7902
year2	0.01037	0.08	1	0.7780
year3	-0.01080	0.08	1	0.7718
year4	0.01111	0.09	1	0.7694

sun		-0.00508	0.02	1	0.8794
sands		0.00380	0.01	1	0.9248
dail		0.00216	0.00	1	0.9645
-----+-----					
global test			0.95	14	1.0000
-----					

note: robust variance-covariance matrix used.

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Stratification by year and location controls; Unclustered standard errors.

```
. estat phtest
```

```
Test of proportional-hazards assumption
```

```
Time: Time
```

```
-----
```

	chi2	df	Prob>chi2
global test	0.00	5	1.0000

```
-----
```

```
. estat phtest, detail
```

```
Test of proportional-hazards assumption
```

```
Time: Time
```

```
-----
```

	rho	chi2	df	Prob>chi2
trave	0.00035	0.00	1	0.9910
tsave	0.00002	0.00	1	0.9995
trbave	0.00026	0.00	1	0.9927
tlbave	0.00000	0.00	1	0.9999
tsbave	0.00007	0.00	1	0.9982
global test		0.00	5	1.0000

```
-----
```

Test of proportional hazards assumption; Duration between Republican attacks; Efron method for tied failures; Stratification by year with location controls; Standard errors clustered by location-year.

```
. estat phtest
```

Test of proportional-hazards assumption

Time: Time

	chi2	df	Prob>chi2
global test	0.00	5	1.0000

note: robust variance-covariance matrix used.

```
estat phtest, detail
```

Test of proportional-hazards assumption

Time: Time

	rho	chi2	df	Prob>chi2
trave	0.00044	0.00	1	0.9868
tsave	0.00013	0.00	1	0.9957
trbave	0.00001	0.00	1	0.9996
tlbave	-0.00023	0.00	1	0.9919
tsbave	0.00017	0.00	1	0.9931
global test		0.00	5	1.0000

note: robust variance-covariance matrix used.



## Appendix 5: Output from Accelerated Failure Time Models with Duration between Republican Attacks as Duration Variable

Output from accelerated failure time models; Exponential distribution; Duration between Republican attacks; Full year and location controls. Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839
Log likelihood   =    -2121.5733
LR chi2(24)     =          1566.16
Prob > chi2     =          0.0000
  
```

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
tlave	2.259301	.2483416	7.42	0.000	1.821421	2.80245
tsave	2.01092	.2876178	4.88	0.000	1.519319	2.661585
trbave	2.497009	.3530698	6.47	0.000	1.892617	3.294409
tlbave	5.322589	1.284531	6.93	0.000	3.316634	8.541779
tsbave	2.068459	.3933173	3.82	0.000	1.424922	3.002637
pop	1.000007	1.78e-06	3.93	0.000	1.000004	1.00001
split	.9728723	.0058351	-4.59	0.000	.9615027	.9843763
east	.2760108	.0807641	-4.40	0.000	.1555443	.4897764
north	2.614352	.448699	5.60	0.000	1.867553	3.659781
south	1.483282	.274481	2.13	0.033	1.032069	2.13176
west	7.650214	1.519494	10.24	0.000	5.183307	11.2912
eantrim	.0487536	.0295909	-4.98	0.000	.0148379	.1601924
ederry	.4904118	.1283081	-2.72	0.006	.293669	.818962
fst	2.909711	.6228014	4.99	0.000	1.912743	4.426322
foyle	6.058476	1.389235	7.86	0.000	3.865265	9.496151
lagan	.281482	.0791217	-4.51	0.000	.1622507	.4883314
midulster	2.191865	.4530563	3.80	0.000	1.461743	3.286671
newry	7.806148	1.451011	11.06	0.000	5.422692	11.23721
nantrim	1.217161	.0501312	4.77	0.000	1.122767	1.319491
ndown	6.07e-08	.0000287	-0.04	0.972	0	.
santrim	.0457738	.024223	-5.83	0.000	.0162244	.1291409

sdown		1.051077	.2724232	0.19	0.848	.6324355	1.74684
strangford		.0332458	.02035	-5.56	0.000	.0100164	.1103475
tyrone		2.446158	.5548647	3.94	0.000	1.568215	3.815606
_cons		.0010567	.0004057	-17.85	0.000	.0004979	.0022427

---



tyrone		2.10619	.478796	3.28	0.001	1.348949	3.288512
_cons		.0016568	.0006532	-16.24	0.000	.0007651	.003588
-----+							
/gamma		-.0007793	.0001712	-4.55	0.000	-.0011148	-.0004439
-----							



tyrone		- .5995566	.2836849	-2.11	0.035	-1.155569	-.0435444
_cons		5.576054	.4879291	11.43	0.000	4.619731	6.532378
-----+							
/ln_gam		-.3017125	.023595	-12.79	0.000	-.3479579	-.2554672
-----+							
gamma		.7395506	.0174497			.7061286	.7745546
-----							

convergence not achieved

Output from accelerated failure time models; Weibull distribution; Duration between Republican attacks; Full year and location controls. Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839
Log likelihood   =   -2102.3675
LR chi2(24)     =          774.35
Prob > chi2     =          0.0000
    
```

-----+-----						
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
tlave	2.046252	.2292657	6.39	0.000	1.642816	2.548762
tsave	1.818652	.2669341	4.07	0.000	1.363998	2.424852
trbave	2.221495	.3266898	5.43	0.000	1.665209	2.963615
tlbave	4.16508	1.027768	5.78	0.000	2.567926	6.755606
tsbave	1.923038	.3680897	3.42	0.001	1.321475	2.798446
pop	1.000006	1.79e-06	3.19	0.001	1.000002	1.000009
split	.9748911	.0059294	-4.18	0.000	.9633388	.986582
east	.2992162	.0881906	-4.09	0.000	.1679202	.5331719
north	2.314247	.4003567	4.85	0.000	1.64875	3.248364
south	1.381719	.2565729	1.74	0.082	.9601944	1.988292
west	6.059752	1.223912	8.92	0.000	4.078818	9.002755
eantrim	.0622747	.0378998	-4.56	0.000	.018892	.2052795
ederry	.5146536	.1347894	-2.54	0.011	.3080226	.8598988
fst	2.589725	.5530184	4.46	0.000	1.704062	3.935701
foyle	4.95967	1.148789	6.91	0.000	3.149868	7.80932
lagan	.3232482	.0912937	-4.00	0.000	.1858381	.5622605
midulster	1.931198	.4006969	3.17	0.002	1.285921	2.900276
newry	6.030211	1.147386	9.44	0.000	4.153095	8.755747
nantrim	1.199098	.0495159	4.40	0.000	1.105872	1.300183
ndown	3.85e-08	.000028	-0.02	0.981	0	.
santrim	.0635395	.0337996	-5.18	0.000	.0224001	.1802343
sdown	1.042751	.2695161	0.16	0.871	.6283091	1.730563

strangford		.0441595	.0271205	-5.08	0.000	.0132513	.1471597
tyrone		2.141984	.4870239	3.35	0.001	1.37176	3.344678
_cons		.0026222	.0010743	-14.51	0.000	.0011747	.0058534
-----+-----							
/ln_p		-.1288376	.0215249	-5.99	0.000	-.1710256	-.0866497
-----+-----							
p		.8791167	.0189229			.8428	.9169983
1/p		1.137505	.0244846			1.090515	1.186521
-----							



Output from accelerated failure time models; Log-Normal distribution; Duration between Republican attacks; Full year and location controls. Unclustered standard errors.

No. of subjects = 1261                      Number of obs = 1261  
 No. of failures = 1243  
 Time at risk = 160839  
 LR chi2(24) = 544.44  
 Log likelihood = -2107.4659              Prob > chi2 = 0.0000

```
-----
```

_t	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+						
tlave	-.8698931	.1922322	-4.53	0.000	-1.246661	-.4931249
tsave	-.5024933	.2153216	-2.33	0.020	-.9245158	-.0804708
trbave	-.5743425	.2257933	-2.54	0.011	-1.016889	-.1317958
tlbave	-1.037634	.3036242	-3.42	0.001	-1.632726	-.442541
tsbave	-1.005139	.2670673	-3.76	0.000	-1.528582	-.4816972
pop	-2.90e-06	2.46e-06	-1.18	0.239	-7.72e-06	1.93e-06
split	.0383893	.008628	4.45	0.000	.0214788	.0552998
east	1.763465	.3972715	4.44	0.000	.9848275	2.542103
north	-.8929171	.2270406	-3.93	0.000	-1.337908	-.4479258
south	-.2575857	.2440564	-1.06	0.291	-.7359275	.2207561
west	-2.191858	.2646022	-8.28	0.000	-2.710469	-1.673247
eantrim	3.785319	.7190969	5.26	0.000	2.375915	5.194723
ederry	.8989721	.3390408	2.65	0.008	.2344643	1.56348
fst	-1.149723	.2681349	-4.29	0.000	-1.675258	-.6241879
foyle	-1.929528	.3044609	-6.34	0.000	-2.526261	-1.332796
lagan	1.304356	.3709871	3.52	0.000	.5772344	2.031477
midulster	-.56604	.2691179	-2.10	0.035	-1.093501	-.0385786
newry	-1.93027	.2445077	-7.89	0.000	-2.409496	-1.451044
nantrim	-.2753781	.0529448	-5.20	0.000	-.379148	-.1716082
ndown	11.46951	176.563	0.06	0.948	-334.5876	357.5266
santrim	3.186208	.6375312	5.00	0.000	1.93667	4.435747
sdown	.0743992	.3326049	0.22	0.823	-.5774943	.7262928
strangford	4.356564	.73262	5.95	0.000	2.920655	5.792473

tyrone		-.6215433	.2919545	-2.13	0.033	-1.193764	-.0493229
_cons		5.946824	.50642	11.74	0.000	4.954259	6.939389
-----+							
/ln_sig		.265963	.0200723	13.25	0.000	.226622	.3053041
-----+							
sigma		1.304687	.0261881			1.254356	1.357038
-----							

Output from accelerated failure time models; Gamma distribution; Duration between Republican attacks; Full year and location controls. Unclustered standard errors.

Initial values not feasible

Output from accelerated failure time models; Exponential distribution; Duration between Republican attacks; Full year and location controls. Standard errors clustered by location-year.

```

No. of subjects      =          1261                Number of obs      =          1261
No. of failures     =          1243
Time at risk        =          160839

                                           Wald chi2(24)      =          3742.51
Log pseudolikelihood = -2121.5733                Prob > chi2        =          0.0000
  
```

(Std. Err. adjusted for 271 clusters in yearcon)

```

-----
                |                               Robust
                |                               +-----+
      _t | Haz. Ratio   Std. Err.       z    P>|z|    [95% Conf. Interval]
-----+-----
      tlave |  2.259301   .1745885   10.55  0.000   1.941767   2.628761
      tsave |  2.01092    .1067863   13.16  0.000   1.812146   2.231497
      trbave |  2.497009   .6297191    3.63  0.000   1.523197   4.093399
      tlbave |  5.322589   1.620342    5.49  0.000   2.930851   9.666117
      tsbave |  2.068459   .2796722    5.38  0.000   1.58693    2.696101
           pop |  1.000007   3.08e-06    2.27  0.023   1.000001   1.000013
      split |  .9728723   .0073492   -3.64  0.000   .9585743   .9873835
           east |  .2760108   .1132426   -3.14  0.002   .1235072   .6168218
      north |  2.614352   .8735755    2.88  0.004   1.358121   5.032569
      south |  1.483282   .4996022    1.17  0.242   .7665139   2.870299
           west |  7.650214   2.776923    5.61  0.000   3.75577   15.58289
      eantrim |  .0487536   .0347437   -4.24  0.000   .0120617   .1970629
      ederry |  .4904118   .2214203   -1.58  0.115   .2024158   1.188167
           fst |  2.909711   1.184529    2.62  0.009   1.310177   6.462043
           foyle |  6.058476   2.365338    4.61  0.000   2.818636   13.0223
           lagan |  .281482    .1372098   -2.60  0.009   .108275    .7317674
      midulster |  2.191865   .7298582    2.36  0.018   1.141238    4.2097
           newry |  7.806148   2.577529    6.22  0.000   4.086737   14.91066
      nantrim |  1.217161   .0578404    4.14  0.000   1.108915   1.335973
           ndown |  6.07e-08   6.46e-08  -15.61  0.000   7.53e-09   4.89e-07
      santrim |  .0457738   .0221879   -6.36  0.000   .0177017   .1183639
  
```

sdown		1.051077	.3979522	0.13	0.895	.5004471	2.207553
strangford		.0332458	.0159643	-7.09	0.000	.0129717	.0852071
tyrone		2.446158	.8305054	2.63	0.008	1.257447	4.758604
_cons		.0010567	.0004473	-16.19	0.000	.000461	.0024225

---

Output from accelerated failure time models; Gompertz distribution; Duration between Republican attacks; Full year and location controls. Standard errors clustered by location-year.

```

No. of subjects      =           1261           Number of obs      =           1261
No. of failures     =           1243
Time at risk        =           160839
Log pseudolikelihood = -2108.2549           Wald chi2(24)      =           2499.89
                                                           Prob > chi2        =           0.0000

```

(Std. Err. adjusted for 271 clusters in yearcon)

```

-----
                |               Robust
          _t | Haz. Ratio  Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
    tlave |  2.228744   .168464    10.60  0.000    1.921854   2.584639
    tsave |  1.983014   .106935    12.70  0.000    1.784121   2.204079
   trbave |  2.424836   .5922175     3.63  0.000    1.502427   3.913553
   tlbave |  4.940761   1.443958     5.47  0.000    2.786293   8.761148
   tsbave |   2.08823   .2678558     5.74  0.000    1.624035   2.685105
      pop |  1.000006   2.84e-06     2.12  0.034             1   1.000012
   split |  .9738474   .0068491    -3.77  0.000    .9605155   .9873642
      east |  .2757881   .0989043    -3.59  0.000    .136557    .5569768
    north |  2.319476   .6669602     2.93  0.003    1.320167    4.07522
    south |  1.328667   .3854214     0.98  0.327    .7524863   2.346031
    west  |  6.319827   2.059202     5.66  0.000    3.337002   11.96889
  eantrim |  .0984093   .0556973    -4.10  0.000    .0324546   .298398
   ederry |  .5168487   .2092722    -1.63  0.103    .2337284   1.142918
      fst  |  2.55373    .9257645     2.59  0.010    1.254879   5.196944
   foyle  |  5.048008   1.774787     4.60  0.000    2.534272   10.05511
   lagan  |  .3531143   .1364807    -2.69  0.007    .1655468   .7531989
midulster |  1.88336    .546948     2.18  0.029    1.065946   3.327602
   newry  |  6.348597   1.871817     6.27  0.000    3.562132   11.31477
  nantrim |  1.193975   .0480546     4.40  0.000    1.103408   1.291974
   ndown  |  1.00e-07   1.08e-07   -14.93  0.000    1.21e-08   8.29e-07
  santrim |  .1023519   .0319191    -7.31  0.000    .0555447   .188603

```

sdown		1.066186	.3326446	0.21	0.837	.5784459	1.965186
strangford		.0586546	.0258546	-6.43	0.000	.0247228	.1391577
tyrone		2.10619	.6277651	2.50	0.012	1.174331	3.777498
_cons		.0016568	.0006494	-16.34	0.000	.0007685	.003572
-----							
/gamma		-.0007793	.0002095	-3.72	0.000	-.00119	-.0003687
-----							

Output from accelerated failure time models; Log-logistic distribution; Duration between Republican attacks; Full year and location controls. Standard errors clustered by location-year.

No. of subjects = 1261                      Number of obs = 1261  
 No. of failures = 1243  
 Time at risk = 160839  
 Wald chi2(23) = .  
 Log pseudolikelihood = -2112.823              Prob > chi2 = .

(Std. Err. adjusted for 271 clusters in yearcon)

```
-----+-----
```

	Robust					
_t	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
tlave	-.9140516	.4619147	-1.98	0.048	-1.819388	-.0087154
tsave	-.4951419	.0545322	-9.08	0.000	-.602023	-.3882608
trbave	-.6791799	.3629459	-1.87	0.061	-1.390541	.032181
tlbave	-1.164543	.3118857	-3.73	0.000	-1.775828	-.5532587
tsbave	-.8984939	.2423619	-3.71	0.000	-1.373515	-.4234733
pop	-1.21e-06	3.10e-06	-0.39	0.696	-7.30e-06	4.87e-06
split	.0378784	.0091104	4.16	0.000	.0200224	.0557344
east	1.87057	.5034185	3.72	0.000	.8838881	2.857252
north	-.942673	.3380924	-2.79	0.005	-1.605322	-.2800241
south	-.2573013	.3419268	-0.75	0.452	-.9274656	.4128629
west	-2.230406	.4202623	-5.31	0.000	-3.054105	-1.406707
eantrim	3.679728	.922288	3.99	0.000	1.872077	5.487379
ederry	.9437908	.7416342	1.27	0.203	-.5097855	2.397367
fst	-1.170615	.3894108	-3.01	0.003	-1.933846	-.4073839
foyle	-1.993786	.4269533	-4.67	0.000	-2.8306	-1.156973
lagan	1.304912	.5890982	2.22	0.027	.1503004	2.459523
midulster	-.4664549	.3612448	-1.29	0.197	-1.174482	.2415718
newry	-1.920189	.3367939	-5.70	0.000	-2.580293	-1.260085
nantrim	-.2393436	.056475	-4.24	0.000	-.3500325	-.1286547
ndown	521.3335	.	.	.	.	.

```
-----+-----
```



santrim		2.972547	.364942	8.15	0.000	2.257274	3.687821
sdown		-.0181613	.3834912	-0.05	0.962	-.7697902	.7334677
strangford		4.151898	.4187286	9.92	0.000	3.331205	4.972591
tyrone		-.5995566	.3505196	-1.71	0.087	-1.286563	.0874492
_cons		5.576054	.5076732	10.98	0.000	4.581033	6.571075
-----+-----							
/ln_gam		-.3017125	.0226689	-13.31	0.000	-.3461427	-.2572823
-----+-----							
gamma		.7395506	.0167648			.7074115	.7731499
-----							

convergence not achieved

Output from accelerated failure time models; Weibull distribution; Duration between Republican attacks; Full year and location controls. Standard errors clustered by location-year.

No. of subjects = 1261                      Number of obs = 1261  
 No. of failures = 1243  
 Time at risk = 160839  
 Wald chi2(24) = 1527.00  
 Log pseudolikelihood = -2102.3675              Prob > chi2 = 0.0000

(Std. Err. adjusted for 271 clusters in yearcon)

-----						
	Robust					
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+						
tlave	2.046252	.1551768	9.44	0.000	1.763634	2.374158
tsave	1.818652	.0914108	11.90	0.000	1.648032	2.006935
trbave	2.221495	.528428	3.36	0.001	1.393701	3.54096
tlbave	4.16508	1.123196	5.29	0.000	2.455162	7.065885
tsbave	1.923038	.2300939	5.47	0.000	1.52104	2.431282
pop	1.000006	2.65e-06	2.16	0.031	1.000001	1.000011
split	.9748911	.0066483	-3.73	0.000	.9619474	.988009
east	.2992162	.1101912	-3.28	0.001	.145384	.6158199
north	2.314247	.6789034	2.86	0.004	1.302276	4.112602
south	1.381719	.4083954	1.09	0.274	.774158	2.466095
west	6.059752	1.938493	5.63	0.000	3.237118	11.34361
eantrim	.0622747	.0414976	-4.17	0.000	.0168694	.2298911
ederry	.5146536	.212949	-1.61	0.108	.2287242	1.158025
fst	2.589725	.9226905	2.67	0.008	1.28819	5.206279
foyle	4.95967	1.720804	4.62	0.000	2.512582	9.790057
lagan	.3232482	.1400539	-2.61	0.009	.1382725	.7556776
midulster	1.931198	.5649201	2.25	0.024	1.088505	3.426281
newry	6.030211	1.783005	6.08	0.000	3.377928	10.76501
nantrim	1.199098	.0509902	4.27	0.000	1.103211	1.30332
ndown	3.85e-08	4.07e-08	-16.15	0.000	4.85e-09	3.05e-07

santrim		.0635395	.0274507	-6.38	0.000	.027246	.1481786
sdown		1.042751	.3444251	0.13	0.899	.545789	1.992214
strangford		.0441595	.0194351	-7.09	0.000	.0186381	.1046281
tyrone		2.141984	.6404756	2.55	0.011	1.19206	3.84888
_cons		.0026222	.0010144	-15.36	0.000	.0012285	.0055971
-----+							
/ln_p		-.1288376	.0240352	-5.36	0.000	-.1759457	-.0817295
-----+							
p		.8791167	.0211297			.8386635	.9215212
1/p		1.137505	.0273402			1.085162	1.192373
-----							

Output from accelerated failure time models; Log-Normal distribution; Duration between Republican attacks; Full year and location controls. Standard errors clustered by location-year.

No. of subjects = 1261                          Number of obs = 1261  
No. of failures = 1243  
Time at risk = 160839  
  
Wald chi2(24) = 4216.21  
Log pseudolikelihood = -2107.4659                  Prob > chi2 = 0.0000

(Std. Err. adjusted for 271 clusters in yearcon)

```
-----+-----
```

_t	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]
tlave	-.8698931	.1993084	-4.36	0.000	[-1.26053, -.4792557]
tsave	-.5024933	.0570312	-8.81	0.000	[-.6142724, -.3907142]
trbave	-.5743425	.3001454	-1.91	0.056	[-1.162617, .0139318]
tlbave	-1.037634	.2622936	-3.96	0.000	[-1.55172, -.5235475]
tsbave	-1.005139	.2238289	-4.49	0.000	[-1.443836, -.566443]
pop	-2.90e-06	3.14e-06	-0.92	0.356	[-9.05e-06, 3.26e-06]
split	.0383893	.0085021	4.52	0.000	[.0217256, .055053]
east	1.763465	.4514493	3.91	0.000	[.878641, 2.64829]
north	-.8929171	.3054806	-2.92	0.003	[-1.491648, -.2941861]
south	-.2575857	.3058756	-0.84	0.400	[-.8570909, .3419195]
west	-2.191858	.3689448	-5.94	0.000	[-2.914977, -1.46874]
eantrim	3.785319	.7729011	4.90	0.000	[2.270461, 5.300177]
ederry	.8989721	.6011707	1.50	0.135	[-.2793008, 2.077245]
fst	-1.149723	.3601785	-3.19	0.001	[-1.855659, -.4437859]
foyle	-1.929528	.3824103	-5.05	0.000	[-2.679039, -1.180018]
lagan	1.304356	.5419576	2.41	0.016	[.2421383, 2.366573]
midulster	-.56604	.3303295	-1.71	0.087	[-1.213474, .0813938]
newry	-1.93027	.3031263	-6.37	0.000	[-2.524387, -1.336154]
nantrim	-.2753781	.0501338	-5.49	0.000	[-.3736386, -.1771177]
ndown	11.46951	.4609601	24.88	0.000	[10.56605, 12.37298]
santrim	3.186208	.3224963	9.88	0.000	[2.554127, 3.818289]

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-----+-----
```

sdown		.0743992	.3449855	0.22	0.829	-.6017598	.7505583
strangford		4.356564	.4258305	10.23	0.000	3.521952	5.191176
tyrone		-.6215433	.3203329	-1.94	0.052	-1.249384	.0062977
_cons		5.946824	.475812	12.50	0.000	5.014249	6.879398
-----+							
/ln_sig		.265963	.0207635	12.81	0.000	.2252674	.3066587
-----+							
sigma		1.304687	.0270898			1.252658	1.358877
-----							

Output from accelerated failure time models; Gamma distribution; Duration between Republican attacks; Full year and location controls. Standard errors clustered by location-year.

Initial values not feasible

Output from accelerated failure time models; Exponential distribution; Duration between Republican attacks; Year stratification and location controls. Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839
Log likelihood   =   -1970.8184
LR chi2(47)     =          736.41
Prob > chi2     =          0.0000

```

```

-----
      _t |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
 _t      |
   tlave |   .6830464   .1222748     5.59   0.000    .4433922   .9227006
   tsave |   .4823453   .1593777     3.03   0.002    .1699707   .7947199
  trbave |   .2903393   .2058422     1.41   0.158   -.1131041   .6937826
  tlbave |   .7236348   .2958013     2.45   0.014    .143875    1.303395
  tsbave |   .7707908   .2051095     3.76   0.000    .3687836   1.172798
   east  |  -1.826279   .5103572    -3.58   0.000   -2.82656   -.8259968
  north  |   .7926991   .1985164     3.99   0.000    .4036141   1.181784
  south  |   .2124542   .2178003     0.98   0.329   -.2144265   .6393348
   west  |   2.289631   .3403027     6.73   0.000    1.62265    2.956612
 eantrim |  -3.166301   .6795728    -4.66   0.000   -4.498239  -1.834362
  ederry |  -.9123233   .2760286    -3.31   0.001   -1.453329  -.3713172
   fst   |     1.325    .2825545     4.69   0.000    .7712031   1.878796
   foyle |   2.176129   .4331874     5.02   0.000    1.327097    3.02516
   lagan |  -1.468103   .378472     -3.88   0.000   -2.209895  -.7263117
midulster | .9176352   .2607516     3.52   0.000    .4065715   1.428699
   newry |   2.246694   .3008821     7.47   0.000    1.656976   2.836412
 nantrim |   .2471489   .0474733     5.21   0.000    .154103    .3401948
  ndown  | -16.80119   727.1279    -0.02   0.982  -1441.946  1408.343
 santrim |  -2.836924   .6117471    -4.64   0.000   -4.035926  -1.637922
  sdown  |   .4470536   .3798519     1.18   0.239   -.2974425   1.19155
strangford | -3.240591   .7112517    -4.56   0.000   -4.634618  -1.846563

```

tyrone		1.157078	.3662486	3.16	0.002	.4392442	1.874913
pop		5.99e-06	1.97e-06	3.04	0.002	2.13e-06	9.86e-06
split		-.046016	.0156913	-2.93	0.003	-.0767704	-.0152615
_Syear_3		-.2709609	.343939	-0.79	0.431	-.9450689	.4031472
_Syear_4		-.7315279	.4358521	-1.68	0.093	-1.585782	.1227265
_Syear_5		-.9605717	.4750906	-2.02	0.043	-1.891732	-.0294113
_Syear_6		-.4332916	.4453311	-0.97	0.331	-1.306124	.4395413
_Syear_7		-.4905691	.4134638	-1.19	0.235	-1.300943	.3198051
_Syear_8		-1.404509	.5544864	-2.53	0.011	-2.491283	-.3177358
_Syear_9		-1.410275	.6435649	-2.19	0.028	-2.671639	-.1489108
_Syear_10		-.6841304	.500166	-1.37	0.171	-1.664438	.296177
_Syear_11		-1.91917	.7034763	-2.73	0.006	-3.297959	-.5403823
_Syear_12		-.5557907	.494697	-1.12	0.261	-1.525379	.4137976
_Syear_13		-1.142468	.5905907	-1.93	0.053	-2.300005	.0150682
_Syear_14		-2.071741	.7067883	-2.93	0.003	-3.45702	-.6864611
_Syear_15		-2.105521	.7468498	-2.82	0.005	-3.56932	-.6417227
_Syear_16		-2.282152	.8491242	-2.69	0.007	-3.946405	-.6178988
_Syear_17		-.7821242	.6343167	-1.23	0.218	-2.025362	.4611138
_Syear_18		-.8346102	.5244461	-1.59	0.112	-1.862506	.1932852
_Syear_19		-1.336102	.6366271	-2.10	0.036	-2.583868	-.0883356
_Syear_20		-3.719961	1.107705	-3.36	0.001	-5.891023	-1.548899
_Syear_21		-2.109452	.8155526	-2.59	0.010	-3.707906	-.5109987
_Syear_22		-1.758003	.8200511	-2.14	0.032	-3.365273	-.1507319
_Syear_23		-.8522457	.8308332	-1.03	0.305	-2.480649	.7761574
_Syear_24		-1.533894	.9046579	-1.70	0.090	-3.306991	.2392029
_Syear_25		-1.61162	.9851544	-1.64	0.102	-3.542487	.3192471
_cons		-5.306166	.5648388	-9.39	0.000	-6.41323	-4.199103

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ln_p							
_Syear_3		.2916018	.0888128	3.28	0.001	.1175319	.4656716
_Syear_4		.3111715	.1069861	2.91	0.004	.1014827	.5208604
_Syear_5		.3068541	.1094948	2.80	0.005	.0922483	.5214598
_Syear_6		.1866396	.1123484	1.66	0.097	-.0335592	.4068383
_Syear_7		.2574077	.102299	2.52	0.012	.0569054	.45791
_Syear_8		.4329964	.1215175	3.56	0.000	.1948266	.6711663



_Syear_9		.2860273	.1353104	2.11	0.035	.0208238	.5512309
_Syear_10		.1479269	.1176819	1.26	0.209	-.0827254	.3785791
_Syear_11		.4268913	.1415248	3.02	0.003	.1495077	.7042748
_Syear_12		.1156743	.1225999	0.94	0.345	-.1246172	.3559657
_Syear_13		.2109995	.1286789	1.64	0.101	-.0412065	.4632054
_Syear_14		.3481513	.1347336	2.58	0.010	.0840783	.6122243
_Syear_15		.4273541	.1427676	2.99	0.003	.1475348	.7071735
_Syear_16		.3597902	.1580468	2.28	0.023	.0500241	.6695562
_Syear_17		.0493736	.1459105	0.34	0.735	-.2366057	.335353
_Syear_18		.1425816	.1208422	1.18	0.238	-.0942647	.3794278
_Syear_19		.2118387	.1336019	1.59	0.113	-.0500162	.4736936
_Syear_20		.5853244	.163693	3.58	0.000	.2644919	.9061568
_Syear_21		.3375214	.1531099	2.20	0.027	.0374314	.6376114
_Syear_22		.425994	.1424752	2.99	0.003	.1467477	.7052404
_Syear_23		.220433	.1651436	1.33	0.182	-.1032426	.5441086
_Syear_24		.3282669	.1650688	1.99	0.047	.004738	.6517958
_Syear_25		.1850783	.1784689	1.04	0.300	-.1647143	.5348708
_cons		-.2790525	.0777585	-3.59	0.000	-.4314565	-.1266486

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Output from accelerated failure time models; Gompertz distribution; Duration between Republican attacks; Year stratification and location controls. Unclustered standard errors.

```
No. of subjects =      1261          Number of obs =      1261
No. of failures =      1243
Time at risk    =      160839

                               LR chi2(47) =      973.87
Log likelihood = -1970.1739       Prob > chi2 =      0.0000
```

_t	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
_t						
tlave	.6925684	.1144372	6.05	0.000	.4682756	.9168612
tsave	.4699482	.1565735	3.00	0.003	.1630697	.7768266
trbave	.2668301	.202445	1.32	0.187	-.1299548	.6636151
tlbave	.6821564	.3063402	2.23	0.026	.0817407	1.282572
tsbave	.8061991	.2070776	3.89	0.000	.4003345	1.212064
east	-2.049068	.5230215	-3.92	0.000	-3.074172	-1.023965
north	.7846049	.2020958	3.88	0.000	.3885044	1.180705
south	.1684694	.2222673	0.76	0.448	-.2671665	.6041053
west	2.441401	.3505988	6.96	0.000	1.75424	3.128562
eantrim	-3.552012	.8685235	-4.09	0.000	-5.254287	-1.849738
ederry	-1.040937	.2901105	-3.59	0.000	-1.609543	-.4723312
fst	1.408069	.2898713	4.86	0.000	.8399316	1.976206
foyle	2.331567	.4468542	5.22	0.000	1.455749	3.207386
lagan	-1.681583	.4041691	-4.16	0.000	-2.47374	-.8894266
midulster	.9856083	.2692159	3.66	0.000	.4579548	1.513262
newry	2.378927	.3101618	7.67	0.000	1.771021	2.986833
nantrim	.2653347	.0514089	5.16	0.000	.1645752	.3660943
ndown	-15.64652	578.5664	-0.03	0.978	-1149.616	1118.323
santrim	-2.863266	.6298081	-4.55	0.000	-4.097667	-1.628865
sdown	.6165247	.3877463	1.59	0.112	-.1434442	1.376493
strangford	-4.000632	.8900671	-4.49	0.000	-5.745131	-2.256132
tyrone	1.289045	.3787307	3.40	0.001	.5467467	2.031344

pop		6.39e-06	2.00e-06	3.19	0.001	2.47e-06	.0000103
split		-.0522933	.0161539	-3.24	0.001	-.0839544	-.0206322
_Syear_3		.6884292	.1783683	3.86	0.000	.3388338	1.038025
_Syear_4		.2236296	.2105582	1.06	0.288	-.1890568	.6363161
_Syear_5		-.0113371	.2018095	-0.06	0.955	-.4068765	.3842023
_Syear_6		.0388235	.2150431	0.18	0.857	-.3826533	.4603003
_Syear_7		.3089152	.1889973	1.63	0.102	-.0615126	.679343
_Syear_8		.1117865	.2189804	0.51	0.610	-.3174072	.5409801
_Syear_9		-.6108578	.2299456	-2.66	0.008	-1.061543	-.1601728
_Syear_10		-.3102699	.2234125	-1.39	0.165	-.7481504	.1276106
_Syear_11		-.4287609	.2735418	-1.57	0.117	-.964893	.1073712
_Syear_12		-.2516932	.2295177	-1.10	0.273	-.7015396	.1981531
_Syear_13		-.6325383	.253246	-2.50	0.012	-1.128891	-.1361853
_Syear_14		-.9355337	.2420772	-3.86	0.000	-1.409996	-.4610711
_Syear_15		-.6292875	.2801396	-2.25	0.025	-1.178351	-.0802239
_Syear_16		-1.232786	.298821	-4.13	0.000	-1.818464	-.6471072
_Syear_17		-.7226524	.2761515	-2.62	0.009	-1.263899	-.1814054
_Syear_18		-.5534407	.2266063	-2.44	0.015	-.9975809	-.1093005
_Syear_19		-.7170099	.2485335	-2.88	0.004	-1.204127	-.2298931
_Syear_20		-1.415408	.3068219	-4.61	0.000	-2.016768	-.8140482
_Syear_21		-1.167752	.3102587	-3.76	0.000	-1.775848	-.5596567
_Syear_22		-.2339665	.3444183	-0.68	0.497	-.909014	.4410809
_Syear_23		-.3619809	.3887062	-0.93	0.352	-1.123831	.3998692
_Syear_24		-.4666951	.3659004	-1.28	0.202	-1.183847	.2504564
_Syear_25		-.9894966	.3653989	-2.71	0.007	-1.705665	-.2733279
_cons		-6.189162	.5334855	-11.60	0.000	-7.234775	-5.14355

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gamma							
_Syear_3		.001878	.0012376	1.52	0.129	-.0005476	.0043036
_Syear_4		.0036968	.0025049	1.48	0.140	-.0012127	.0086062
_Syear_5		.0031903	.0012302	2.59	0.010	.0007792	.0056013
_Syear_6		.0030649	.0018286	1.68	0.094	-.0005191	.006649
_Syear_7		.0024007	.0011761	2.04	0.041	.0000955	.0047058
_Syear_8		.0032324	.0021811	1.48	0.138	-.0010425	.0075073
_Syear_9		.0033965	.0010903	3.12	0.002	.0012595	.0055335

_Syear_10		.0018431	.0011179	1.65	0.099	-.0003479	.0040341
_Syear_11		.0039978	.0026961	1.48	0.138	-.0012864	.009282
_Syear_12		.0007579	.0015026	0.50	0.614	-.0021872	.0037029
_Syear_13		.0026342	.0011296	2.33	0.020	.0004203	.0048481
_Syear_14		.0029914	.0010538	2.84	0.005	.0009261	.0050568
_Syear_15		.0040002	.0019175	2.09	0.037	.0002419	.0077585
_Syear_16		.0042171	.0014468	2.91	0.004	.0013813	.0070528
_Syear_17		.000874	.0012683	0.69	0.491	-.0016117	.0033598
_Syear_18		.0022306	.0010186	2.19	0.029	.0002341	.004227
_Syear_19		.0018973	.0011489	1.65	0.099	-.0003544	.0041491
_Syear_20		.0056191	.0013794	4.07	0.000	.0029156	.0083226
_Syear_21		.0041611	.0015926	2.61	0.009	.0010397	.0072825
_Syear_22		.0044642	.0016625	2.69	0.007	.0012058	.0077225
_Syear_23		.0035671	.0018132	1.97	0.049	.0000133	.0071208
_Syear_24		.0033863	.0014404	2.35	0.019	.0005632	.0062094
_Syear_25		.0020359	.0010583	1.92	0.054	-.0000382	.0041101
_cons		-.0024722	.0009732	-2.54	0.011	-.0043796	-.0005648

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Output from accelerated failure time models; Weibull distribution; Duration between Republican attacks; Year stratification and location controls. Unclustered standard errors.

```

No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839
                                                    LR chi2(29)    =          365.12
Log likelihood   =   -2029.0089                Prob > chi2    =          0.0000

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-----
      _t |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
 _t     |
      tlave |   .6819171   .1195887     5.70   0.000   .4475276   .9163066
      tsave |   .4965845   .1578508     3.15   0.002   .1872026   .8059665
      trbave |   .5640354   .1697461     3.32   0.001   .2313392   .8967315
      tlbave |   .9718763   .2698587     3.60   0.000   .4429629   1.50079
      tsbave |   .6805702   .200325     3.40   0.001   .2879404   1.0732
      lngdppc |   .1974801   .2270542     0.87   0.384   -.247538   .6424981
      lnunemp |  -.6852772   .2617828    -2.62   0.009  -1.198362  -.1721924
      pop     |   5.15e-06   1.91e-06     2.70   0.007   1.41e-06   8.89e-06
      split  |  -.0286806   .0081228    -3.53   0.000   -.044601   -.0127602
      sunn   |   .4852396   .2666362     1.82   0.069   -.0373577   1.007837
      sands  |   .2276593   .1589718     1.43   0.152   -.0839198   .5392384
      dail   |   .1710358   .1440979     1.19   0.235   -.1113909   .4534624
      _Scon_2 |   2.347485   .8787662     2.67   0.008   .6251351   4.069835
      _Scon_3 |    1.63972   .9166115     1.79   0.074   -.1568059   3.436245
      _Scon_4 |   3.284342   .9292651     3.53   0.000   1.463016   5.105668
      _Scon_5 |  -4.576653   4.731226    -0.97   0.333  -13.84969   4.696381
      _Scon_6 |   .8766149   1.283746     0.68   0.495   -1.639481   3.392711
      _Scon_7 |   2.237374   .9572818     2.34   0.019   .3611358   4.113611
      _Scon_8 |   3.173106   .9788541     3.24   0.001   1.254587   5.091624
      _Scon_9 |   1.188682   1.199542     0.99   0.322   -1.162378   3.539741

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_Scon_10		1.952525	1.027112	1.90	0.057	-.0605768	3.965627
_Scon_11		3.099939	.937009	3.31	0.001	1.263435	4.936443
_Scon_12		-2.897759	2.309661	-1.25	0.210	-7.424611	1.629094
_Scon_13		-13.32743	15839.98	-0.00	0.999	-31059.11	31032.45
_Scon_14		-.4953709	2.410518	-0.21	0.837	-5.2199	4.229158
_Scon_15		1.566774	1.177442	1.33	0.183	-.7409698	3.874519
_Scon_16		-23.71243	13.93126	-1.70	0.089	-51.0172	3.592338
_Scon_17		1.850294	1.00675	1.84	0.066	-.1228998	3.823488
_Scon_18		1.322927	1.081235	1.22	0.221	-.7962545	3.442108
_cons		.1164194	1.766063	0.07	0.947	-3.345001	3.577839

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ln_p							
_Scon_2		-.0474799	.1556346	-0.31	0.760	-.3525182	.2575583
_Scon_3		.0003437	.163627	0.00	0.998	-.3203593	.3210467
_Scon_4		-.0084983	.1536471	-0.06	0.956	-.3096412	.2926445
_Scon_5		.3570673	.465685	0.77	0.443	-.5556585	1.269793
_Scon_6		-.0453318	.2223022	-0.20	0.838	-.4810361	.3903726
_Scon_7		.0388054	.1620149	0.24	0.811	-.278738	.3563487
_Scon_8		-.0354839	.1603808	-0.22	0.825	-.3498244	.2788566
_Scon_9		-.1885038	.2238056	-0.84	0.400	-.6271548	.2501471
_Scon_10		.0124007	.1769973	0.07	0.944	-.3345076	.359309
_Scon_11		.0387556	.1560704	0.25	0.804	-.2671367	.3446479
_Scon_12		.3609536	.2744286	1.32	0.188	-.1769166	.8988237
_Scon_13		-11.36115	1599064	-0.00	1.000	-3134119	3134097
_Scon_14		-.1501072	.3991668	-0.38	0.707	-.9324597	.6322452
_Scon_15		-.0194601	.1986461	-0.10	0.922	-.4087993	.369879
_Scon_16		1.396855	.4938152	2.83	0.005	.4289948	2.364715
_Scon_17		-.1035426	.1802052	-0.57	0.566	-.4567383	.249653
_Scon_18		.1543008	.177376	0.87	0.384	-.1933497	.5019513
_cons		-.077155	.147541	-0.52	0.601	-.36633	.21202

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Output from accelerated failure time models; Gompertz distribution; Duration between Republican attacks; Location stratification and year controls. Unclustered standard errors.

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No. of subjects =          1261                Number of obs =          1261
No. of failures =          1243
Time at risk    =          160839
Log likelihood  =       -2021.165
LR chi2(29)     =          851.73
Prob > chi2     =          0.0000
    
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-----
      _t |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
 _t      |
   tlave |   .7384565   .114778      6.43   0.000   .5134958   .9634173
   tsave |   .5330175   .1557218     3.42   0.001   .2278084   .8382265
  trbave |   .5736579   .1695548     3.38   0.001   .2413366   .9059791
  tlbave |   1.031718   .2675372     3.86   0.000   .5073545   1.556081
  tsbave |   .7274031   .1985646     3.66   0.000   .3382237   1.116583
 lngdppc |   .1446526   .2271333     0.64   0.524  - .3005206   .5898258
 lnunemp |  -.6126921   .262418     -2.33   0.020  -1.127022  -.0983623
   pop   |  4.26e-06    1.92e-06     2.22   0.027   4.94e-07   8.03e-06
  split  |  -.0271045   .0081993    -3.31   0.001  -.0431748  -.0110341
   sunn  |   .474226   .2665518     1.78   0.075  -.048206   .9966579
  sands  |   .199527   .159354     1.25   0.211  -.1128011   .5118551
   dail  |   .1587406   .1445146     1.10   0.272  -.1245027   .441984
 _Scon_2 |   2.606464   .3580938     7.28   0.000   1.904613   3.308315
 _Scon_3 |   1.942369   .3652471     5.32   0.000   1.226498   2.65824
 _Scon_4 |   3.590629   .4824191     7.44   0.000   2.645105   4.536153
 _Scon_5 |  -1.801798   1.049957    -1.72   0.086  -3.859676   .2560796
 _Scon_6 |   .5702473   .4935209     1.16   0.248  -.3970359   1.537531
 _Scon_7 |   2.73575   .4697752     5.82   0.000   1.815007   3.656492
 _Scon_8 |   3.368777   .5333462     6.32   0.000   2.323437   4.414116
 _Scon_9 |   .4571386   .4190401     1.09   0.275  -.364165   1.278442
 _Scon_10 |  2.182536   .4609657     4.73   0.000   1.27906   3.086013
    
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_Scon_11		3.581662	.4701721	7.62	0.000	2.660142	4.503182
_Scon_12		-.5800512	.6115312	-0.95	0.343	-1.77863	.6185279
_Scon_13		-4.675953	16644.31	-0.00	1.000	-32626.92	32617.56
_Scon_14		-.771604	.6984334	-1.10	0.269	-2.140508	.5973003
_Scon_15		1.731475	.5254656	3.30	0.001	.701581	2.761368
_Scon_16		-4.346331	1.932757	-2.25	0.025	-8.134466	-.5581963
_Scon_17		1.71355	.4173126	4.11	0.000	.8956319	2.531467
_Scon_18		2.212389	.508396	4.35	0.000	1.215951	3.208827
_cons		-.786031	1.598289	-0.49	0.623	-3.91862	2.346559

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gamma

_Scon_2		-.0032705	.001179	-2.77	0.006	-.0055814	-.0009597
_Scon_3		-.0014054	.0011048	-1.27	0.203	-.0035707	.0007599
_Scon_4		-.0031037	.0016297	-1.90	0.057	-.0062978	.0000904
_Scon_5		-.0003123	.000891	-0.35	0.726	-.0020586	.0014339
_Scon_6		-.0002009	.0010115	-0.20	0.843	-.0021834	.0017817
_Scon_7		-.0019257	.0012399	-1.55	0.120	-.0043558	.0005045
_Scon_8		-.0028204	.0013614	-2.07	0.038	-.0054887	-.0001521
_Scon_9		-.000913	.0008443	-1.08	0.280	-.0025679	.0007418
_Scon_10		-.0008857	.0011749	-0.75	0.451	-.0031883	.001417
_Scon_11		-.0030781	.0015843	-1.94	0.052	-.0061833	.0000271
_Scon_12		.0003227	.0009699	0.33	0.739	-.0015781	.0022236
_Scon_13		-1819.282	2.14e+07	-0.00	1.000	-4.20e+07	4.20e+07
_Scon_14		-.0011404	.0009587	-1.19	0.234	-.0030194	.0007386
_Scon_15		-.001108	.0009099	-1.22	0.223	-.0028914	.0006753
_Scon_16		.0010928	.0011437	0.96	0.339	-.0011489	.0033344
_Scon_17		-.0015996	.0009581	-1.67	0.095	-.0034774	.0002783
_Scon_18		-.000132	.0011863	-0.11	0.911	-.0024572	.0021931
_cons		.0005	.0007464	0.67	0.503	-.0009629	.001963

-----+-----



## Appendix 6: Output from Accelerated Failure Time Models with Duration between Loyalist Attacks as Duration Variable

Output from accelerated failure time models; Exponential distribution; Duration between Loyalist attacks; Full year and location controls. Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk   =          161711

LR chi2(24) =          1203.05
Log likelihood =          -1255.261          Prob > chi2 =          0.0000
  
```

_____	_____	_____	_____	_____	_____	_____
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
_____	_____	_____	_____	_____	_____	_____
trave	7.78438	2.061931	7.75	0.000	4.63188	13.0825
tsave	1.229662	.2447607	1.04	0.299	.8324469	1.816415
trbave	1.057375	.1712866	0.34	0.731	.7697348	1.452504
tlbave	36.54599	12.53432	10.49	0.000	18.65949	71.578
tsbave	.3065313	.1385635	-2.62	0.009	.1263864	.7434459
pop	1.000008	2.67e-06	2.97	0.003	1.000003	1.000013
split	1.017123	.0073067	2.36	0.018	1.002903	1.031546
east	2.555158	.77036	3.11	0.002	1.415101	4.613689
north	5.05084	.9671202	8.46	0.000	3.470387	7.351047
south	2.115214	.4472578	3.54	0.000	1.397557	3.201394
west	2.181895	.5451061	3.12	0.002	1.33714	3.560334
eantrim	.7333877	.2484936	-0.92	0.360	.3775037	1.424774
ederry	.2991136	.1187463	-3.04	0.002	.1373771	.6512653
fst	.3303456	.1139277	-3.21	0.001	.1680394	.6494206
foyle	.0494345	.0322676	-4.61	0.000	.0137538	.1776798
lagan	.5319036	.1735715	-1.93	0.053	.2805872	1.008319
midulster	.5924843	.1789329	-1.73	0.083	.3278009	1.070887
newry	.3870843	.1246585	-2.95	0.003	.2059114	.7276636
nantrim	.3182432	.1216305	-3.00	0.003	.150465	.673105
ndown	.1612967	.101726	-2.89	0.004	.046859	.5552108
santrim	.3407998	.1170957	-3.13	0.002	.1737938	.6682892

sdown		.1829761	.0739456	-4.20	0.000	.0828706	.4040063
strangford		.2911035	.1231814	-2.92	0.004	.127016	.6671696
tyrone		.13522	.0641748	-4.22	0.000	.0533414	.3427817
_cons		.0010039	.0004026	-17.21	0.000	.0004574	.0022034

---

Output from accelerated failure time models; Gompertz distribution; Duration between Loyalist attacks; Full year and location controls. Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk   =          161711
                                          LR chi2(24) =          697.92
Log likelihood =   -1222.4089            Prob > chi2 =          0.0000
  
```

```

-----
      _t | Haz. Ratio  Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      trave | 7.354954   1.934469     7.59   0.000     4.392387    12.31571
      tsave | 1.271487   .2570316     1.19   0.235     .8555422    1.889656
    trbave | 1.079417   .1819221     0.45   0.650     .7757643    1.501926
    tlbave | 26.53404   9.325803     9.33   0.000    13.32402    52.84105
    tsbave | .3510568   .162532     -2.26   0.024     .1416736    .8698931
      pop   | 1.000001   2.65e-06     3.86   0.000     1.000005    1.000015
    split  | 1.013024   .0074357     1.76   0.078     .9985548    1.027703
      east  | 2.14207    .6563567     2.49   0.013     1.174938    3.905281
    north  | 3.900669   .7583949     7.00   0.000     2.664665    5.709993
    south  | 1.752228   .3738288     2.63   0.009     1.15343     2.66189
      west  | 1.887832   .4701856     2.55   0.011     1.158676    3.075846
    eantrim | 1.008872   .3419009     0.03   0.979     .5192407    1.960213
    ederry | .4379868   .1742143     -2.08   0.038     .2008565    .9550724
      fst   | .3475847   .1173868     -3.13   0.002     .1793047    .6737979
      foyle | .1271161   .0824334     -3.18   0.001     .035662     .4531015
      lagan | .5571894   .1819306     -1.79   0.073     .2938143    1.056654
    midulster | .7488209   .2281768     -0.95   0.342     .4121015    1.360667
      newry | .5281194   .1672818     -2.02   0.044     .2838664     .98254
    nantrim | .3443026   .1318936     -2.78   0.005     .1625049    .7294812
      ndown | .3715662   .2363394     -1.56   0.120     .1068117    1.292569
    santrim | .572251    .1973213     -1.62   0.105     .2911245    1.12485
      sdown | .2401518   .0978889     -3.50   0.000     .1080252    .5338833
    strangford | .3710172   .1568993     -2.34   0.019     .1619682    .8498812
  
```

tyrone		.2000586	.0959551	-3.35	0.001	.0781432	.5121806
_cons		.0012752	.0005165	-16.45	0.000	.0005765	.0028206
-----+							
/gamma		-.0007034	.0001061	-6.63	0.000	-.0009114	-.0004954
-----							

Output from accelerated failure time models; Log-logistic distribution; Duration between Loyalist attacks; Full year and location controls. Unclustered standard errors.

No. of subjects = 690                      Number of obs = 690  
No. of failures = 672  
Time at risk = 161711  
LR chi2(24) = 438.92  
Log likelihood = -1193.1011              Prob > chi2 = 0.0000

```
-----+-----
```

_t	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
trave	-1.634538	.3096718	-5.28	0.000	-2.241483	-1.027592
tsave	-.1899639	.2489051	-0.76	0.445	-.677809	.2978812
trbave	-.5803609	.2993066	-1.94	0.052	-1.166991	.0062693
tlbave	-1.977079	.4390626	-4.50	0.000	-2.837625	-1.116532
tsbave	.4894504	.5935108	0.82	0.410	-.6738093	1.65271
pop	-.00002	4.25e-06	-4.69	0.000	-.0000283	-.0000116
split	-.0140409	.0107465	-1.31	0.191	-.0351037	.0070219
east	-1.086507	.4473935	-2.43	0.015	-1.963383	-.2096322
north	-1.404944	.2632114	-5.34	0.000	-1.920829	-.8890589
south	-.6271743	.2911976	-2.15	0.031	-1.197911	-.0564376
west	-.5801763	.3444124	-1.68	0.092	-1.255212	.0948595
eantrim	-.2795299	.4753812	-0.59	0.557	-1.21126	.6522002
ederry	1.198927	.5399717	2.22	0.026	.140602	2.257252
fst	.9707509	.4300788	2.26	0.024	.127812	1.81369
foyle	2.70007	.8292378	3.26	0.001	1.074793	4.325346
lagan	.8973998	.4396792	2.04	0.041	.0356445	1.759155
midulster	.2425762	.4155736	0.58	0.559	-.571933	1.057085
newry	.6025329	.4315477	1.40	0.163	-.243285	1.448351
nantrim	1.85154	.4973982	3.72	0.000	.8766571	2.826422
ndown	1.157032	.8135539	1.42	0.155	-.4375039	2.751569
santrim	.5681222	.4792847	1.19	0.236	-.3712586	1.507503
sdown	2.241094	.5237325	4.28	0.000	1.214598	3.267591
strangford	1.288064	.567972	2.27	0.023	.1748598	2.401269

```
-----+-----
```

tyrone		2.544732	.5990355	4.25	0.000	1.370643	3.71882
_cons		6.928209	.6355609	10.90	0.000	5.682532	8.173885
-----+							
/ln_gam		-.2416003	.0323241	-7.47	0.000	-.3049544	-.1782463
-----+							
gamma		.78537	.0253864			.737157	.8367363
-----							

Output from accelerated failure time models; Weibull distribution; Loyalist between Republican attacks; Full year and location controls. Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk    =         161711
                                                    LR chi2(24)    =         499.98
Log likelihood  =    -1212.7586                Prob > chi2    =          0.0000
    
```

-----						
-----	_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]
-----	+	-----	-----	-----	-----	-----
	trave	4.608694	1.23062	5.72	0.000	2.730793 7.777983
	tsave	1.187256	.244083	0.83	0.404	.7935048 1.776394
	trbave	1.148368	.1943876	0.82	0.414	.8241303 1.600171
	tlbave	13.00924	4.667374	7.15	0.000	6.439659 26.28093
	tsbave	.4511522	.2076847	-1.73	0.084	.1830116 1.112161
	pop	1.000007	2.65e-06	2.74	0.006	1.000002 1.000012
	split	1.011677	.007437	1.58	0.114	.9972054 1.026359
	east	2.040762	.6263826	2.32	0.020	1.118223 3.724401
	north	3.467039	.6780819	6.36	0.000	2.363094 5.086702
	south	1.776593	.3780442	2.70	0.007	1.170737 2.695979
	west	1.843682	.4602313	2.45	0.014	1.130326 3.00724
	eantrim	.8176394	.2777823	-0.59	0.553	.4201237 1.591279
	ederry	.3735973	.148525	-2.48	0.013	.1713978 .8143332
	fst	.4199311	.1411083	-2.58	0.010	.2173457 .811344
	foyle	.0930142	.0608064	-3.63	0.000	.025828 .3349711
	lagan	.5691906	.1863115	-1.72	0.085	.2996653 1.081133
	midulster	.6882099	.2085382	-1.23	0.218	.3800089 1.246373
	newry	.5124625	.163729	-2.09	0.036	.273973 .9585537
	nantrim	.3608209	.1382435	-2.66	0.008	.1702808 .7645709
	ndown	.2205427	.139765	-2.39	0.017	.0636882 .7637068
	santrim	.4593185	.1585591	-2.25	0.024	.2334935 .9035518
	sdown	.2489424	.1011933	-3.42	0.001	.1122255 .5522124

strangford		.3442555	.1456761	-2.52	0.012	.1502049	.7890012
tyrone		.1965839	.0936889	-3.41	0.001	.0772464	.5002854
_cons		.0050434	.0022076	-12.08	0.000	.0021386	.0118934
-----+-----							
/ln_p		-.2474403	.0287574	-8.60	0.000	-.3038037	-.1910768
-----+-----							
p		.7807969	.0224537			.7380057	.8260692
1/p		1.280743	.0368308			1.210552	1.355003
-----							



Output from accelerated failure time models; Log-Normal distribution; Duration between Loyalist attacks; Full year and location controls. Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk    =          161711

LR chi2(24)     =          405.76
Log likelihood  = -1199.2055                Prob > chi2     =          0.0000
    
```

_t	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
trave	-1.562732	.3554145	-4.40	0.000	-2.259331	-.866132
tsave	-.1978694	.3074012	-0.64	0.520	-.8003647	.4046258
trbave	-.4880969	.2599353	-1.88	0.060	-.9975606	.0213669
tlbave	-1.904967	.440464	-4.32	0.000	-2.768261	-1.041673
tsbave	.4576814	.6312673	0.73	0.468	-.7795798	1.694943
pop	-.0000162	4.08e-06	-3.96	0.000	-.0000242	-8.16e-06
split	-.0113176	.0113038	-1.00	0.317	-.0334726	.0108374
east	-1.000131	.4607219	-2.17	0.030	-1.903129	-.0971327
north	-1.455903	.2735411	-5.32	0.000	-1.992034	-.9197724
south	-.7379803	.3014254	-2.45	0.014	-1.328763	-.1471974
west	-.7140424	.358094	-1.99	0.046	-1.415894	-.0121911
eantrim	.0137655	.4867218	0.03	0.977	-.9401918	.9677228
ederry	1.361112	.5474594	2.49	0.013	.2881108	2.434112
fst	.8062647	.4320259	1.87	0.062	-.0404904	1.65302
foyle	2.556901	.8180947	3.13	0.002	.9534645	4.160337
lagan	.9254858	.4603644	2.01	0.044	.0231881	1.827783
midulster	.2659496	.4284117	0.62	0.535	-.573722	1.105621
newry	.4909954	.4378015	1.12	0.262	-.3670798	1.349071
nantrim	1.766973	.5356063	3.30	0.001	.7172041	2.816742
ndown	1.675202	.8303961	2.02	0.044	.0476555	3.302748
santrim	.6480736	.4904332	1.32	0.186	-.3131578	1.609305
sdown	2.244694	.5741178	3.91	0.000	1.119444	3.369945

strangford		1.58496	.5785249	2.74	0.006	.4510725	2.718848
tyrone		2.505436	.671495	3.73	0.000	1.18933	3.821542
_cons		6.469387	.6353954	10.18	0.000	5.224035	7.714739
-----+-----							
/ln_sig		.3484824	.0272823	12.77	0.000	.2950101	.4019547
-----+-----							
sigma		1.416916	.0386567			1.34314	1.494744
-----							



tyrone		2.347202	.651057	3.61	0.000	1.071153	3.62325
_cons		6.57276	.5890837	11.16	0.000	5.418177	7.727343
-----+							
/ln_sig		.3153325	.0292157	10.79	0.000	.2580707	.3725942
/kappa		.3558071	.0968052	3.68	0.000	.1660723	.5455418
-----+							
sigma		1.370715	.0400464			1.29443	1.451495
-----							

Output from accelerated failure time models; Exponential distribution; Duration between Loyalist attacks; Full year and location controls. Standard errors clustered by location-year.

```
No. of subjects      =      690                     Number of obs      =      690
No. of failures     =      672
Time at risk        =      161711
Log pseudolikelihood =    -1255.261
Wald chi2(24)       =      2622.48
Prob > chi2         =      0.0000
```

(Std. Err. adjusted for 195 clusters in yearcon)

-----						
	Robust					
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
-----						
trave	7.78438	1.125277	14.20	0.000	5.863784	10.33404
tsave	1.229662	.1858362	1.37	0.171	.9144196	1.653583
trbave	1.057375	.2351541	0.25	0.802	.6837966	1.635051
tlbave	36.54599	20.06045	6.56	0.000	12.46255	107.1699
tsbave	.3065313	.1089548	-3.33	0.001	.1527285	.6152185
pop	1.000008	5.47e-06	1.45	0.148	.9999972	1.000019
split	1.017123	.0082183	2.10	0.036	1.001143	1.033359
east	2.555158	1.260119	1.90	0.057	.9719268	6.717414
north	5.05084	1.750521	4.67	0.000	2.560673	9.962609
south	2.115214	.8048827	1.97	0.049	1.003355	4.459171
west	2.181895	.853615	1.99	0.046	1.013494	4.697279
eantrim	.7333877	.4852885	-0.47	0.639	.2004872	2.682751
ederry	.2991136	.1704666	-2.12	0.034	.0978885	.9139887
fst	.3303456	.2073345	-1.76	0.078	.096545	1.130335
foyle	.0494345	.0524961	-2.83	0.005	.0061675	.3962318
lagan	.5319036	.2528604	-1.33	0.184	.2094992	1.350466
midulster	.5924843	.3107467	-1.00	0.318	.2119522	1.656212
newry	.3870843	.2383375	-1.54	0.123	.1157976	1.293933
nantrim	.3182432	.1324641	-2.75	0.006	.1407534	.7195475
ndown	.1612967	.1179139	-2.50	0.013	.0384915	.6759051
santrim	.3407998	.2699406	-1.36	0.174	.0721573	1.609603

sdown		.1829761	.0906001	-3.43	0.001	.0693305	.4829079
strangford		.2911035	.1513473	-2.37	0.018	.1050752	.8064818
tyrone		.13522	.0580601	-4.66	0.000	.0582849	.3137082
_cons		.0010039	.0006824	-10.16	0.000	.0002649	.0038048

---

Output from accelerated failure time models; Gompertz distribution; Duration between Loyalist attacks; Full year and location controls. Standard errors clustered by location-year.

No. of subjects = 690 Number of obs = 690  
 No. of failures = 672  
 Time at risk = 161711  
 Wald chi2(24) = 2452.27  
 Log pseudolikelihood = -1222.4089 Prob > chi2 = 0.0000

(Std. Err. adjusted for 195 clusters in yearcon)

-----						
	Robust					
_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
-----						
trave	7.354954	.9436783	15.55	0.000	5.71961	9.457873
tsave	1.271487	.1714072	1.78	0.075	.9762543	1.656003
trbave	1.079417	.2368355	0.35	0.728	.7021443	1.659403
tlbave	26.53404	13.71664	6.34	0.000	9.633387	73.08492
tsbave	.3510568	.1268738	-2.90	0.004	.1728816	.712863
pop	1.00001	4.83e-06	2.11	0.034	1.000001	1.00002
split	1.013024	.006948	1.89	0.059	.9994975	1.026734
east	2.14207	.8602212	1.90	0.058	.9749999	4.706116
north	3.900669	1.097547	4.84	0.000	2.247156	6.770879
south	1.752228	.5449488	1.80	0.071	.9524983	3.223422
west	1.887832	.6095631	1.97	0.049	1.002578	3.554743
eantrim	1.008872	.4603789	0.02	0.985	.4124838	2.467545
ederry	.4379868	.1827993	-1.98	0.048	.1932865	.9924774
fst	.3475847	.1827419	-2.01	0.044	.1240347	.9740428
foyle	.1271161	.0927378	-2.83	0.005	.0304232	.5311248
lagan	.5571894	.2032723	-1.60	0.109	.2725648	1.139032
midulster	.7488209	.2848801	-0.76	0.447	.3552617	1.578365
newry	.5281194	.238638	-1.41	0.158	.2178236	1.28044
nantrim	.3443026	.1160064	-3.16	0.002	.1778868	.6664028
ndown	.3715662	.1756865	-2.09	0.036	.1470839	.9386577
santrim	.572251	.2749995	-1.16	0.245	.2231184	1.467702

sdown		.2401518	.0841416	-4.07	0.000	.1208514	.4772213
strangford		.3710172	.1504794	-2.44	0.015	.1675555	.8215414
tyrone		.2000586	.067623	-4.76	0.000	.1031425	.3880404
_cons		.0012752	.0007272	-11.69	0.000	.000417	.0038996
-----							
/gamma		-.0007034	.0001107	-6.36	0.000	-.0009203	-.0004865
-----							



Output from accelerated failure time models; Log-logistic distribution; Duration between Loyalist attacks; Full year and location controls. Standard errors clustered by location-year.

```

No. of subjects      =          690                Number of obs      =          690
No. of failures      =          672
Time at risk        =          161711
                                                              Wald chi2(24)      =          2389.10
Log pseudolikelihood = -1193.1011                Prob > chi2        =          0.0000
  
```

(Std. Err. adjusted for 195 clusters in yearcon)

-----						
	Robust					
_t	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----+-----						
trave	-1.634538	.1672089	-9.78	0.000	-1.962261	-1.306814
tsave	-.1899639	.1389241	-1.37	0.172	-.46225	.0823223
trbave	-.5803609	.5814571	-1.00	0.318	-1.719996	.5592742
tlbave	-1.977079	.6527409	-3.03	0.002	-3.256427	-.6977298
tsbave	.4894504	.7282684	0.67	0.502	-.9379294	1.91683
pop	-.00002	6.08e-06	-3.28	0.001	-.0000319	-8.04e-06
split	-.0140409	.0100834	-1.39	0.164	-.0338039	.0057221
east	-1.086507	.5383162	-2.02	0.044	-2.141588	-.031427
north	-1.404944	.3144682	-4.47	0.000	-2.02129	-.7885974
south	-.6271743	.3316647	-1.89	0.059	-1.277225	.0228766
west	-.5801763	.4023808	-1.44	0.149	-1.368828	.2084755
eantrim	-.2795299	.5512905	-0.51	0.612	-1.360039	.8009796
ederry	1.198927	.6736065	1.78	0.075	-.1213174	2.519172
fst	.9707509	.5800228	1.67	0.094	-.166073	2.107575
foyle	2.70007	.9731812	2.77	0.006	.7926696	4.60747
lagan	.8973998	.4248152	2.11	0.035	.0647774	1.730022
midulster	.2425762	.4598957	0.53	0.598	-.6588027	1.143955
newry	.6025329	.6229023	0.97	0.333	-.6183332	1.823399
nantrim	1.85154	.5417308	3.42	0.001	.7897667	2.913312
ndown	1.157032	.5243274	2.21	0.027	.1293696	2.184695

santrim		.5681222	.4601778	1.23	0.217	-.3338097	1.470054
sdown		2.241094	.4795503	4.67	0.000	1.301193	3.180996
strangford		1.288064	.6456581	1.99	0.046	.0225979	2.553531
tyrone		2.544732	.500281	5.09	0.000	1.564199	3.525264
_cons		6.928209	.7407156	9.35	0.000	5.476433	8.379985
-----+							
/ln_gam		-.2416003	.0327643	-7.37	0.000	-.3058171	-.1773836
-----+							
gamma		.78537	.0257321			.7365213	.8374585
-----							

Output from accelerated failure time models; Weibull distribution; Duration between Loyalist attacks; Full year and location controls. Standard errors clustered by location-year.

```

No. of subjects      =           690                Number of obs      =           690
No. of failures     =           672
Time at risk        =          161711
Log pseudolikelihood = -1212.7586                Wald chi2(24)     =           907.36
                                                            Prob > chi2       =           0.0000
    
```

(Std. Err. adjusted for 195 clusters in yearcon)

```

-----
                |
                |           Robust
                |
    _t | Haz. Ratio  Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
    trave |  4.608694   .5190257    13.57  0.000    3.695869    5.746973
    tsave |  1.187256   .1302814     1.56  0.118    .9575013    1.472141
    trbave |  1.148368   .2410913     0.66  0.510    .760988     1.732944
    tlbave | 13.00924    5.63919     5.92  0.000    5.562582   30.42476
    tsbave |  .4511522   .1425096    -2.52  0.012    .2429104    .8379151
     pop   |  1.000007   4.26e-06     1.70  0.089    .9999989    1.000016
    split |  1.011677   .0067799     1.73  0.083    .9984757    1.025053
     east  |  2.040762   .7954204     1.83  0.067    .9506543    4.380888
    north  |  3.467039   .9362392     4.60  0.000    2.042209    5.885958
    south  |  1.776593   .518322     1.97  0.049    1.002881    3.147215
     west  |  1.843682   .5675595     1.99  0.047    1.008444     3.3707
    eantrim | .8176394   .4196055    -0.39  0.695    .2990422    2.235585
    ederry |  .3735973   .1716803    -2.14  0.032    .1517918    .9195152
     fst   |  .4199311   .204482     -1.78  0.075    .1616935    1.090595
    foyle  |  .0930142   .0861114    -2.57  0.010    .0151537    .5709272
    lagan  |  .5691906   .214917     -1.49  0.136    .2715551    1.193047
    midulster | .6882099   .276597     -0.93  0.353    .3130518    1.512954
     newry |  .5124625   .2454895    -1.40  0.163    .2004026    1.310451
    nantrim |  .3608209   .122989     -2.99  0.003    .1849916     .703771
    ndown  |  .2205427   .1360734    -2.45  0.014    .0658123    .7390576
    
```

santrim		.4593185	.2846278	-1.26	0.209	.1363472	1.547325
sdown		.2489424	.096315	-3.59	0.000	.1166197	.5314055
strangford		.3442555	.1452129	-2.53	0.011	.1506015	.7869233
tyrone		.1965839	.0678708	-4.71	0.000	.099924	.3867463
_cons		.0050434	.0029264	-9.12	0.000	.0016174	.0157263
-----+							
/ln_p		-.2474403	.0265774	-9.31	0.000	-.2995311	-.1953494
-----+							
p		.7807969	.0207516			.7411657	.8225472
1/p		1.280743	.0340389			1.215736	1.349226
-----							

Output from accelerated failure time models; Log-Normal distribution; Duration between Loyalist attacks; Full year and location controls. Standard errors clustered by location-year.

```

No. of subjects      =           690              Number of obs      =           690
No. of failures      =           672
Time at risk        =           161711
                                                              Wald chi2(24)      =           1961.43
Log pseudolikelihood = -1199.2055              Prob > chi2        =           0.0000
    
```

(Std. Err. adjusted for 195 clusters in yearcon)

-----						
	Robust					
_t	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----						
trave	-1.562732	.1588983	-9.83	0.000	-1.874167	-1.251297
tsave	-.1978694	.1033278	-1.91	0.055	-.4003883	.0046494
trbave	-.4880969	.377028	-1.29	0.195	-1.227058	.2508643
tlbave	-1.904967	.5154251	-3.70	0.000	-2.915182	-.8947522
tsbave	.4576814	.5852578	0.78	0.434	-.6894028	1.604766
pop	-.0000162	5.86e-06	-2.76	0.006	-.0000276	-4.68e-06
split	-.0113176	.0103881	-1.09	0.276	-.0316778	.0090427
east	-1.000131	.5171898	-1.93	0.053	-2.013804	.0135423
north	-1.455903	.3344473	-4.35	0.000	-2.111408	-.8003986
south	-.7379803	.3610038	-2.04	0.041	-1.445535	-.0304259
west	-.7140424	.4189792	-1.70	0.088	-1.535226	.1071417
eantrim	.0137655	.5547969	0.02	0.980	-1.073617	1.101148
ederry	1.361112	.5860349	2.32	0.020	.2125043	2.509719
fst	.8062647	.6072403	1.33	0.184	-.3839044	1.996434
foyle	2.556901	1.073289	2.38	0.017	.453292	4.660509
lagan	.9254858	.4683991	1.98	0.048	.0074403	1.843531
midulster	.2659496	.4686786	0.57	0.570	-.6526436	1.184543
newry	.4909954	.6420398	0.76	0.444	-.7673794	1.74937
nantrim	1.766973	.5838863	3.03	0.002	.622577	2.911369
ndown	1.675202	.571963	2.93	0.003	.5541751	2.796229
santrim	.6480736	.5431068	1.19	0.233	-.4163961	1.712543

sdown		2.244694	.4813167	4.66	0.000	1.301331	3.188058
strangford		1.58496	.5665041	2.80	0.005	.4746328	2.695288
tyrone		2.505436	.509471	4.92	0.000	1.506891	3.503981
_cons		6.469387	.7538832	8.58	0.000	4.991803	7.94697
-----+							
/ln_sig		.3484824	.0312114	11.17	0.000	.2873091	.4096556
-----+							
sigma		1.416916	.0442239			1.332836	1.506299
-----							

Output from accelerated failure time models; Gamma distribution; Duration between Loyalist attacks; Full year and location controls. Standard errors clustered by location-year.

No. of subjects = 690 Number of obs = 690  
 No. of failures = 672  
 Time at risk = 161711  
 Wald chi2(24) = 2200.64  
 Log pseudolikelihood = -1192.4815 Prob > chi2 = 0.0000

(Std. Err. adjusted for 195 clusters in yearcon)

-----						
	Robust					
_t	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
-----						
trave	-1.712532	.1579176	-10.84	0.000	-2.022045	-1.40302
tsave	-.2088497	.099515	-2.10	0.036	-.4038954	-.013804
trbave	-.4590314	.3861123	-1.19	0.234	-1.215798	.2977348
tlbave	-2.378416	.5923822	-4.02	0.000	-3.539463	-1.217368
tsbave	.6318376	.5772996	1.09	0.274	-.4996489	1.763324
pop	-.0000136	5.94e-06	-2.29	0.022	-.0000253	-1.99e-06
split	-.012283	.0097293	-1.26	0.207	-.0313522	.0067861
east	-.9550499	.5092998	-1.88	0.061	-1.953259	.0431593
north	-1.514354	.3281472	-4.61	0.000	-2.157511	-.8711978
south	-.725289	.3507181	-2.07	0.039	-1.412684	-.0378941
west	-.7393255	.4017774	-1.84	0.066	-1.526795	.0481437
eantrim	.0674509	.5941809	0.11	0.910	-1.097122	1.232024
ederry	1.313035	.5959881	2.20	0.028	.1449197	2.48115
fst	.9879143	.5960924	1.66	0.097	-.1804054	2.156234
foyle	2.772859	1.12977	2.45	0.014	.5585501	4.987167
lagan	.8530304	.4688016	1.82	0.069	-.0658039	1.771865
midulster	.3382555	.4808509	0.70	0.482	-.6041949	1.280706
newry	.6324396	.6130405	1.03	0.302	-.5690978	1.833977
nantrim	1.621145	.5157337	3.14	0.002	.6103256	2.631965
ndown	1.757321	.6614805	2.66	0.008	.4608427	3.053799
santrim	.7375965	.6378722	1.16	0.248	-.5126101	1.987803

sdown		2.060004	.4845196	4.25	0.000	1.110363	3.009645
strangford		1.522918	.5601403	2.72	0.007	.4250636	2.620773
tyrone		2.347202	.4781563	4.91	0.000	1.410033	3.284371
_cons		6.57276	.7224102	9.10	0.000	5.156862	7.988658
-----							
/ln_sig		.3153325	.0283578	11.12	0.000	.2597522	.3709128
/kappa		.3558071	.098271	3.62	0.000	.1631995	.5484146
-----							
sigma		1.370715	.0388705			1.296609	1.449057
-----							



Output from accelerated failure time models; Weibull distribution; Duration between Loyalist attacks; Year stratification and location controls. Unclustered standard errors.

could not find feasible values



pop		-3.13e-06	4.46e-06	-0.70	0.483	-.0000119	5.62e-06
split		-.0094026	.0145386	-0.65	0.518	-.0378978	.0190926
_Syear_3		1.837323	.6048656	3.04	0.002	.651808	3.022838
_Syear_4		1.88886	.6054567	3.12	0.002	.7021863	3.075533
_Syear_5		1.819239	.6053941	3.01	0.003	.6326886	3.00579
_Syear_6		1.893208	.6092071	3.11	0.002	.6991837	3.087232
_Syear_7		1.920853	.605022	3.17	0.001	.7350321	3.106675
_Syear_8		1.53932	.6374734	2.41	0.016	.2898954	2.788745
_Syear_9		-.1949291	.7655849	-0.25	0.799	-1.695448	1.30559
_Syear_10		.5248661	.6834699	0.77	0.443	-.8147103	1.864442
_Syear_11		.951792	.6822086	1.40	0.163	-.3853123	2.288896
_Syear_12		-.3183821	.7840136	-0.41	0.685	-1.855021	1.218256
_Syear_13		.493561	.6815578	0.72	0.469	-.8422678	1.82939
_Syear_14		-.0911773	.7514075	-0.12	0.903	-1.563909	1.381554
_Syear_15		-.9631701	.9851879	-0.98	0.328	-2.894103	.9677627
_Syear_16		-.5207349	1.029892	-0.51	0.613	-2.539286	1.497816
_Syear_17		.0143638	.6837455	0.02	0.983	-1.325753	1.35448
_Syear_18		.4788894	.6886358	0.70	0.487	-.870812	1.828591
_Syear_19		.2528396	.6746269	0.37	0.708	-1.069405	1.575084
_Syear_20		.7632052	.6771058	1.13	0.260	-.5638978	2.090308
_Syear_21		.3365714	.6790997	0.50	0.620	-.9944396	1.667582
_Syear_22		1.313099	.6673949	1.97	0.049	.0050292	2.621169
_Syear_23		1.196763	.6609987	1.81	0.070	-.0987711	2.492296
_Syear_24		1.304004	.6510408	2.00	0.045	.0279876	2.580021
_Syear_25		.6532401	.6636958	0.98	0.325	-.6475799	1.95406
_cons		-6.186004	.9138432	-6.77	0.000	-7.977103	-4.394904

-----+-----

gamma							
_Syear_3		-.0008406	.0022142	-0.38	0.704	-.0051803	.0034991
_Syear_4		.0000607	.0022393	0.03	0.978	-.0043282	.0044496
_Syear_5		-6.18e-06	.0022169	-0.00	0.998	-.0043511	.0043388
_Syear_6		.0026066	.0026606	0.98	0.327	-.0026081	.0078213
_Syear_7		.000579	.002253	0.26	0.797	-.0038369	.0049949
_Syear_8		.000324	.0023083	0.14	0.888	-.0042001	.0048481
_Syear_9		.0035965	.0025917	1.39	0.165	-.0014832	.0086761

_Syear_10		-.0002253	.0023062	-0.10	0.922	-.0047455	.0042948
_Syear_11		.0011417	.002425	0.47	0.638	-.0036111	.0058946
_Syear_12		.0022877	.0027056	0.85	0.398	-.0030151	.0075905
_Syear_13		.0012832	.0022522	0.57	0.569	-.0031311	.0056975
_Syear_14		.0009245	.0022053	0.42	0.675	-.0033978	.0052469
_Syear_15		.0033046	.0031741	1.04	0.298	-.0029166	.0095257
_Syear_16		.0009142	.0022067	0.41	0.679	-.0034109	.0052392
_Syear_17		.0008501	.0021716	0.39	0.695	-.0034062	.0051064
_Syear_18		.0024493	.0024281	1.01	0.313	-.0023096	.0072082
_Syear_19		.0003988	.0021676	0.18	0.854	-.0038496	.0046472
_Syear_20		.0004603	.0022292	0.21	0.836	-.0039088	.0048294
_Syear_21		.0007845	.0022545	0.35	0.728	-.0036343	.0052032
_Syear_22		-.0000979	.0023329	-0.04	0.967	-.0046703	.0044745
_Syear_23		.0013581	.0022447	0.61	0.545	-.0030415	.0057577
_Syear_24		.0005115	.0021841	0.23	0.815	-.0037692	.0047922
_Syear_25		.0002662	.0021587	0.12	0.902	-.0039648	.0044973
_cons		-.0006115	.0021517	-0.28	0.776	-.0048288	.0036058

-----

Output from accelerated failure time models; Weibull distribution; Duration between Loyalist attacks; Location stratification and year controls. Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk    =          161711

LR chi2(29)     =          294.70
Log likelihood  = -1152.3821              Prob > chi2     =          0.0000
    
```

```

-----+-----
      _t |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
 _t      |
   trave |   1.648212   .2648923     6.22   0.000     1.129033     2.167392
   tsave |   .2753883   .209523     1.31   0.189    -.1352693     .6860458
  trbave |   .2611495   .1918482     1.36   0.173    -.1148661     .6371652
  tlbave |   2.063534   .4008564     5.15   0.000     1.27787     2.849198
  tsbave |  -.5628784   .5127997    -1.10   0.272    -1.567947     .4421906
 lngdppc |   .4309298   .2732095     1.58   0.115    -.1045509     .9664106
 lnunemp |  -1.27191    .333663    -3.81   0.000    -1.925877    -.6179426
    pop   |  -5.39e-06   3.53e-06    -1.53   0.127    -.0000123     1.53e-06
  split  |   .0128382   .0094533     1.36   0.174    -.0056898     .0313663
    sunn  |   .0487116   .3569421     0.14   0.891    -.650882     .7483052
  sands  |   .0866651   .2376593     0.36   0.715    -.3791385     .5524688
    dail  |  -.1819884   .2179112    -0.84   0.404    -.6090866     .2451098
 _Scon_2 |   .0363667   .4663902     0.08   0.938    -.8777412     .9504746
 _Scon_3 |  -.3273437   .5164621    -0.63   0.526    -1.339591     .6849033
 _Scon_4 |  -.8467887   .6299621    -1.34   0.179    -2.081492     .3879144
 _Scon_5 |  -1.845163   .9755303    -1.89   0.059    -3.757168     .0668408
 _Scon_6 |  -2.912244   1.773942    -1.64   0.101    -6.389106     .564618
 _Scon_7 |  -1.695681   1.003453    -1.69   0.091    -3.662413     .2710508
 _Scon_8 |  -1.871252   2.415481    -0.77   0.439    -6.605508     2.863005
 _Scon_9 |  -1.604942   1.176222    -1.36   0.172    -3.910295     .7004108
 _Scon_10|  -1.656565   1.026622    -1.61   0.107    -3.668706     .3555765
    
```

_Scon_11		-1.076527	.917691	-1.17	0.241	-2.875168	.7221146
_Scon_12		-5.807066	2.744908	-2.12	0.034	-11.18699	-.4271458
_Scon_13		-2.046997	2.382602	-0.86	0.390	-6.716811	2.622818
_Scon_14		-1.128239	.9249211	-1.22	0.223	-2.941051	.6845728
_Scon_15		-6.706755	2.353244	-2.85	0.004	-11.31903	-2.094481
_Scon_16		-5.114764	2.114418	-2.42	0.016	-9.258947	-.9705813
_Scon_17		-1.040167	.7510872	-1.38	0.166	-2.512271	.4319369
_Scon_18		-11.31122	4.520055	-2.50	0.012	-20.17037	-2.452075
_cons		7.276984	2.26668	3.21	0.001	2.834373	11.71959

-----+-----

ln_p							
_Scon_2		.1975735	.0994146	1.99	0.047	.0027244	.3924226
_Scon_3		.0981335	.1141761	0.86	0.390	-.1256475	.3219145
_Scon_4		.2338553	.1057509	2.21	0.027	.0265875	.4411232
_Scon_5		.1336138	.1848178	0.72	0.470	-.2286225	.4958501
_Scon_6		.2092526	.2740328	0.76	0.445	-.3278419	.7463471
_Scon_7		.1389903	.1881637	0.74	0.460	-.2298037	.5077844
_Scon_8		-.1509749	.4862554	-0.31	0.756	-1.104018	.8020681
_Scon_9		.1303825	.2174395	0.60	0.549	-.295791	.5565561
_Scon_10		.086975	.1894633	0.46	0.646	-.2843663	.4583163
_Scon_11		-.0598522	.1871108	-0.32	0.749	-.4265827	.3068783
_Scon_12		.641303	.2893121	2.22	0.027	.0742618	1.208344
_Scon_13		-.1088609	.4607938	-0.24	0.813	-1.012	.7942784
_Scon_14		.0117233	.1971655	0.06	0.953	-.374714	.3981606
_Scon_15		.6824939	.2360515	2.89	0.004	.2198414	1.145146
_Scon_16		.5285872	.2490705	2.12	0.034	.040418	1.016756
_Scon_17		.108679	.1512889	0.72	0.473	-.1878418	.4051998
_Scon_18		1.004798	.3104621	3.24	0.001	.3963034	1.613293
_cons		-.3263345	.0896122	-3.64	0.000	-.5019713	-.1506978

-----

Output from accelerated failure time models; Gompertz distribution; Duration between Loyalist attacks; Location stratification and year controls. Unclustered standard errors.

```

No. of subjects =          690                Number of obs =          690
No. of failures =          672
Time at risk    =          161711
Log likelihood   = -1149.4781                LR chi2(29)    =          812.78
                                                Prob > chi2    =          0.0000

```

```

-----+-----
      _t |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
 _t      |
   trave |   1.751689   .261551     6.70   0.000    1.239059    2.26432
   tsave |    .314552   .2101518    1.50   0.134   -.097338    .726442
  trbave |    .2193825  .1935819    1.13   0.257   -.1600311   .5987961
  tlbave |   2.206042   .3969009    5.56   0.000    1.428131   2.983954
  tsbave |  -.4516487   .5143436   -0.88   0.380   -1.459744   .5564461
 lngdppc |    .3971262  .2736536    1.45   0.147   -.1392251   .9334774
 lnunemp |  -1.181808   .3339118   -3.54   0.000   -1.836263  -.527353
    pop   |  -5.63e-06   3.68e-06   -1.53   0.126   -.0000129   1.59e-06
  split   |    .0110302  .0095704    1.15   0.249   -.0077275   .0297879
    sunn   |    .1161167  .3597876    0.32   0.747   -.5890541   .8212875
  sands   |    .129515   .2407237    0.54   0.591   -.3422946   .6013247
    dail   |  -.2215345    .2216    -1.00   0.317   -.6558625   .2127934
 _Scon_2  |    .9619174   .310104    3.10   0.002    .3541248   1.56971
 _Scon_3  |    .1583324   .3078261    0.51   0.607   -.4449956   .7616604
 _Scon_4  |    .0831131   .5129859    0.16   0.871   -.9223208   1.088547
 _Scon_5  |  -1.574913   .3760356   -4.19   0.000   -2.31193   -.837897
 _Scon_6  |  -2.435141   .5808231   -4.19   0.000   -3.573533  -1.296748
 _Scon_7  |  -1.523115   .5399636   -2.82   0.005   -2.581424  -.4648056
 _Scon_8  |  -2.797932   .9644583   -2.90   0.004   -4.688235  -.9076282
 _Scon_9  |  -1.43223    .4096364   -3.50   0.000   -2.235103  -.6293573
 _Scon_10 |  -1.576086   .4965383   -3.17   0.002   -2.549283  -.6028887

```

_Scon_11		-1.556921	.5504004	-2.83	0.005	-2.635686	-.4781559
_Scon_12		-2.796637	.6650509	-4.21	0.000	-4.100113	-1.493162
_Scon_13		-2.501237	.7619116	-3.28	0.001	-3.994557	-1.007918
_Scon_14		-1.376366	.3927418	-3.50	0.000	-2.146126	-.6066066
_Scon_15		-2.702367	.689724	-3.92	0.000	-4.054201	-1.350533
_Scon_16		-2.561309	.5468367	-4.68	0.000	-3.63309	-1.489529
_Scon_17		-.7486918	.3883982	-1.93	0.054	-1.509938	.0125546
_Scon_18		-3.719734	.9038146	-4.12	0.000	-5.491178	-1.94829
_cons		5.38913	2.259131	2.39	0.017	.961315	9.816946

-----+-----

gamma							
_Scon_2		-.0022884	.0012342	-1.85	0.064	-.0047073	.0001306
_Scon_3		-.0004533	.0008943	-0.51	0.612	-.0022061	.0012994
_Scon_4		.0004805	.0012507	0.38	0.701	-.0019709	.0029319
_Scon_5		.0013641	.0006607	2.06	0.039	.0000691	.002659
_Scon_6		.0016306	.0006843	2.38	0.017	.0002893	.0029718
_Scon_7		.0017254	.0007922	2.18	0.029	.0001727	.003278
_Scon_8		.001093	.0008587	1.27	0.203	-.0005901	.002776
_Scon_9		.0013968	.0007477	1.87	0.062	-.0000686	.0028623
_Scon_10		.0012731	.0006928	1.84	0.066	-.0000847	.0026309
_Scon_11		.0010871	.0007173	1.52	0.130	-.0003187	.002493
_Scon_12		.0027093	.0008076	3.35	0.001	.0011264	.0042921
_Scon_13		.0008163	.0009322	0.88	0.381	-.0010108	.0026434
_Scon_14		.0013461	.0006433	2.09	0.036	.0000854	.0026069
_Scon_15		.0020351	.0006833	2.98	0.003	.0006958	.0033744
_Scon_16		.0019348	.0006823	2.84	0.005	.0005975	.0032722
_Scon_17		.000972	.0007696	1.26	0.207	-.0005363	.0024803
_Scon_18		.002485	.0007188	3.46	0.001	.0010761	.0038938
_cons		-.001694	.0005999	-2.82	0.005	-.0028697	-.0005182

-----



## Appendix 7: List of Extended Regression Covariates

Covariate Name:	Definition:
trarmyave	Average deaths of members of the British Army, per day, attributable to Republican organisations within a region, between two Republican or Loyalist attacks
trnonarmyave	Average deaths attributable to Republican organisations that were not members of the British Army, within a region, between two Republican or Loyalist attacks
trarmybave	Average deaths of members of the British Army, per day, attributable to Republican organisations in areas contiguous to a region, between two Republican or Loyalist attacks
trnonarmyba ve	Average deaths attributable to Republican organisations that were not members of the British Army, in areas contiguous to a region, between two Republican or Loyalist attacks

## Appendix 8: Output from Cox Proportional Hazards Models with Duration between Republican Attacks against Army and Civilians as Duration Variable

Output from Cox proportional hazards model; Duration between Republican attacks against the Army as duration variable; Breslow method for tied failures; Stratified by year and location. Unclustered standard errors.

```

No. of subjects =          328                Number of obs   =          328
No. of failures =          314
Time at risk    =          126126
                                                    LR chi2(7)       =          17.37
Log likelihood   =   -300.66398                Prob > chi2      =          0.0152
  
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
trnonarmyave |   .737831   .9503601    -0.24   0.813   .0590977   9.211777
      tlave |  14.89698  19.90893     2.02   0.043   1.085221  204.493
      tsave |   .4809788  .6307266    -0.56   0.577   .0368054   6.285507
trarmybave |   .3677372  .6294287    -0.58   0.559   .012841  10.53117
trnonarmybave |  1.074545   .6028635     0.13   0.898   .3578211   3.226884
      tlbave |   .9689155  .8059009    -0.04   0.970   .1897991   4.946268
      tsbave |   8.520339  6.462695     2.82   0.005   1.926721  37.67863
-----
  
```

Stratified by strat

Output from Cox proportional hazards model; Duration between Republican attacks against non-Army targets as duration variable; Breslow method for tied failures; Stratified by year and location. Unclustered standard errors.

```

No. of subjects =          966                Number of obs   =          966
No. of failures =          949
Time at risk    =          151830
                                                    LR chi2(7)       =          18.24
Log likelihood   =   -958.48256                Prob > chi2      =          0.0109
  
```

-----

_t	Haz. Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
trarmyave	.4587264	.3361429	-1.06	0.288	.1090976	1.928823
tlave	1.623664	.3094574	2.54	0.011	1.117543	2.359003
tsave	2.155905	.814262	2.03	0.042	1.028348	4.519801
trnonarmybave	1.223677	.6339871	0.39	0.697	.4432608	3.378114
trarmybave	1.005785	.9489379	0.01	0.995	.1582756	6.391408
tlbave	2.336071	1.139732	1.74	0.082	.897839	6.078182
tsbave	4.086393	2.862532	2.01	0.044	1.035311	16.12908

Stratified by strat

## Appendix 9: Output from Cox Proportional Hazards Models with Duration between Loyalist Attacks as Duration Variable and Republican Violence against Army and Civilians as Covariate

Output from Cox proportional hazards model; Duration between Loyalist attacks against all targets as duration variable; Split Republican targets as covariates; Breslow method for tied failures; Stratified by year and location. Unclustered standard errors.

```

No. of subjects =          687                Number of obs   =          687
No. of failures =          670
Time at risk    =          161685
Log likelihood   =    -795.49087
LR chi2(7)      =          25.50
Prob > chi2     =          0.0006
  
```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
      trarmyave |   .94191   .7161079   -0.08   0.937   .2122582   4.179788
      trnonarmyave |  4.898712  1.930394    4.03   0.000   2.262852  10.60493
           tsave |  1.354536  .3534811    1.16   0.245   .8121942   2.259024
      trarmybave |   .4568147  .3580514   -1.00   0.318   .0983033   2.122814
      trnonarmybave |  1.326239  .4163798    0.90   0.368   .7167742   2.453923
           tlbave |  2.325292  1.044041    1.88   0.060   .964481   5.606108
           tsbave |  1.33605   .8120207    0.48   0.634   .4059589   4.397072
-----
  
```

Stratified by strat

## Appendix 10: Output from Cox Proportional Hazards Model; Accounting for Multicollinearity of 'tlave'

Output from Cox Proportional hazards model; Duration between Republican attacks against the British Army as duration variable; Breslow method for tied failures; Stratified of year and location; Unclustered standard errors; Full model.

```
No. of subjects =          328                Number of obs   =          328
No. of failures =          314
Time at risk    =          126126
Log likelihood   =   -300.66398
LR chi2(7)      =          17.37
Prob > chi2     =          0.0152
```

```
-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
trnonarmyave |   .737831   .9503601   -0.24   0.813   .0590977   9.211777
      tlave |  14.89698  19.90893    2.02   0.043   1.085221  204.493
      tsave |   .4809788  .6307266   -0.56   0.577   .0368054   6.285507
trarmybave   |   .3677372  .6294287   -0.58   0.559   .012841  10.53117
trnonarmybave |  1.074545   .6028635    0.13   0.898   .3578211   3.226884
      tlbave |   .9689155  .8059009   -0.04   0.970   .1897991   4.946268
      tsbave |   8.520339  6.462695    2.82   0.005   1.926721  37.67863
-----
                                             Stratified by strat
```

Output from Cox Proportional hazards model; Duration between Republican attacks against the British Army as duration variable; Breslow method for tied failures; Stratified of year and location; Unclustered standard errors; 'trnonarmyave' dropped.

```
No. of subjects =          328                Number of obs   =          328
No. of failures =          314
Time at risk    =          126126
Log likelihood   =   -300.69217
LR chi2(6)      =          17.31
Prob > chi2     =          0.0082
```

```
-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
```

```

-----+-----
      tlave | 14.41189 19.14514 2.01 0.045 1.066504 194.7509
      tsave | .4739552 .6180908 -0.57 0.567 .0367854 6.106603
    trarmybave | .3355473 .5605028 -0.65 0.513 .0127027 8.863646
trnonarmybave | 1.066032 .598468 0.11 0.909 .3547376 3.20356
      tlbave | .9828356 .8148804 -0.02 0.983 .1935263 4.991395
      tsbave | 7.551125 4.126249 3.70 0.000 2.587496 22.03655
-----

```

Stratified by strat

Output from Cox Proportional hazards model; Duration between Republican attacks against the British Army as duration variable; Breslow method for tied failures; Stratified of year and location; Unclustered standard errors; 'tsave' dropped.

```

No. of subjects = 328          Number of obs = 328
No. of failures = 314
Time at risk = 126126
LR chi2(6) = 17.04
Log likelihood = -300.82654    Prob > chi2 = 0.0091

```

```

-----+-----
      _t | Haz. Ratio  Std. Err.      z    P>|z|    [95% Conf. Interval]
-----+-----
    trnonarmyave | .7026537   .9168776   -0.27   0.787   .0544536   9.066838
      tlave | 13.88896  18.50435    1.97   0.048   1.020019  189.1172
    trarmybave | .2873355   .4768034   -0.75   0.452   .011115   7.427965
trnonarmybave | 1.163256   .6302725    0.28   0.780   .4022346   3.364118
      tlbave | .9141369   .7597002   -0.11   0.914   .1793139   4.660243
      tsbave | 8.535328   6.62995    2.76   0.006   1.862242  39.1205
-----

```

Stratified by strat

Output from Cox Proportional hazards model; Duration between Republican attacks against the British Army as duration variable; Breslow method for tied failures; Stratified of year and location; Unclustered standard errors; 'trarmybave' dropped.

```

No. of subjects =          328                Number of obs   =          328
No. of failures =          314
Time at risk    =          126126

LR chi2(6)      =          17.02
Log likelihood  =   -300.83778                Prob > chi2      =          0.0092

```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
trnonarmyave |   .6232893   .7835613   -0.38   0.707   .0530409   7.324339
      tlave |  12.12793   15.77551    1.92   0.055   .9475008  155.2366
      tsave |   .3926401   .5049199   -0.73   0.467   .0315778   4.882101
trnonarmybave |   .9811282   .5384082   -0.03   0.972   .3346699   2.876304
      tlbave |   .8422931   .6876127   -0.21   0.833   .1700505   4.17204
      tsbave |   8.857378   6.675467    2.89   0.004   2.022028  38.79924
-----

```

Stratified by strat

Output from Cox Proportional hazards model; Duration between Republican attacks against the British Army as duration variable; Breslow method for tied failures; Stratified of year and location; Unclustered standard errors; 'trnonarmybave' dropped.

```

No. of subjects =          328                Number of obs   =          328
No. of failures =          314
Time at risk    =          126126

LR chi2(6)      =          17.35
Log likelihood  =   -300.67213                Prob > chi2      =          0.0081

```

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
trnonarmyave |   .7456456   .9561523   -0.23   0.819   .0603982   9.205358
      tlave |  15.85654   19.71468    2.22   0.026   1.386425  181.3511
      tsave |   .4620505   .5887512   -0.61   0.545   .0380256   5.614386
trarmybave |   .3894836   .6440458   -0.57   0.569   .0152388   9.954668
      tlbave |   .9570308   .7929938   -0.05   0.958   .1886349   4.855453
      tsbave |   8.441127   6.345524    2.84   0.005   1.934278  36.8368
-----

```

-----  
Stratified by strat

Output from Cox Proportional hazards model; Duration between Republican attacks against the British Army as duration variable; Breslow method for tied failures; Stratified of year and location; Unclustered standard errors; 'tlbave' dropped.

No. of subjects = 328                      Number of obs = 328  
No. of failures = 314  
Time at risk = 126126  
LR chi2(6) = 17.36  
Log likelihood = -300.6647                  Prob > chi2 = 0.0080

-----  
\_t | Haz. Ratio    Std. Err.      z    P>|z|      [95% Conf. Interval]  
-----+-----  
trnonarmyave |   .740521   .9507766   -0.23   0.815   .0597936   9.171069  
          tlave | 14.79711   19.60618    2.03   0.042   1.102388   198.6183  
          tsave |   .4780331   .6223263   -0.57   0.571   .0372669   6.131869  
          trarmybave |   .3610513   .5931691   -0.62   0.535   .0144256   9.036561  
trnonarmybave |   1.077235   .600355    0.13   0.894   .3613487   3.211401  
          tsbave |   8.490559   6.386155    2.84   0.004   1.944048   37.08221  
-----

Stratified by strat

Output from Cox Proportional hazards model; Duration between Republican attacks against the British Army as duration variable; Breslow method for tied failures; Stratified of year and location; Unclustered standard errors; 'tsbave' dropped.

No. of subjects = 328                      Number of obs = 328  
No. of failures = 314  
Time at risk = 126126  
LR chi2(6) = 6.89



Log likelihood = -305.90223 Prob > chi2 = 0.3311

```
-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
trnonarmyave |   6.44039   6.978547    1.72   0.086    .7701663   53.85671
      tlave |   9.471095  12.36718    1.72   0.085    .7326849  122.4287
      tsave |   .8419986   .9997366   -0.14   0.885    .0821576    8.629288
      trarmyave |   .2085122   .3565635   -0.92   0.359    .0073037    5.952745
trnonarmyave |   1.00997   .5678693    0.02   0.986    .3355128    3.040241
      tlbave |   1.267226   1.017451    0.29   0.768    .2626802    6.113371
-----
```

Stratified by strat

Output from Cox Proportional hazards model; Duration between Republican attacks against the British Army as duration variable; Breslow method for tied failures; Stratified of year and location; Unclustered standard errors; 'trnonarmyave', 'trarmyave' and 'tsave' dropped.

No. of subjects = 328 Number of obs = 328  
 No. of failures = 314  
 Time at risk = 126126  
 LR chi2(4) = 5.96  
 Log likelihood = -306.36548 Prob > chi2 = 0.2019

```
-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
trnonarmyave |  4.919119   5.301324    1.48   0.139    .595044   40.66544
      tlave |   5.45897   5.96023    1.55   0.120    .6423167   46.39512
      tsave |   .6874425   .7992695   -0.32   0.747    .0703994    6.7128
      tlbave |   1.066453   .8557393    0.08   0.936    .2212705    5.13996
-----
```

Stratified by strat

Output from Cox Proportional hazards model; Duration between Republican attacks against the British Army as duration variable; Breslow method for tied failures; Stratified of year and location; Unclustered standard errors; 'tlave' dropped.

No. of subjects = 328                      Number of obs = 328  
 No. of failures = 314  
 Time at risk = 126126  
 LR chi2(6) = 13.55  
 Log likelihood = -302.57039              Prob > chi2 = 0.0350

```

-----
      _t | Haz. Ratio   Std. Err.      z    P>|z|     [95% Conf. Interval]
-----+-----
trnonarmyave |   .9401815   1.15824   -0.05   0.960   .0840599   10.51562
      tsave |   .6077827   .7952024  -0.38   0.704   .0467805    7.896446
  trarmybave |   .9103582   1.45001  -0.06   0.953   .040126    20.65372
trnonarmybave |  1.632249   .8909828    0.90   0.369   .5599484    4.758006
      tlbave |  1.204446   .9536731    0.23   0.814   .2551591    5.685433
      tsbave |  7.083973   5.12548    2.71   0.007   1.715558    29.25151
-----
  
```

Stratified by strat