Capturing changing attitudes of European Commission officials before and after significant external and internal events. Repeat cross sections or pseudo panels?

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**Capturing changing attitudes of European Commission officials before and after significant external and internal events. Repeat cross sections or pseudo panels?**

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**Abstract**

A widely held assumption in the literature is that bureaucrats are fundamentally conservative and that their beliefs are relatively immutable. In the case of the European Commission, the assumption is even stronger; that ‘Eurocrats’ live in a Brussels bubble and are unaffected by the challenges that ordinary citizens experience. This paper uses an innovative method – pseudo panels – and unique data – online surveys carried out in 2008 and 2014 - to challenge this view.

The paper explores changes in the views of European Commission officials before and after three significant events external and internal to the organisation; viz. the financial and economic crisis of 2008, general social trends, and the Commission’s Equal Opportunity Strategy (2010-14). A number of hypotheses are tested, based on expected shifts in attitudes, with comparisons drawn between the results of using the cross-sectional datasets and the pseudo panels. We find evidence that not only do the values of bureaucrats change, but also that the evidence is consistent, whether we use repeated cross sections or pseudo-panels, and is robust with respect to the composition of the clusters and the weighting of the samples.
Introduction
In the social sciences, surveys are an indispensable tool for generating datasets of attitudes and perceptions from a wide variety of respondents at multiple levels of society. Increasingly common are longitudinal datasets which facilitate comparisons over time, from comparative questions within a single questionnaire, through multiple cross-sectional surveys with different samples, to single-sample panel surveys (Gayle and Lambert, 2018). There are also examples of various hybrid forms, such as rotating and split-panel surveys.

Generally, the greater the complexity of these survey designs, the more expensive they are to produce and consequently the fewer there are to analyse. Panels are often viewed as the nearest an observational study can approximate an experiment, insofar as it enables greater control of confounding variables that might lead to false conclusions about the extent and nature of change over time.

As Firebaugh (2011) has argued, researchers need to consider the relative merits of these various survey designs in relation to their research questions. Repeated cross-sectional surveys, the most common design in use currently and for the foreseeable future, are superior when it comes to estimating aggregate change, for the reason that a randomly selected sample would reflect the total composition of a population in each time period. Also they are neither prone to problems of attrition nor the usual smaller sample sizes and hence lower power of panels (Verbeek, 2008). Panel surveys, on the other hand, have the advantage of enabling an estimation of the overall change among specific respondents or cases, as they build in the dependent relationship that exists over time and offer control over residual heterogeneity, or omitted variables, that can bias the findings (Gayle and Lambert, 2018).

Even where a researcher may wish to run a panel survey, there can be a number of constraints on achieving it, not least for reasons of cost, but also due to practical limitations such as the imposition of anonymity and confidentiality barriers by participating organisations that expressly prohibit record linkage between respondents.

In this paper our intention is to explore the benefits of using cross-sectional datasets to measure overall aggregate change and in relation to specific sub-groups in the population, alongside an attempt to mimic and evaluate a panel survey through the derivation of a pseudo panel from the cross-sectional datasets. The context is to assess the effects of significant external and internal events on officials’ beliefs.

As Kassim, Bauer, Connolly and Thompson (2018) argue, bureaucrats are depicted as value conservative in much of the public administration scholarship. In political debate (Blair, scars on my back ...) and popular media (Yes Minister), they are seen as wary of change or reform. Theoretical perspectives (sociological and historical institutionalism) tend to treat bureaucratic values as stable. This paper tests

1 The term ‘questionnaire’ is used to indicate a survey tool for recording data, whether it is administered through self-completion or interview, electronic or otherwise.
whether values are indeed stable in the context of significant (external and internal) change.

**Materials and methods**
The data for the comparative analysis of officials’ attitudes over time is derived from successive surveys of European Commission policy-related administrative staff, referred to as AD officials. We have compared the individual officials’ responses through cross-sectional analyses at each time point and through a pseudo panel of artificially created clusters of officials with similar background characteristics.

We had developed and implemented two attitudinal surveys of the officials working in the European Commission, one in 2008 (Kassim et al, 2013) and a second in 2014 (Connolly and Kassim, 2015). The vast majority of the questions were in a closed format, with specified response options to a structured set of items that were aimed at recording officials’ views and opinions of their organisation. There were a few open questions to allow for more expansive responses where a wide range of possible answers were possible and to allow overall comments to be made about the Commission. Some of these latter questions were post-coded into a number of discrete categories for further quantitative analysis.

Both surveys asked questions about the following issues:
- individuals’ backgrounds
- philosophical views on economic and social issues
- views about the current state of the European Union
- work experience in the Commission
- views on the Commission as an organisation
- views on the Commission in historical perspective

*European Commission in Question (EUCIQ), the 2008 survey – Phase 1*
The total population was drawn from the policy-related administrative (AD) staff in Brussels and Luxembourg in September 2008, which numbered 14,730. The target sample was designed to include all senior AD staff with managerial responsibilities (n=1,766) and a random sample of non-management AD staff across 31 Directorates General (DGs) (n=2,855). The random sample was proportionate to gender, age/length of service and member state, and disproportionate to the older member states (EU15) and newer accession states (EU12) in the ratio of 3:1, to ensure an adequate representation of the newer members who joined in 2004 and 2007 (see Kassim et al, 2013).

Of this total target sample of 4,621 officials, the final achieved sample was 1,901, representing a 41% response rate of the target sample and 13% of the overall population. The actual numbers of staff within each grade was as follows:
- Cabinet members: 54
- Senior Management (Directors General/Deputy Directors General/Directors): 114
- Advisors/Assistants to Directors General: 81
- Middle Managers (Heads of Unit): 429
- Principal Administrator/Administrator: 1,149
Others/prefer not to say: 74

The sample was weighted to reflect the population distributions, based on iterative proportional fitting (due to only having access to marginal distributions of sub-populations). This ensured that the sample for analysis was representative of seniority, gender, age/length of service, nationality, EU15 / EU12 proportions, and DG (31 policy-related).

European Commission: Facing the Future (ECFTF) the 2014 survey – Phase 2
The survey in 2014 was based on asking every member of staff working in the Commission in Brussels, Luxembourg, Joint Research Centre sites, Delegations, Representations and the Grange in Ireland, including non-policy AD officials, temporary agents, contract agents and seconded national experts (n=31,100). The number of officials who took part totalled 5,631, representing a response rate of 18%. The actual numbers of staff within each grade was as follows:

- Cabinet members: 51
- Senior Management (Directors General/Deputy Directors General/Directors): 81
- Middle Management AD (Heads of Unit): 306
- AD official: 2279
- AST official: 1797
- Contract agent: 822
- Temporary agent: 99
- Seconded National Expert: 117
- Others/prefer not to say: 79

The data were weighted to reflect similar characteristics to the 2008 sample, including gender, EU15/EU13 (Croatia had joined since 2008) and category of official. Since on this occasion the population characteristics were known for the cells of this 3-way categorisation, it was possible to adjust the data using post-stratification weights. When comparing this approach to weighting with the system used for the 2008 survey, based on iterative proportional fitting, the resulting weightings were almost identical. Weighted cross-sectional results almost perfectly reflect the findings of the unweighted results, so the analysis will focus on using the weights, due to the additional benefit of reflecting the true populations.

In assessing the potential impact of significant external and internal events we have measured the attitudinal changes between the two time periods. In order to compare the views in 2014 with those in 2008 it is necessary to ensure that the officials are from the same nations and DGs, as well as being limited to the policy-related AD categories. Additionally, due to the difference of 6 years between the surveys, we excluded those from the first sample who reached the official retirement age by 2014 and those from the second sample who were too young to have been employed in 2008. This reduced the samples to 1,737 in the first phase and 1,801 in the second phase. The analysis involved a pooled cross-sectional linear regression model, estimated with ordinary least squares using robust standard errors (Huber-White sandwich estimates of variance) to help correct the violation of
the independence assumption (Gayle and Lambert, 2018). We refer to analysis of
this data as results obtained from the matched cross sections.

Derivation of pseudo panels
It might be argued that ideally we would have a panel of the same individuals being
surveyed at each time point to enable matching of individual views. However, both
panels and cross-sections suffer from the problem of non-response, which can cause
biased estimates of average views and model coefficients, despite the use of
weights. In addition, panels are adversely affected by the problem of attrition,
which is typically non-random, and conditioning effects, such that prior behaviour
and outcomes can influence future behaviour and attitudes. While attitudes are
usually more stable, they are susceptible to major environmental effects, which is
the focus of this paper. There can also be problems in gaining permission to link
responses at different time points, due to ethical concerns over confidentiality and
anonymity.

In this case we have two cross-sectional datasets, in which we cannot be sure that
the initial respondents are the same as those in the second survey. Nonetheless,
there is evidence to show that staff turnover is very low and the likelihood is that
many respondents, if not most, to the second survey are common to the first one.
This raises the possibility of considering the use of pseudo panels, whereby clusters
of individuals can be compared over time, based on average or proportional (for
dichotomous questions) opinions. This has a number of potential advantages if the
interest is in change at the individual level rather than aggregate change, since there
is an in-built assumption of some degree of matching of the samples.

In order to produce the clusters, it is necessary to identify a number of invariant
characteristics that are, by definition, constant over the time period, but that would
not be of prime interest in developing an explanatory model of change; i.e. we
cannot use the same variables to both define the cases and explain the dependent
variable. The pseudo panel is based on clusters that comprise three characteristics
that are expected to be invariant over time, including the variables of age cohort,
measured as five groups based on year of birth (1943-1956, 1957- 1962, 1963-1967,
1968-1972 and 1973-1984); gender (female and male); and education, measured as
the disciplinary subject of their highest academic qualification (Business/Economics,
STEMM², Law, Politics/International Relations, and ‘Other’ (primarily humanities)).
Those with the same three characteristics are combined into clusters and matched
across EUCIQ (2008) and ECFTF (2014). The values that are recorded are the mean
or median values, or proportions based on the initial observations.

Whilst many studies of this nature use just one variable to create clusters, the use of
a mix of variables helps to increase the homogeneity within clusters, while increasing
variation between clusters (Tsai et al, 2014). The size of the clusters (or cohorts) is
important in avoiding the problem of ‘errors-in-variables’, for which Verbeek and
Nijman (1992) suggested a minimum of 100 cases, unless the clusters maximise the

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² STEMM: Science, Technology, Engineering, Mathematics and Medicine
inter-cohort variation to improve estimation efficiency, which has been the intention in this analysis. Ideally we would have few pseudo cases with small numbers of individuals, but there is a balance to be struck between having a heterogeneous set of cases with increased statistical power and the robustness of each case.

In our approach, we decided on the three-way definition of clusters to derive 50 pseudo panel cases for which values would be recorded at the two survey time points. The reduction of cases from the original sizes of 1737 in Phase 1 and 1801 in Phase 2 to just 50 cases in each clearly reduces the power of analyses. We were also faced with the problem of widely varying numbers of observations within each cluster, for which the mean number was 34.74 in the first survey (median: 27.00; range: 6 – 160) and 36.02 in the second survey (median: 29.50; range: 1 – 119). The actual distributions of initial cases at each phase are shown in Table 1. We refer to analysis of this data as results obtained from the pseudo panel.

### Table 1  Sample sizes of pseudo panel clusters

<table>
<thead>
<tr>
<th>GENDER × Cohort</th>
<th>EDUCATION (Highest Qual)</th>
<th>COHORT (Year of Birth)</th>
<th>TOTAL for Phase 1</th>
<th>TOTAL for Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>Bus/Econ</td>
<td>1943 – 1956</td>
<td>119</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1957 – 1962</td>
<td>65</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1963 – 1967</td>
<td>49</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1968 – 1972</td>
<td>24</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1973 – 1984</td>
<td>62</td>
<td>15</td>
</tr>
<tr>
<td>Female</td>
<td>Bus/Econ</td>
<td>1943 – 1956</td>
<td>68</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1957 – 1962</td>
<td>66</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1963 – 1967</td>
<td>67</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1968 – 1972</td>
<td>63</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1973 – 1984</td>
<td>60</td>
<td>10</td>
</tr>
<tr>
<td>STEMM</td>
<td>Bus/Econ</td>
<td>1943 – 1956</td>
<td>160</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1957 – 1962</td>
<td>95</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1963 – 1967</td>
<td>78</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1968 – 1972</td>
<td>78</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1973 – 1984</td>
<td>66</td>
<td>14</td>
</tr>
<tr>
<td>Law</td>
<td>Bus/Econ</td>
<td>1943 – 1956</td>
<td>78</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1957 – 1962</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1963 – 1967</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1968 – 1972</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1973 – 1984</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>Bus/Econ</td>
<td>1943 – 1956</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1957 – 1962</td>
<td>10</td>
<td>1</td>
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<tr>
<td></td>
<td></td>
<td>1963 – 1967</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1968 – 1972</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1973 – 1984</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

The panel analyses are based on clusters using the weights in the cross-sectional datasets to reflect the populations. Due to potential problems of heteroscedasticity resulting from the clusters having unequal sample sizes, the variables have also been weighted by the square root of the sample size, a variance stabilising mechanism for count variables, which serves to reduce the negative impact on the standard error (Dargay, 2002). The impact of this additional transformation was to increase the correlation between the two phases, but with little substantive effect on the results. Therefore, we will report the findings without these further adjustments to the data. The panel analyses are conducted using mixed between-within ANOVA, based on repeated sampling.

### Hypotheses

The aim of this paper is to demonstrate the impact of three significant events, two external and one internal, on the attitudes of European Commission officials between 2008 and 2014. The first external event is the financial and economic crisis that affected the global economy starting in 2008. In order to demonstrate this effect, we have focussed on locating the philosophical attitudes of officials to economic policy management, between the poles of a greater role for government compared to markets.
Although the date of the outbreak of the financial and economic crisis is contested, there is more of a consensus that the Eurozone crisis struck later, around 2010, and that by 2014 EU institutions had responded both with emergency measures and policies and structures that were intended to secure the Eurozone in the medium and longer term. Staff in the Commission, particularly those working in the following departments: DG Competition (COMP), DG Economic and Financial Affairs (ECFIN), DG Employment (EMPL), DG Enterprise (ENTR), DG Internal Market (MARKT), the Secretariat General, and members of cabinets, were extensively involved in developing a response to the crisis. Given the scale of the crisis and the threat presented to the European project, many staff expressed in interviews that their views on economic issues were different after the crisis from how they were before it.

Therefore, our first hypothesis (H1) is that there would be a philosophical shift towards government and away from the free market due to the collapse in banking.

The second external event is the changing social mores in society, which is hypothesised to affect the officials‘ philosophical attitudes about socio-cultural issues, between the poles of liberal and conservative beliefs.

Across the USA and the EU there has been a significant shift in social attitudes. Taking attitudes in the USA on same sex marriage as an indicator, support for same sex marriage in 2008 was at 40% compared with 55% in 2014\(^3\). Within Europe, opinion remains divided, with support at 80-100% in most of Western Europe compared with less than 60% in most of Eastern and Central Europe (European Social Survey, 2010)\(^4\). However, the legislative landscape has not remained constant, particularly in Europe. The Netherlands became the first country to legislate to allow same sex marriage in 2000, and by 2017 same sex marriages are legal in 11 EU countries, plus Iceland and Norway\(^5\).

We hypothesise that attitudes of staff in the Commission might similarly become more socially liberal over this time period reflecting two factors: the international trends outlined above, plus the staff from the 12 European states (excluding Croatia) who joined since 2004 becoming socialised and more likely to share the more liberal attitudes of colleagues from the existing 15 member states. Differences in socio-cultural values between the old and new member state officials was evident in 2008, with the newer 12 states expressing more conservative attitudes (Kassim et al, 2013).

The second hypothesis (H2) is that there would be a shift towards liberal over conservative attitudes due to the general shift in social attitudes and acculturation within the Commission.

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\(^3\) http://www.gallup.com/poll/117328/Marriage.aspx
\(^4\) http://www.pewresearch.org/fact-tank/2013/12/12/eastern-and-western-europe-divided-over-gay-marriage-homosexuality/
\(^5\) http://www.pewresearch.org/fact-tank/2015/06/09/where-europe-stands-on-gay-marriage-and-civil-unions/
The internal event of interest within this study is the Equal Opportunities Strategy of the Commission, which was implemented over the period 2010-2014. The EU and the Commission, in particular, have taken a key role in developing and monitoring gender equality policies within the member states. Internally, the Commission has set a series of gender action plans which were intended to create equal opportunities for staff working within the Commission. Each successive plan became more ambitious in terms of targets (Connolly and Kassim, 2017) and the Equal Opportunity Strategy (2010-14) not only set overall targets for gender equality, but also thresholds for achieving greater female representation amongst management. These targets were achieved a year early, so we therefore hypothesise that this will be reflected in a more positive perception of equality between men and women in their career development. Given the focus on gender-based targets for career progression, we focus here on attitudes towards the ease with which women are currently able to advance in their careers in the Commission on an equal footing with men. We consider this question from the separate viewpoints of women and men.

Our third hypothesis (H3) is that there would be a positive perceptions of a shift towards equality due to the meeting of targets set within the Commission, and that this would be shared by women (H3a) and men (H3b).

Results

We present the findings in statistical and graphical form from testing the hypotheses related to the external and internal events using the comparison from the matched cross-sections and the pseudo panels.

External event – financial and economic crisis: 2008

H1 Economic philosophy: Shift towards government over markets.

One obvious way in which the economic and financial crisis may have affected beliefs is through preferences on the role of government versus leaving it to the markets. Economic philosophy was examined through the following question: ‘People often think of themselves in terms of their personal philosophical stance on economic issues. Some favour an active role for government on economic policy questions. Others look primarily to markets. Where would you place yourself in terms of economic philosophy on a scale of 0-10, where 0 represents a greater role for government and 10 a greater role for markets?’.

The results from a matched cross-sectional analysis of both surveys are illustrated in Figure 1, which illustrates the distribution of responses to the economic philosophy question showing a shift between 2008 and 2014, with responses moving towards a belief in more involvement of government. Views on economic philosophy appear to be more polarized in 2014 than in 2008, with very little difference in the distribution of preferences in the range 6-10, but the proportion offering the middle value 5 falls considerably with an increase in those choosing values 2 to 4.
There was an overall shift towards an increased role for Government in the economy by 0.457 scale points (on 0-10 scale), from 5.496 to 5.039 (p<0.0005). There is some evidence to suggest that women are more likely than men to favour Government by 0.171 scale points (p=.021), although the interaction between time and gender is insignificant. The younger the cohort, the more markets are favoured, although there is little difference between the oldest two cohorts born before 1963. Business/Economics graduates are the most market-orientated, much more than any other group, while STEMM are the least, followed by PIR, ‘Other’ and Law. There is some change over time for STEMM and ‘Other’, both moving more towards support for Government over markets.

If we now analyse the pseudo panels, as illustrated in Figure 2, we can see how the mean value of the economic philosophy has shifted towards Government over markets by 0.468 scale points (from 5.435 to 4.967).
The average difference between women and men is also large (0.402 points), with women more likely to favour Government. There is no interaction between gender and time, indicating a parallel shift over time (Figure 3). The younger the cohort, the more markets are favoured, albeit with a parallel move towards more government over time (Figure 4). There is a statistically significant difference between the oldest and the two youngest cohorts. STEMM is significantly more supportive of Government than Business/Economics, with the other disciplines in between, and there is an interaction between education and time, with PIR and ‘Other’ crossing the others over time (Figure 5).

In comparing these two types of analysis, we can see that there is a consistent balance of evidence to demonstrate a shift to government over markets. Gender, cohort and education differences are consistent too, although the estimated magnitude of change differs.
**H2 Socio-cultural philosophy: Shift towards liberal over conservative attitudes.**

It is postulated that the financial and economic crisis may have also affected beliefs relating to social and cultural issues due to challenges to traditional ways of thinking about individual behaviour and morality in society, which is reflected in the degree to which officials have been acculturated within the Commission. Socio-cultural philosophy was examined through the following question: ‘People often think of themselves in terms of their personal philosophical stance on social and cultural issues. Many people who consider themselves to be progressive/libertarian tend to favour expanded personal freedoms on (for example) abortion, same-sex marriage, and so on. People on the conservative/traditionalist side tend to favour more traditional notions of family, morality, and order. Where would you place yourself in terms of social-cultural philosophy on a scale of 0-10, where 0 represents more liberal and 10 more conservative?’.

Based on the matched cross-sectional analysis, the results from the two surveys are illustrated in Figure 6, which shows that the distribution of responses to the socio-cultural philosophy question reveals a shift between 2008 and 2014, with responses moving towards support for more liberal beliefs. There is little indication of change in the values 6 to 10 on the more conservative side of the scale, but a major reduction in those in the middle of the scale (point 5) and an increase in all points 0 to 4 at the liberal pole.

**Figure 6 Shift in socio-cultural philosophy: 2008-2014 (Matched cross-sections)**

Overall there is a clear shift towards more liberal socio-cultural attitudes by 0.761 scale points (on 0-10 scale), from 3.677 to 2.916 (p<0.0005). Women are more liberal than men by 0.298 scale points (p<0.0005), and show increasing divergence over time (p=0.042). The two oldest cohorts born before 1963 are the most socially conservative, while the 1963-1967 cohort and increasingly those born in 1973-1984 are the most socially liberal (p=0.011). Some educational differences can be seen, with PIR the most liberal, followed by ‘Other’, and STEMM the least. The interactions
over time are insignificant, except that ‘Other’ is moving increasingly towards a liberal position (p=0.039).

If we now consider the pseudo panel analysis of socio-cultural philosophy, illustrated in Figure 2, we can see that there is a very large shift towards more liberal attitudes overall by 0.873 scale points (from 3.724 to 2.851). However, here there is little evidence of gender difference (0.123 points). There are no interaction effects between gender and time, indicating a parallel shift towards more liberal attitudes (Figure 7). There is also little evidence of differences between cohorts (Figure 8), or between educational groups (Figure 9), with no significant interaction effects, except that ‘Other’ is diverging further towards a liberal position.

In comparing the two types of analysis, we can see consistent support for the overall shift to liberal beliefs over conservative ones, but there are differences in the evidence available in relation to gender, cohort, or education, with the pseudo panels lacking the power to provide a clear picture of change.

Internal event – equal opportunity strategy: 2010-2014

H3 Perceptions of gender equality: Shift towards equality in careers

Now we turn to an area where the Commission has undertaken significant internal reform over the last 10 years, gender equality. This issue was explored through a fairly direct question in both surveys to which respondents could express their opinion on a 5-point Likert scale (1: strongly agree; 2: agree; 3: neither agree nor disagree; 4: disagree; 5: strongly disagree): ‘It is as easy for women to advance their careers in the Commission as men’. Descriptive analysis of both surveys revealed a strong gender differential in responses to this question with men more inclined to agree than disagree, compared to women (Figure 10). Contrary to our expectations, despite the greater focus and successful attainment of gender equality targets within the Commission, views amongst women and men are significantly more negative in 2014 than they were in 2008, particularly so for women.

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6 Responses 1 and 2 have been combined for illustrative purposes, as have responses 4 and 5; i.e. the scale is now ‘agree’, ‘neutral’, or ‘disagree’.
Figure 10 ‘It is as easy for women to advance their careers in the Commission as men’ (Matched cross-sections)

H3a Women’s perceptions of gender equality in careers

The matched cross-sectional analysis reveals a shift to more disagreement by women about the ease with which women can advance their careers on an equal basis with men by 0.484 scale points on a 1 to 5 scale (from 3.089 to 3.573). There are no apparent cohort differences and no interaction with time. STEMM disagree more than Business/Economics by 0.288 scale points on average, while ‘Other’ agree more by 0.258 scale points, the other two disciplines of PIR and Law showing no discernible difference. There is some sign of a small shift over time by ‘Other’, moving towards more disagreement (p=0.038).

H3b Men’s perceptions of gender equality in careers

When analysing the changing views of men with the matched cross-sections (Figure 10), we can identify a small shift to increased disagreement by men over the ease of career progress for women by 0.128 scale points (from 2.212 to 2.340). There is little difference between the cohorts, except those born in 1968-1972 are on average 0.186 points more in disagreement than the oldest cohort, with little interaction with time. There is no discernible statistical evidence of any difference between educational groups, nor interaction with time.
Turning now to the pseudo panel analyses, illustrated in Figure 11, we can discern an increase in women’s disagreement with the statement in the question by 0.561 scale points (from 2.999 to 3.560) $(p<0.001)$, but with no apparent cohort differences, nor interaction effects over time (Figure 12). STEM are most in disagreement, increasing from 3.213 points to 3.926 points, and are significantly different to ‘Other’ who are at most in agreement, albeit shifting by 0.805 points to more disagreement (Figure 13).

There is evidence of a small increase in men who are in disagreement by 0.143 points (from 2.204 to 2.347 points) $(p=0.041)$. There is evidence of a significant difference between those born in 1968-1972 (most in disagreement) and 1973-1984 (least in disagreement), but with no significant interaction effects with time (Figure
There is no discernible evidence of differences between educational groups, nor significant interaction effects (Figure 15).

Overall, the two analyses of women and men show a consistent picture of a perceived worsening situation for women in their careers, more so from the point of view of women than men, with broad agreement about the independent variables.

Despite the success of the Commission in meeting gender equality targets in advance of 2014, we find evidence that officials, especially women, feel more strongly that it is harder for women than men to have a successful career in the Commission. Evidence from interview data suggests that the 2014 reform to Staff Regulations, which limited flexible working, had a disproportionate impact upon women and parents of young families. Whist some recognised the improvements, a sense of presenteeism, a failure to recognize the real challenge of work-life balance, limited focus on diversity within the Commission, and a backlash were all apparent. These reasons provide a compelling account of why our hypothesis about an improving situation for women is rejected by both analyses.

Conclusions

We set out four tentative hypotheses where we expected views to have changed between the two surveys. We found evidence from both our analysis of matched cross-sectional data and of pseudo panel data to accept the hypotheses linking the

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7 “Not as bad as some organisations, there’s been a push since Kinnock staff. I remember in the past seeing women in support grades, males in other roles. That has improved.”
8 “Asked by manager are you getting a nanny? I said no I’m planning to work at home. There’s still a perception of coats on the back of chair.”
9 “What they want is services to combine family life and working life - like kindergarten/ laundry service. Then they can organise their life better. Gender is important and our response is wrong.”
10 “Have you noticed the only brown skinned official?”
11 “Yes now I am discriminated against! When I apply for a position, do they need a new member state?, then do they need a woman?, then who is the best candidate?”
external event of the financial and economic crisis with changes in the officials’ economic and socio-cultural philosophies. Whilst we anticipated a change in views relating to career gender equality, our hypothesis predicting perceptions of an improvement, we found the reverse, a worsening situation, that in 2014 women in particular and men to a lesser extent are less likely to believe that women can progress in their careers as easily as men than they were in 2008.

Our preliminary analysis suggests that the conclusions drawn from the analysis of data from matched cross-sections and pseudo panels are broadly the same, both in terms of overall trends and breakdowns by gender, education and educational background (where sample sizes allow). It is clear that cross-sectional data, if sampled well, provide a better picture of the aggregate change due to obviating the problems of attrition and positive feedback, whilst providing more power to detect changes. The advantage of using a pseudo panel over a repeated cross section is that by matching ‘cases’, the pseudo panel allows us to track the views of similar ‘cases’ over time, here based on gender, year of birth and subject of highest qualification, characteristics that do not change over time. This allows us to draw stronger inferences in terms of causality, that the change in views reflects responses to external events rather than differences in those being sampled at each time point, which is an obvious drawback of a repeated cross-section.

In this analysis we identified a sample of 50 pseudo cases across two time periods\textsuperscript{12}, with an average of 34.75 individual responses in each ‘case’ in 2008 and 36.02 in 2014. These sample sizes are dwarfed by the actual sample sizes in both years, thus raising the question of whether the value of linking artificial ‘cases’ is superior to the power afforded by the larger samples typically available in cross-sectional studies. A further disadvantage of the pseudo panel approach is that we can only show average values (means or medians) of panel cases, for which Figures 2 and 11 illustrate the drawback of such an approach since the changes in the distribution may be more complex.

Our view is that our particular cross-sectional studies benefitted from large-scale representative samples drawn from a relatively stable population. Therefore, the fact that the conclusions drawn from the cross-section should be robust when compared to those based on a pseudo panel is perhaps not surprising. Here, at least, the value in its demonstration of ‘no difference’ acts to strengthen the value of using the cross-sectional data. The value of the pseudo panel approach may be even greater in other studies where the survey samples are smaller and perhaps less representative, or where the underlying population is subject to more change, as turnover in the Commission is relatively low.

\textsuperscript{12} The analysis of H3 by gender reduced the pseudo panel size to 25 cases for each gender.
References


