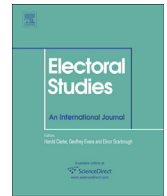




ELSEVIER

Contents lists available at [SciVerse ScienceDirect](http://SciVerse.ScienceDirect.com)

Electoral Studies

journal homepage: www.elsevier.com/locate/electstud

Age, period and cohort analysis in a comparative context: Political generations and political participation repertoires in Western Europe



Maria T. Grasso*

Department of Politics, University of Sheffield, Elmfield, Northumberland Road, Sheffield S10 2TU, United Kingdom

ARTICLE INFO

Article history:

Received 14 June 2013

Accepted 24 June 2013

Keywords:

Participation

Political generations

Western Europe

Multi-level models

Generalized additive models (GAMs)

Generalized additive mixed models (GAMMs)

ABSTRACT

This paper presents a method for studying age-period-cohort effects in a comparative context where repeated cross-sectional data are available covering a suitably long period of time. The method consists in the application of multi-level models with country as the higher level of analysis and random coefficients to model variables which vary at the country-level. Additionally, the application of generalized additive models (GAMs) and generalized additive mixed models (GAMMs) provides robust empirical tests of cohort categorizations applied in this and previous studies to estimate otherwise collinear effects. To illustrate the method, I derive and test the theory that generations will be differentiated in their patterns of participation based on the ascendancy of certain repertoires in the era of their political socialization.

© 2013 Elsevier Ltd. All rights reserved.

1. Introduction

In political science research it is often crucial to analyse the relative importance of age, period and cohort effects to understand the origins and trajectories of social change. Social ageing, historical context and generational membership are all three related to the passing of time but often have divergent effects from each other. These three time effects have different implications for what we can expect from the future, given inter-generational replacement.

The fundamental importance of disentangling these effects for explaining the occurrence and emergence of various social phenomena means that we must devise strategies to deal with the age, period and cohort “identification problem” in different research contexts (see Introduction to this Special Symposium by Neundorff and Niemi, 2014). The ‘identification problem’ stems from the fact that three effects cannot be estimated simultaneously. This is since age period and cohort are in a linear relationship with each other. As soon as we know two of the values (someone’s age and the year in which

they were surveyed, for example), the third value in the relationship (i.e., in this case, their year of birth) is automatically known. To deal with this methodological hurdle and allow for the estimation of all three effects simultaneously, we must devise strategies, or different methodological approaches, that allow us to ‘break’ this linearity.

The way in which we choose to ‘break’ the linearity of the age-period-cohort relationship will be largely influenced by the theoretical expectations of the research and the availability of ‘side-information’ to support simplifying assumptions or constraints on one or more of the three effects. Indeed, it is the substantive meaning attached to each of the three effects in terms of the research at hand which normally holds the key for determining which simplifying assumptions are the most legitimate and useful in a given research context (Glenn 1976, Tilley 2002, Tilley and Evans 2014).

With this in mind, this paper presents a method for studying age, period and cohort effects in a comparative context where repeated cross-sectional data are available covering a suitably long period of time so that members of the same cohorts are observed at different historical moments and in different phases of their life-time. More specifically, the method presented in this paper applies multi-level

* Tel.: +44 (0) 1142 221 702.

E-mail address: m.grasso@sheffield.ac.uk.

models (Snijders and Bosker, 1999) with country as the higher level of analysis and random coefficients to model those variables which vary at the country-level. This modelling strategy has the distinct advantage of accurately reflecting the fact that observations are nested within countries and that not all variables have the same effects cross-nationally.

This kind of approach is useful in a comparative context so as to allow for the correct modelling of those effects which vary between countries while at the same time recognising that there is some random variability at the country-level. This is a significant improvement on a cumbersome fixed effects approach with interactions which would estimate an inconvenient number of parameters and also importantly ignore the random variability at the country-level.

To 'break' the linearity in the age-period-cohort relationship and simultaneously estimate all three effects in the analysis, the method applied here relies on the transformation of the continuous year of birth variable into a five-category cohort variable. This means that people who are born within a given period are set to have equal cohort effects. As Rosow (1978: 69) pointed out, "the general bounding criteria for cohorts [cannot] be clearly established independent of specific analytic questions to delineate them". However, any categorization of cohort, no matter how theoretically sound, always runs the risk of losing information or applying the wrong 'cuts'.

Spitzer (1973: 1358) points out that there is always going to be a boundary problem of where to delineate social generations in the "seamless continuum of daily births" and that there is always unavoidable ambiguity in terms of where to apply the 'cuts'. This problem becomes even more important if the cohort analysis is done in a comparative context. Cohorts of the same birth year might differ as they experienced different formative events in their respective home-countries. This paper takes this criticism of *a priori* theoretical categorizations seriously, and unlike previous studies, provides a robust and novel empirical test of the categorization of cohorts, developed from theory.

This is accomplished through the application of generalized additive models (GAMs) and generalized additive mixed models (GAMMs). Both types of analysis allow us to plot the non-parametric smoothed curve for the effect of year of birth (for example, see Tilley, 2002 for an application of GAMs to study political generations in the UK). The utility of the application of the GAMs to plot the country-by-country smoothed cohort effects is that it allows us visually check whether cohort effects are similar across countries. Diagnostic country-by-country logistic regressions were also estimated to allow for the most accurate set-up of the multi-level models.

The advantage of the application of GAMMs, on the other hand, is that it allows us, just like in the multi-level models, to include random effects for those variables which vary at the country-level. Thus, by plotting the non-parametric smoothed curve for the effect of year of birth for the whole sample without ignoring the nested structure of the data the GAMMs crucially provide a means to visualise the shape of the cohort effects and overcome the need for categorizations in this context. This gives us greater confidence in our results. While categorizing cohorts is still necessary to estimate the

multi-level models, GAMMs allow us to visualise the shape of the cohort effects and thus provide a robust and novel empirical test to show that the theoretically-motivated cohort cut-offs applied for the multi-level models did not lead to biased results.

2. Political generations and political participation in Western Europe

I illustrate this method for age, period and cohort analysis by examining generational differences in various political activities in Western Europe. I hypothesize that certain generations are more likely to engage in specific political acts than other generations, based on the relative importance of different repertoires of participation in the historical context of a generation's coming of age.

In particular, this theorising suggests that older generations, coming of age in a period when mass parties and elections shaped social cleavages and were fundamental to the existence of democratic government, will have higher levels of party membership. In contrast, the generation coming of age in 1960s and 1970s, during the ascendancy of 'unconventional' modes of participation, are more likely than both older generations, but also than younger generations coming of age in subsequent, less politicised political contexts, to protest, petition and participate in social movement organisations (SMOs) (see also Grasso, 2011; Grasso, 2013a, 2013b for more on this).

The five-category distinction between cohorts applied in the multi-level models assumes that the historical periods in which individuals have spent the majority of their 'formative years' (here understood to be 15–25 years of age, but see Bartels and Jackman (2014) in this Special Symposium for evidence that this crucial 'impressionable' period might come earlier) are sufficiently different as to warrant the distinction of five generations each with their particular values and proclivities. It stands to reason that coming of age in periods as different as pre-WWII, post-WWII, 1960s–1970s, 1980s and 1990s will present divergent experiences.

I analyse data from the European Values Study 1981–2008 (EVS, 2011) on observations of individuals born between 1909 and 1981 in ten advanced Western European countries: Belgium, Denmark, France, West Germany, Great Britain, Ireland, Italy, the Netherlands, Spain and Sweden. Despite intricate national trajectories, the broad historical patterns identified as salient for determining generational differences in the modes of political action in this study are common to all ten countries analysed here.

In all of them, political parties and the social cleavages they represented, particularly around class, but also around religion and language/region, were the fundamental structuring boundaries of democratic competition at least until the 1960s. All ten nations, even though some to a greater and some to a lesser extent, shared a period of economic affluence and heightened radicalism around educational institutions and youth in the late-1960s and 1970s. Finally, the de-politicisation of public life in the wake of the Cold War, the convergence of mainstream parties on the centre of the ideological spectrum, and the withering ideological struggle between grand-narratives of Left and Right in the age of what Francis Fukuyama famously dubbed 'the End of Politics'

Download English Version:

<https://daneshyari.com/en/article/1051892>

Download Persian Version:

<https://daneshyari.com/article/1051892>

[Daneshyari.com](https://daneshyari.com)