The impact of information acquisition on EU performance judgements

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Abstract. Public evaluations of EU performance are not only critical indicators of the EU’s output legitimacy, but also shape future support for European integration. For citizens to monitor the political performance of the EU they need relevant facts, yet it is anything but clear that gains in information about EU performance cause change in judgements about such performance. Drawing on two-wave panel data, this article examines whether acquiring information following a real-world EU decision-making event alters citizens’ judgements about the utilitarian and democratic performance of the EU. It also examines how this effect differs for people with different levels of general political information. It is found that citizens who acquired performance-relevant information became more approving of the EU’s utilitarian performance but did not change their judgements about its democratic performance. Also, individuals with moderate levels of general political information were affected most strongly by new facts about performance. The implications of these findings for EU-level representative democracy are considered.

Keywords: political information; public opinion; political performance; European Union

Does political information influence citizens’ judgements about the political performance of the European Union (EU)? Of necessity, citizens need relevant factual information in order to monitor the performance of political institutions and hold political elites accountable for their actions (e.g., Delli Carpini & Keeter 1996; Wlezien 1995). Indeed, if citizens lack information about what EU leaders do and how they do it, it becomes difficult to imagine them evaluating the EU on its own merits. And yet, this is precisely what appears to be the problem. After all, it is common wisdom that citizens, while not being particularly informed about political affairs overall, generally know less about European politics than about national politics (e.g., Hobolt 2007). Most people, therefore, would tend to evaluate the EU first and foremost on the basis of domestic considerations (Anderson 1998; Reif & Schmitt 1980).

A growing body of research maintains that EU-related public opinions and behaviours are likely to be more strongly grounded in European vis-à-vis
domestic considerations as levels of political information increase (De Vries et al. 2011; Hobolt 2005; Karp et al. 2003). However, virtually no studies have gone beyond this notion to investigate the dynamics of the relationship between political information and public judgements about the EU. Even if we accept that the political judgements of well-informed individuals are more strongly rooted in ‘relevant’ information, it is still an open question whether citizens actually change their pre-existing evaluations of EU performance after having acquired new information about such performance. Furthermore, previous research suggests that opinion change varies across levels of general political information (e.g., Gilens 2001; Zaller 1992), yet competing perspectives exist on how general information moderates the effect of information acquisition.

Given the perennial concern over Europe’s political legitimacy, this gap in research is remarkable. Performance mirrors the outputs and effectiveness of a political regime, or ‘government for the people’ (Scharpf 1999). Therefore, public evaluations of EU performance are crucial empirical indicators of the EU’s output-oriented legitimacy (Thomassen 2009; see also Easton 1965: 286; Lipset 1960: 77). Moreover, such evaluations likely serve as building blocks (or roadblocks) towards future support for an EU-wide government (Rohrschneider 2002; Sánchez-Cuenca 2000). In Sánchez-Cuenca’s (2000: 149) words: ‘[A]llegiance to Europe can be generated by the functioning of the EU itself: the better the performance of the EU, the more likely it is that citizens will agree to pool sovereignty.’ Accordingly, the implications of whether, and if so among whom, EU performance judgements really change following new and relevant information are potentially highly significant.

Drawing on data from a two-wave panel survey, the present article asks if information gains relevant to EU performance cause change in individual judgements about such performance. It also asks how the effect of acquiring performance-relevant information differs for people with different levels of general information. We examine the presence of such effects in the wake of a naturally occurring major decision-making event in European politics: the EU summit in Brussels of 11 and 12 December 2008. EU summits are central events in European politics that address and resolve major outstanding EU-level issues, and therefore precisely the sort of political event that ought to inform the public about key manifestations of EU performance.

**Political information and change in EU performance judgements**

Previous work maintains that the concept of performance comprises both a utilitarian and a democratic dimension (e.g., Dahl 1989; Hofferbert &
Klingemann 1999; Mishler & Rose 2001). Scholarship has adopted this conceptual distinction in studies of mass opinion about political performance at the level of the EU (Rohrschneider 2002; Sánchez-Cuenca 2000). ‘Utilitarian performance judgements’ include appraisals of the EU’s ability to bring benefits and deliver desired goods. However, since virtually any change in policy will be opposed by some, and citizens cannot always get what they want, they must be able to trust that, irrespective of decision-making outcomes, the democratic process and use of public power are fair and just. Thus, ‘democratic performance judgements’ contain evaluations of the EU’s institutional functioning and democratic practices for articulating all competing public interests (Rohrschneider 2002; Sánchez-Cuenca 2000).

For citizens to monitor these aspects of performance, they require relevant factual information. Information about what government does is a crucial resource for the formation of opinions about that government, allowing citizens to monitor the behaviour of public officeholders (Delli Carpini & Keeter 1996; Fiorina 1981). Information about EU performance enables citizens to assess their approval of EU-level government action (or inaction), but whether learning the relevant facts actually alters such judgements is anything but obvious.

On the one hand, one could argue that information should have a great potential to change existing opinions about the EU because these opinions are generally less established and informed than opinions in more familiar domains of public life (Converse 1964; Page & Shapiro 1992; Zaller 1992). But on the other hand, it seems fair to assume that opinions about EU performance, even if subject to uncertainty, have gradually become better established and more firmly held as the EU evolved over time (see Page & Shapiro 1992). And most of what citizens believe about such performance, of course, is already quite fixed long before they take in new information about current events in European politics (Bartels 1993, 2006). This implies, as Bartels (1993, 2006) has argued, that newly received information must compete with a relatively greater mass of prior beliefs in order to cause an observable movement of opinion, and that any short-term change is likely to be modest in magnitude. It also implies, following Bartels, that, in order to produce such change, the information received must be perceived by citizens as fairly distinctive to begin with.

In fact, even if people learn more about the actions of the EU, it is questionable whether they are always capable or motivated to assess the distinctiveness of these actions and voice their satisfaction or dissatisfaction accordingly. The policies and decision-making processes at the level of the EU are typically complex and untransparent, as is the division of power between EU institutions and national governments. In this complex political environment, it might be difficult, if not too demanding, for citizens to translate information into knowledge, and knowledge into judgement. While it is one
thing to have information about the actions of the EU, it is quite another to understand the substance and implications of such actions (Lupia & McCubbins 2000), and yet another to credit or blame the EU in a multilevel system of government and responsibility (Rohrschneider 2002).

Moreover, from the perspective of the rational citizen (Downs 1957), there appears to be little incentive to make relatively complicated judgements on account of new information. To begin with, the electoral relationship between Europe’s citizens and executive institutions is only indirect, and therefore weak. With such limited opportunity to choose between rival candidates for Europe’s political leadership or policy agenda (Follesdal & Hix 2006), new information might not necessarily sensitise citizens to review performance and revise earlier judgements. A related issue is that media coverage of European affairs is generally rare, particularly relative to domestic politics (Peter & De Vreese 2004; Peter et al. 2003). As a result, the information environment might fall short of stimulating citizens to carefully process the relevant information that is received (Hobolt 2005; Kuklinski & Quirk 2000; Kuklinski et al. 2001).

From a theoretical standpoint, then, it is unclear whether new information actually matters for political performance evaluations in the context of European politics. In the political and informational context in which EU action takes place, either such evaluations are to a modest extent malleable by new information, or the information alone does not suffice because the cognitive stakes are too high – and the motivational stakes too low – for citizens to engage in the effort of re-assessing initial judgements. But amid this uncertainty, one proposition makes intuitive sense: new facts about the EU should be more distinctive, and hence more consequential for judgements about EU performance, when the facts bear directly upon those judgements.

**General versus performance-relevant information**

If opinion change is contingent upon the distinctiveness of the information received, then more specific measures of information acquisition are likely to be more adequate than general political information in capturing the actual impact of information on existing opinions. Indeed, it is unlikely that knowing such generic political facts as, say, which office José Manuel Barroso holds is, by itself, of direct importance to judgements about EU performance (Druckman 2005a; Gilens 2001).

This factor may lurk behind the failure of prior research to find a causal connection between political information and change in EU opinion. For example, as part of a two-wave panel study, exceptional in this domain of research, Semetko and her colleagues surveyed their respondents a month
before and shortly after the 1997 EU summit that cleared the way for the Treaty of Amsterdam. That treaty ‘further involved the EU in the process of solving social problems in EU member countries’, and contained ‘[p]rovisions concerning employment guarantees and improved security including greater cooperation between police forces in EU countries’ (Smetko et al. 2003: 633). It was not the goal of the study to examine the consequences of intake of this information per se, but it is theoretically sensible to expect that an information measure tailored to the summit outcomes would be more likely to correlate with opinions than the generic information measure that was used instead.  

To be sure, we are not the first to make a conceptual distinction between general and prior political information, on the one hand, and intake of ‘domain-specific information’, on the other (e.g., Converse 1962). Nonetheless, this distinction is often disregarded in operational measures of information (Kuklinski et al. 2000: 792), and it is virtually absent in studies of public opinion about the EU (but see Hobolt 2007). The reason for this is that general political information is a superior predictor of information acquisition in specific contexts (Price & Zaller 1993), and it is often assumed that the former should sufficiently ‘capture’ the latter (Delli Carpini & Keeter 1996; Zaller 1992). Therefore, more specific measures of information intake would contribute little to opinion change beyond general political information.

However, regardless of how well or poorly informed overall, people might still fail or succeed to acquire highly relevant information in specific domains of government at any given point in time (Price & Zaller 1993; see also Iyengar 1990; Kuklinski et al. 2000). And crucially, such information is more likely to substantially affect related judgements than general information. For example, Gilens’s (2001) simulations reveal that public support for environmental spending would be 8 percentage points higher than observed if people were fully informed in terms of general political information, but as many as 26 percentage points higher if, additionally, they were aware of an eight-year decline in government efforts to improve and protect the environment. Overall, Gilens’s findings substantiate what Delli Carpini and Keeter (1996: 365) already suspected: that ‘detailed knowledge of a particular issue area is undoubtedly more consequential for attitudes and behaviors in that domain than general political knowledge’.

It also seems plausible, then, that factual information about EU political performance has a greater potential to alter existing opinions towards such performance than one’s stock of general political information. In particular, it is information about EU-level actions and decision making – in short, information about what the EU does – that, once absorbed, should directly inform and induce change in judgements about Europe’s political performance. Accordingly, we expect that a greater intake of performance-relevant
information, our key independent variable, is associated with a greater likelihood that an individual’s judgement about EU performance will change.

\[ H1: \] Performance-relevant information causes significant change in EU performance judgements.

**General political information as a regulator of change**

There is a second argument for why the distinction between general political information and performance-relevant information is suitable to our analysis of opinion change. Performance-relevant information measures what and how much citizens learn about political performance within a given period of time, and can be thought of as comprising the ‘raw ingredients’ for opinion change (Barabas & Jerit 2010; Gilens 2001). By contrast, general political information is commonly thought to reflect the capacity to understand and weigh new information (e.g., Zaller 1992); hence, it should perform as a regulator of opinion change – for example by attenuating or strengthening the impact of new information. Clearly, general political information and performance-relevant information differ conceptually and perform notably different roles in the process of opinion change (see Nadeau et al. 2008).

Accordingly, as Nadeau et al. (2008) point out, the magnitude of change may amount to a combination of the quantity of new information acquired, on the one hand, and its potential to change as regulated by general political information, on the other. In other words, the effect of new information may vary according to citizens’ individual level of general political information. But even so, there are conflicting insights as to how general political information moderates this effect.

One strand of the literature emphasises that general political information signifies one’s cognitive ability and motivation to process and integrate new information: resources that facilitate the use of information and restructuring of political judgements (Delli Carpini & Keeter 1996). This perspective suggests that general political information should increase the change-inducing influence of judgement-relevant facts (Gilens 2001). But other insights suggest that performance-relevant information should be of relatively little influence to the judgements of individuals who are generally well-informed about politics. These individuals are expected to hold a comparatively large store of prior information relevant to the given judgement. To the extent that all of this available information is considered when making a judgement, new facts may carry little weight (Anderson 1981; Bartels 1993). In that way, general political information may provide a resource to resist the influence of performance-relevant information (Converse 1962; Saris 1997).
Alternatively, it is entirely conceivable that both suppositions carry substantial validity, so that the greater one’s level of general political information, the more likely one is to both absorb \textit{and} resist new performance-relevant information (Zaller 1992). Because information absorption and resistance affect the potential for opinion change in opposite directions which may offset each other, we may either find no apparent interaction at all, or a curvilinear by linear interaction. If general political information is indeed curvilinearly related to opinion change due to incomprehension or indifference at low levels and resistance at high levels, the linear effect of performance-relevant information acquisition on opinion change may turn out to be strongest among individuals with \textit{moderate} levels of general political information (Nadeau et al. 2008).

Lacking a clear expectation about the nature of the interaction between general political information and performance-relevant information, we pose the following research question:

\textit{RQ1:} How, if at all, does general political information moderate the effect of performance-relevant information on EU performance judgements?

The December 2008 EU summit

The specific setting of this study is the EU summit of 11 and 12 December, 2008 in Brussels, and we use panel survey data collected in the Netherlands about two weeks before ($t_1$) and directly after ($t_2$) the summit. Three issues dominated the agenda of this summit. First, EU leaders sought agreement on an energy and climate change package with measures including a 20 percentage-point cut in CO$_2$ (compared with the 1990 level) and a boost in renewable sources to 20 per cent of total energy use, both by the year 2020. Second, approval was required of a European economic recovery plan equivalent to €200 billion to ease the EU’s economic downturn. And third, EU leaders attempted to resolve the hold-up in the Lisbon Treaty ratification process by addressing Irish concerns about the treaty in view of the Irish ‘no’ in a referendum in June 2008. Specifically, a deal had to be reached on concessions enabling Ireland to hold a second referendum on ‘Lisbon’. A key concession being discussed was that Ireland – and consequently, each Member State – would keep a Commissioner in the European Commission.

The important point, from our perspective, is that the December 2008 EU summit presents a fertile opportunity for examining the dynamics of public judgements about EU performance. Confronted with what one Brussels correspondent termed a ‘threefold crisis’ (Van der Kris 2008), the summit addressed

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several of the EU’s major policy challenges (climate change, the financial crisis and institutional reform); a political context in which EU performance was of high practical and symbolic importance. Moreover, we gain leverage of the composition of the summit agenda, which featured both utilitarian-oriented issues (the climate and economic recovery plans) and democratic institution-oriented issues (the Lisbon Treaty and its ratification), thus allowing us to relate performance-relevant information acquisition to changes in each dimension of political performance. Finally, the summit generated a considerable amount of national media coverage that, to varying degrees, focused attention on the EU’s handling of the issues described above, thereby providing our panel respondents with an actual opportunity to acquire performance-relevant information in their natural encounters with media (Barabas & Jerit 2009; Druckman 2005b).

Data and measurement

The panel survey was administered by TNS-NIPO. About two weeks prior to the summit, TNS-NIPO randomly selected and invited 2,400 persons aged 18 and older from an online panel of nearly 144,000 citizens to fill out an online questionnaire. A total of 1,394 individuals completed the questionnaire, yielding an AAPOR RR1 response rate of 58 per cent. One day after the final day of the summit, TNS-NIPO re-contacted these 1,394 respondents, requesting them to fill out a second questionnaire. The 1,127 respondents who also completed the second questionnaire form our sample. It includes 588 women (52 per cent) and 539 men between the ages of 18 and 83 (\( M = 49.50, SD = 16.10 \)). The sample is by and large representative of the Dutch adult population in terms of key sociodemographics.

EU performance judgements

Our dependent variables are utilitarian and democratic performance judgements. Evaluations of utilitarian performance incorporate judgements about the costs and benefits associated with the EU’s actions and policies, thus reflecting perceptions of how much the individual citizen and her country gain or lose from EU performance. The instrumental nature of such evaluations can be conceived broadly in that they capture not only perceived financial or material benefits, but also postmaterial benefits and ‘benefits that are not available at the domestic level’ (Sánchez-Cuenca 2000: 151), such as peace and stability or environmental protection (Boomgaarden et al. 2011).
We measure utilitarian performance judgements at $t_1$ and $t_2$ with four survey items derived from Boomgaarden et al. (2011): (1) ‘The EU fosters peace and stability’; (2) ‘Dutch membership of the EU is a good thing’; (3) ‘The Netherlands benefits from membership of the EU’; and (4) ‘I personally benefit from Dutch membership of the EU’.11 The country membership item features prominently in the utilitarian research tradition (e.g., Anderson & Reichert 1996; Eichenberg & Dalton 1993; Gabel 1998; Gabel & Palmer 1995), and the country benefit item is considered a suitable indicator of perceived benefits associated with EU policy performance (Marsh 1999; Mikhaylov & Marsh 2009; Sánchez-Cuenca 2000).12

Democratic performance judgements, in a nutshell, contain appraisals of the way democracy at the level of the EU works in practice. Again, we draw on the Boomgaarden et al. (2011) study for another set of four survey items to measure these judgements at $t_1$ and $t_2$: (1) ‘The decision-making process in the EU is transparent’; (2) ‘The EU functions well as it is’; (3) ‘The EU is wasting a lot of tax money’ (coding reversed); and (4) ‘The EU functions according to democratic principles’.13 While most measures of democratic performance employed in previous research are restricted to a single-item measure of ‘satisfaction with democracy’, the quartet of items used here covers a wider variety of interrelated aspects of the EU’s democratic and institutional functioning (see Linde & Ekman 2003).

Responses to all of the above items, which were put to respondents in randomised order to avoid question order effects, are measured on a scale ranging from 1 to 7 and without a ‘don’t know’ option. The 1–7 scale allows respondents to articulate their judgements quite precisely, which is not the norm in this area of research (Gabel 1998: 342; Sánchez-Cuenca 2000: 154). We average the responses to each set of items to create index measures of utilitarian performance judgements at $t_1$ ($M = 4.30$, $SD = 1.19$, alpha = 0.84) and $t_2$ ($M = 4.08$, $SD = 1.20$, alpha = 0.83) and democratic performance judgements at $t_1$ ($M = 3.38$, $SD = 0.92$, alpha = 0.69) and $t_2$ ($M = 3.33$, $SD = 0.97$, alpha = 0.73).

We emphasise that this two-dimensional conceptualisation of EU performance judgements (e.g., Rohrschneider 2002) is supported empirically. Utilitarian and democratic performance judgements emerge as separate factors in a solution from a rotated exploratory principal components factor analysis, and we find substantially similar results in a Mokken analysis for polytomous items that is sensitive to item response distributions.

Performance-relevant and general political information

Our key independent variable is performance-relevant information. We measure this using a unique battery of six questions from the post-summit
survey about major expressions of EU performance that materialised in the context of the December 2008 summit. Specifically, we asked our respondents three questions about the energy and climate change package, one question about the European economic recovery plan, and two questions about the Lisbon Treaty ratification process – all of which focus on EU-level action in relation to these issues (including causes and consequences of such action). All questions were put to respondents in a multiple-choice format including four response categories with random order rotation, plus a ‘don’t know’ option. (For a full overview, see the Appendix.) Incorrect and don’t know answers score 0 and correct answers score 1. In the multivariate analyses that follow, we use a single measure of performance-relevant information that is the additive scale of all six scores ($M = 2.31$, $SD = 1.89$, KR-20 = 0.76). 14

The questions address several of the most significant facts about EU performance that came forward in media coverage about the summit. 15 The correct answers to these questions are pieces of information that plausibly connect to judgements about EU performance (Druckman 2005a). Following Gilens (2001), we make no normative claim that it is desirable that this information influences respondents’ political judgements; we simply seek to determine whether it does so (indeed, as we expect it does following $H1$). Furthermore, our measure of performance-relevant information indicates nothing about the sources of that information. Indeed, we are primarily concerned with the consequences of acquiring information, irrespective of its origins (Price & Zaller 1993; Zaller 1992). 16

General political information, which was measured at $t_1$, is based on an additive scale of scores (0, 1) from eight questions about national and EU-level political actors and offices (KR-20 = 0.70). 17 These questions were asked in a multiple-choice format with five randomly rotating response categories and a ‘don’t know’ option (as specified in the Appendix). Following Nadeau et al. (2008), we distinguish four distinct levels of general political information ranging from 1 to 4 ($M = 2.45$, $SD = 1.11$), corresponding to individual scores representing low, medium-low, medium-high and high general political information, and comprising 24, 32, 19 and 25 per cent of the sample, respectively (see also Hobolt 2007: 179).

Results

We begin our analysis by juxtaposing respondent levels of general political information with levels of acquired information specific to EU performance following the December 2008 summit. The correlations between each of the six performance-relevant information items and the general political information...
scale are fairly modest and range from 0.21 for information acquired about the delegation of one Commissioner per Member State to the European Commission, to 0.38 for information obtained about Poland’s fierce opposition to the original EU climate proposals (forcing the EU to water down these proposals). Table 1 displays the raw percentages of respondents correctly answering each performance-relevant information question across increasing levels of general political information. These percentages hint at considerable nonlinearities in the data lurking behind the modest correlations between the performance-relevant information items and general political information.

Several of the lower and upper bound scores on performance-relevant information deviate notably from what one would expect on the basis of the general political information scale. On the one hand, there are large proportions of respondents who are best informed according to the general political information standard but who nonetheless did not acquire the relevant facts about EU performance. For example, only slightly more than half of the highly informed were aware that the Irish government did indeed decide to hold a second referendum on the Treaty of Lisbon, in spite of the ‘no’ of the Irish people in 2008. On the other hand, there are some facts that even a considerable proportion of respondents with the lowest level of general political information did acquire. For example, nearly a third of respondents with the lowest level of general political information knew about the EU agreement to reduce CO₂ emissions by 20 percentage points by 2020.

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<th>Levels of general political information</th>
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<tr>
<td></td>
<td>Low</td>
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<tr>
<td>EU to lower carbon emissions by 20 percentage points (compared to 1990)</td>
<td>32.6</td>
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<tr>
<td>Poland among strongest opponents of EU’s initial climate plan</td>
<td>13.7</td>
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<tr>
<td>EU to boost economy with €200 billion stimulus package</td>
<td>15.6</td>
</tr>
<tr>
<td>EU to increase renewable energy to 20 per cent of total production</td>
<td>19.6</td>
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<tr>
<td>Irish government to hold second referendum on Lisbon Treaty</td>
<td>8.5</td>
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<td>Each Member State keeps Commissioner in the European Commission</td>
<td>3.3</td>
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To be sure, those considered highly informed in terms of general political information are more likely to acquire facts about EU performance (Price & Zaller 1993). Even so, we find that intake of performance-relevant information varies strongly from one fact to another at all levels of general political information. In part, this discrepancy undoubtedly owes to variation in relevant media coverage (Barabas & Jerit 2009; Iyengar et al. 2009). Indeed, patterns in the data shown in Table 1 indicate ceiling effects for information that was plausibly rather widely available in the media environment (e.g., the energy and climate agreements) and floor effects for information of presumably lower availability (e.g., the agreement on the size and composition of the Commission).

In sum, our scale of general political information is rather imprecise in estimating who learns what about EU-level action. To the extent that citizens who do learn perceive the information obtained as comprehensible and significant input to EU performance judgements, such information may well be more likely to induce change in these judgements than general political information.

The partial effect of information on performance judgements

Our model of preference for analysing change in performance judgements is the lagged dependent variable (LDV) model (e.g., Eveland et al. 2005; Lenz 2009; Strömbäck & Shehata 2010). We choose this method primarily because, as with many realistic models of opinion change, there is good reason to suspect that the magnitude and direction of change in judgements is correlated with the original judgement at $t_1$ (Bartels 1993, 2006). By controlling $t_1$ judgements when predicting their $t_2$ values, our political information variables thus predict change in judgements for fixed levels of prior judgements (Finkel 1995).18

We first analyse the relationship between information and change in performance judgements in a model that includes only general political information among the predictors (Model 1). We then extend this model to include performance-relevant information (Model 2). Aside from the lagged dependent variable, our model includes political interest as a control variable. Interest in politics, which captures a motivation to attend to political affairs (Delli Carpini & Keeter 1996, Luskin 1990; Prior 2010), may influence both information acquisition (e.g., Druckman 2005b) and opinions about the EU (Semetko et al. 2003; see also Krosnick & Brannon 1993; Kuklinski et al. 2001), and therefore possibly confounds the relationship between information and change in judgements.19

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Table 2 presents the results from these two models as estimated by ordinary least squares (OLS) regression. The results of models 1 and 2 predicting $t_2$ utilitarian performance judgements are shown in the first two columns of Table 2. Estimating model 1, we find that, first of all, individual judgements about utilitarian performance are highly stable over the period of time between the two panel waves. Beyond this, the effect of political interest is positive, and this effect is statistically significant. Two people who are equally positive or negative about Europe’s utilitarian performance at $t_1$ and equally well-informed in terms of general political information, but who differ by one unit in their level of interest in politics, are expected to differ by 0.05 units in their evaluations of utilitarian performance at $t_2$. The positive sign of the coefficient indicates that the person expressing more political interest became more positive about utilitarian performance. We also find that, once $t_1$ judgements and political interest are controlled, the effect of general political information on judgements at $t_2$ is positive but insignificant.

In contrast, when we enter performance-relevant information into model 2 we see that its influence on $t_2$ judgements is positive and statistically significant above and beyond the influence of the other predictors in the model. Holding prior judgements, political interest and general political information constant, each additional piece of acquired information about EU performance is associated with a 0.07 unit more positive judgement about utilitarian performance at $t_2$. We furthermore see that including the performance-relevant information variable reduces the positive effect of political interest. This suggests that performance-relevant information partially accounts for the relationship

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<th>Utilitarian performance judgements($t_2$)</th>
<th>Democratic performance judgements($t_2$)</th>
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<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
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<tr>
<td>Performance judgements($t_1$)</td>
<td>0.73*** (0.02)</td>
<td>0.72*** (0.02)</td>
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<tr>
<td>Political interest</td>
<td>0.05** (0.02)</td>
<td>0.03 (0.02)</td>
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<tr>
<td>General political information</td>
<td>0.03 (0.02)</td>
<td>-0.01 (0.03)</td>
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<tr>
<td>Performance-relevant information</td>
<td>–</td>
<td>0.07*** (0.01)</td>
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<td>Adjusted $R^2$</td>
<td>0.55</td>
<td>0.56</td>
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Notes: Unstandardised regression coefficients with standard errors in parentheses. ** $p < 0.01$; *** $p < 0.001$ (two-tailed); $n = 1,127$. © 2012 The Author(s) European Journal of Political Research © 2012 European Consortium for Political Research
between political interest and change in utilitarian performance judgements. Plausibly, those with higher interest were more attentive to political affairs and learned more about the current actions of the EU, and this information translated into a greater appreciation of EU benefits.

Our findings look different, however, when we estimate a similar pair of models with \( t \) democratic performance judgements as the dependent variable, as shown in the last two columns of Table 2. Again, we find a robust stability effect running from initial judgements to subsequent judgements. Beyond this, we find little evidence of information effects. Here, the effects of both information variables run in a negative direction, but neither the effect of general political information nor of performance-relevant information is significant.

In sum, our results suggest that citizens who acquired information about EU performance became more approving of Europe’s utilitarian performance but did not change their opinions about its democratic practices. Overall, these analyses show that performance-relevant information can have a significant influence on political judgements beyond the effect of prior judgements and general political information, and this evidence supports \( H1 \).

Who is most affected by performance-relevant information?

The analyses above reveal that performance-relevant information is of greater direct importance for individual political judgements than general political information. Nonetheless, general political information might play an important – yet not fully clarified – indirect role in the opinion change process by moderating the impact of new information. If an individual’s stock of pre-existing information mainly facilitates the integration of new information into current attitude structures, then the influence of performance-relevant information should be greatest among the highly informed. If general political information primarily serves as a resistance mechanism, however, then the least informed individuals should be most affected. And if both factors are at play, we may find those around the midpoint of the general political information ladder to be influenced most strongly.

In order to test for these competing possibilities, we estimate two new models. To account for the possibility that the interaction between general political information and performance-relevant information takes a linear form, we estimate a model similar to Model 2 but now including a linear by linear component designed to assess the first-order interaction between the two information variables (Model 3). In order to account for the possibility of a curvilinear by linear interaction between general political information and performance-relevant information, we estimate a model that accommodates two additional components (Model 4). The first is a quadratic term of the...
general political information variable, and the second term is the curvilinear by linear component designed to capture a nonlinear interaction effect (Aiken & West 1991; Cohen et al. 2003).22

Table 3 presents the results from the two expanded models. The estimated effects of the predictors in Model 3 on $t_2$ utilitarian and democratic performance judgements are shown in the first and third columns of the table, respectively. The results of Model 3 indicate that the first-order interaction term designed to assess the joint effects of the two information variables is not related significantly to either $t_2$ utilitarian performance judgements or $t_2$ democratic performance judgements. These findings suggest that the influence of performance-relevant information on EU performance evaluations does not increase or decrease linearly with levels of general political information. The influence of performance-relevant information is neither at its greatest among well-informed individuals, nor among poorly informed individuals.

The estimates derived from Model 4 are shown in the second and fourth columns of Table 3. The results of Model 4 reveal that the higher order interaction term assessing the curvilinear by linear interaction has a significant

<table>
<thead>
<tr>
<th></th>
<th>Utilitarian performance judgements($t_2$)</th>
<th>Democratic performance judgements($t_2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 3</td>
<td>Model 4</td>
</tr>
<tr>
<td>Performance judgements($t_1$)</td>
<td>0.72*** (0.02)</td>
<td>0.72*** (0.02)</td>
</tr>
<tr>
<td>Political interest</td>
<td>0.03 (0.02)</td>
<td>0.03 (0.02)</td>
</tr>
<tr>
<td>General political information</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Performance-relevant information</td>
<td>0.07*** (0.01)</td>
<td>0.11*** (0.02)</td>
</tr>
<tr>
<td>Performance-relevant information $\times$ General political information</td>
<td>–</td>
<td>–0.01 (0.01)</td>
</tr>
<tr>
<td>General political information$^2$</td>
<td>–</td>
<td>−0.02 (0.03)</td>
</tr>
<tr>
<td>Performance-relevant information $\times$ General political information$^2$</td>
<td>–</td>
<td>−0.04** (0.01)</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.56</td>
<td>0.57</td>
</tr>
</tbody>
</table>

Notes: Unstandardised regression coefficients with standard errors in parentheses. ** $p < 0.01$; *** $p < 0.001$ (two-tailed); $n = 1,127$. 

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effect on $t_2$ utilitarian performance judgements. The sign of the coefficient is negative, which indicates that the further an individual’s score on the general political information scale is removed from the mean on that scale (i.e., the higher the value on the squared general political information variable), the weaker the impact of performance-relevant information. At lower levels of general political information, acquiring performance-relevant information exerts little influence on utilitarian performance judgements. As the level of general political information increases, the effect of performance-relevant information initially grows stronger. However, beyond a certain threshold level, general political information is associated with a lower impact of performance-relevant information. In other words, it is those who score around the average on the general political information scale – the *moderately* informed individuals – who appear to be most affected by performance-relevant information.\(^{23}\)

Figure 1 visualises the curvilinear by linear interaction between general political information and performance-relevant information using the coefficients from Model 4, with the covariates set at their sample means and

---

**Figure 1.** The effect of performance-relevant information (x-axis) on $t_2$ utilitarian performance judgements (y-axis) at different levels of general political information. The dashed lines in grey shading indicate 95 per cent confidence intervals around the simulated effect among respondents with medium-low levels of general political information.
performance-relevant information scaled in its original uncentred form. Although the influence of performance-relevant information on $t_2$ utilitarian performance judgements is uniformly positive across all levels of general political information, it has fairly little impact on judgements among individuals scoring low or high on general political information. The average difference between zero and full performance-relevant information is 0.16 and 0.09 on the performance judgements scale for poorly and highly informed individuals, respectively. However, at intermediate levels of general political information, the impact of performance-relevant information is notably stronger. At these levels, individuals with zero and full performance-relevant information differ nearly two-thirds of a full point on average in their post-summit performance judgements.

The presence of a curvilinear by linear interaction in model 4 predicting $t_2$ utilitarian-based judgements can also be revealed by estimating the effect of performance-relevant information at low (1), moderately low (2), moderately high (3) and high (4) levels of general political information. These estimates are shown in Table 4. There is no significant effect of performance-relevant information among respondents at the top and bottom of the general political information ladder (1 and 4 on the scale). But among those with moderately low and moderately high levels of general political information (2 and 3 on the scale), we find that the coefficients for performance-relevant information are statistically different from zero.

Taken as a whole, the results presented suggest, as an answer to RQ1, that general political information can moderate the influence of performance-relevant information and that it can do so curvilinearly, such that moderately informed individuals are affected most significantly.

### Table 4. Effect of performance-relevant information on $t_2$ EU performance judgements at different levels of general political information

<table>
<thead>
<tr>
<th>General political information</th>
<th>Utilitarian performance judgements($t_2$)</th>
<th>Democratic performance judgements($t_2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>General political information = Low (1)</td>
<td>0.03 (0.02)</td>
<td>-0.02 (0.02)</td>
</tr>
<tr>
<td>General political information = Medium-low (2)</td>
<td>0.10*** (0.02)</td>
<td>0.00 (0.02)</td>
</tr>
<tr>
<td>General political information = Medium-high (3)</td>
<td>0.10*** (0.02)</td>
<td>0.00 (0.02)</td>
</tr>
<tr>
<td>General political information = High (4)</td>
<td>0.02 (0.02)</td>
<td>-0.02 (0.02)</td>
</tr>
</tbody>
</table>

Notes: Unstandardised regression coefficients with standard errors in parentheses. Covariates are set at their sample means. *** $p < 0.001$ (two-tailed); $n = 1,127$. 

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Discussion and conclusion

As Price and Zaller (1993: 134) write: ‘Only people who actually acquire information from the news can use it in forming and changing their political evaluations.’ In the present study, we find evidence that, in the wake of a naturally occurring major decision-making event in European politics, citizens who acquire information about EU-level actions do indeed ‘use’ such information to re-evaluate their judgements about EU performance. In other words, the influence of raw facts informing citizens about what the EU does can be powerful and distinctive enough to cause significant change in existing judgements about the EU.

It is worth repeating that the power of such information to alter the public’s political judgements about the EU is not obvious (e.g., Kuklinski et al. 2000). First of all, the representation (Follesdal & Hix 2006) and communication (Meyer 1999) deficits that impede the relationship between EU elites and the European public gave us ample reason to presume that citizens might be ill-prepared to absorb facts about performance when such facts are available, let alone use them to inform their opinions about the EU. Furthermore, the effects of information acquisition that we report are observed in a real-world setting where, for a number of reasons, such effects are less likely to emerge than in the controlled setting of the experiment, and this adds to the external validity of our findings (Barabas & Jerit 2010).

In addition, whereas most information effects studies rely on cross-sectional data that typically exaggerate the behavioural impact of information (Levendusky 2011), our study documents information effects based on panel data, generating significantly smaller but presumably more accurate estimates of these effects. Judging from the apparent stability effects (Table 2), EU performance judgements are indeed ‘more a product of long-term political assessments than of short-term reactions’ to new information (Bartels 2006: 146). In view of such opinion stability, the effects of even the most prominent political events are bound to be quite modest. When weighing the political significance of a two-day European summit in Brussels, this is very important to keep in mind (Bartels 2006).

Yet meaningful short-term change need not be of great magnitude. Even if the effects of various emerging facts about performance in some cases counteract each other or fade over longer periods of time, they also accumulate to alter judgements in a systematic way that might well produce a major change in the long run (Page & Shapiro 1992). In fact, the long-term impact of relevant information presumably not only manifests itself in altered performance judgements, but also spills over to shift support for further integration. After all, the willingness to support an EU-wide government is, at least to a
substantial degree, itself reflective of a cumulative effect of subsequent rational assessments of EU institutions and their performance (Rohrschneider 2002; Sánchez-Cuenca 2000).

The analyses reveal an overall positive impact of information acquisition on change in utilitarian performance judgements but little change in evaluations of democratic practices. One possible factor that may account for the differential impact of information acquisition is the perceived relevance of the information, which may vary depending on the particular aspect of performance under consideration. To be sure, our measure of performance-relevant information did contain facts about EU-level institutional action, but the facts we asked about may be perceived as not particularly relevant to judgements about Europe’s democratic functioning. Another possible factor is the precise content of the information (Gilens 2001). Perhaps the influence of performance-relevant information would have been greater if the summit outcomes were more consequential for Europe’s decision-making structures and of greater democratic significance more generally. Moreover, such factors as perceived relevance and significance are likely moderated by yet other factors. For example, the intensity of relevant media attention is an important cue to citizens about the relevance and significance of current events and issues (e.g., Kuklinski et al. 2001).

We find the impact of acquired information to be curvilinearly related to levels of general political information, such that performance-relevant facts carry relatively little weight for citizens high and low in general political information. As for highly informed people, allowing for little opinion change might be sensible since new information per se does not necessarily warrant a short-term update of relatively well-established prior opinions. When it comes to the responsiveness of the least informed, we are less sanguine. ‘If making information gains does not lead low aware citizens to change their mind’, Nadeau et al. (2008: 243) state, then adjusting their opinions ‘is not merely a problem of reaching these citizens.’ If, as Lupia and McCubbins (2000: 52) argue, knowledge is ‘the ability to make accurate predictions’ and information is ‘data’, then a lack of knowledge among these citizens may obstruct them from putting the incoming facts together in such a way as to make accurate inferences about Europe’s political performance.

Nevertheless, there is a large middle group of moderately informed citizens who, according to our results, are clearly responsive to factual information about EU activity. It is precisely this information – information about what the EU does – that enables citizens to better evaluate the EU on its own merits. We are not suggesting that it is always rational or appropriate for citizens to respond to new and relevant facts, but rather that when citizens’ task is to evaluate the political performance of the EU, a competent evaluation is one
that is based on specific information relevant to judging its performance (see Hobolt 2007). ‘The more facts they bring to bear, the better, and some facts are always better than no facts’ (Kuklinski et al. 2000: 791). Overall, when citizens are better informed about EU performance, they express more reliable opinions about it. And when public opinion is more reliable, it becomes a better guide for political elites to EU-level decision making.

The EU summit we examined is just the sort of decision-making event that informs the public about important EU-level policies and political behaviours. However, summits are scheduled only infrequently, and citizens can use the facts only if they have sufficient opportunity to acquire them (Druckman 2005b). Notwithstanding the considerable media attention that European summits tend to generate, the visibility of European affairs is overall quite limited (Peter & De Vreese 2004). More in general, strong variation in information availability likely causes strong variation in information acquisition (Barabas & Jerit 2009; Iyengar et al. 2009). It is imperative, therefore, that future research not only maps the availability of performance-relevant information within and across media environments in Europe, but also examines its consequences for the quality of representative democracy at the level of the EU.

Appendix

Performance-relevant information

(1) What have the EU Member States agreed on the number of Commissioners in the European Commission? (a) Every Member State continues to hold the right to delegate a Commissioner to the European Commission. (b) Member States will from now on not be allowed to automatically delegate a Commissioner to the European Commission. (c) No decision was taken on this issue at the EU Summit. (d) From now on, every Member State is allowed to delegate two Commissioners to the European Commission. (e) Don’t know.

(2) Which decision did the Irish government take on the Treaty of Lisbon? (a) The Irish government has decided to hold a referendum on the treaty in 2009. (b) The Irish government has asked the Irish parliament to take a decision on the treaty. (c) The Irish government has definitively rejected the treaty. (d) The Irish government has not taken any decision on the treaty. (e) Don’t know.

(3) What have the EU members agreed on the issue of CO₂ emissions? (a) They have not taken any decision on this issue. (b) They have agreed
that CO₂ emissions should be reduced by 20 per cent in 2020. (c) They have decided that the Netherlands does not have to take part in the EU’s efforts to reduce CO₂ emissions. (d) They have agreed that CO₂ emissions in 2020 should be equal to the current emissions. (e) Don’t know.

(4) What have the EU Member States agreed on the production of renewable energy? (a) They have agreed that the production of renewable energy should have increased by 80 per cent in 2020. (b) They have not taken any decision on this issue. (c) They have agreed that the production of renewable energy should have increased by 20 per cent in 2020. (d) They have decided that the Netherlands does not have to take part in the EU’s efforts to produce renewable energy. (e) Don’t know.

(5) Which country was initially strongly opposed to measures proposed in the EU’s climate plan? (a) The Netherlands. (b) Spain. (c) Austria. (d) Poland. (e) Don’t know.

(6) What have the EU Member States agreed on the EU’s economic recovery plan? (a) They have agreed to cut down on EU spending by €200 billion. (b) They have decided that the Netherlands does not have to take part in the EU’s economic recovery plan. (c) They have agreed to jointly stimulate their economies for a total amount of about €200 billion. (d) They have not taken any decision on this issue. (e) Don’t know.

General political information

(1) Maxime Verhagen belongs to which political party? (a) PvdA. (b) CDA. (c) VVD. (d) Christenunie. (e) SP. (f) Don’t know.

(2) Which political party has the most seats in the national parliament? (a) CDA. (b) PvdA. (c) SP. (d) PVV. (e) VVD. (f) Don’t know.

(3) What is the name of the current Speaker of the national parliament? (a) Mariëtte Hamer. (b) Frans Weisglas. (c) Henk Kamp. (d) Nebahat Albayrak. (e) Gerdi Verbeek. (f) Don’t know.

(4) What job or political office does Wouter Bos currently hold? (a) Minister of Finance. (b) Minister of Social Affairs. (c) Minister of Foreign Affairs. (d) Minister of Education. (e) Minister of Economic Affairs. (f) Don’t know.

(5) What is the name of the current President of the European Commission? (a) Javier Solana. (b) Jean-Claude Juncker. (c) Nicolas Sarkozy. (d) Hans-Gert Pöttering. (e) José Manuel Barroso. (f) Don’t know.
(6) Which country currently holds the Presidency of the EU? (a) Germany. (b) Czech Republic. (c) France. (d) Slovenia. (e) Portugal. (f) Don’t know.

(7) What is the name of the Dutch Euro Commissioner? (a) Neelie Kroes. (b) Frans Timmermans. (c) Jaap de Hoop Scheffer. (d) Frits Bolkestein. (e) Ben Bot. (f) Don’t know.

(8) What is the current number of Member States of the European Union? (a) 15. (b) 22. (c) 25. (d) 27. (e) 29. (f) Don’t know.

Notes

1. In Saris’s (1997: 429–430) words; ‘[T]he general public has a weak but general attitude towards Europe which is rather stable . . . when no new events occur. [Yet] large changes can be expected as a result of minor changes in . . . information.’

2. Further complicating such judgements is that, as Delli Carpini and Keeter (1996: 56) note, ‘many economic and social trends are outside the control of government, and so the very notion of responsibility may be inappropriate in certain cases’. Also, ‘there is usually no objectively “right” or “accurate” judgment in evaluating policy, since predictions of outcomes . . . are ultimately subject to disagreement’ (Kuklinski et al. 2001: 413).

3. Furthermore, the modest body of extant relevant research, though valuable, possibly overstates the impact of information on EU performance judgements. Research based on cross-sectional data suggests a negative relationship between political information and satisfaction with Europe’s democratic performance (e.g., Karp et al. 2003), yet such data do not allow for a causal test and typically produce exaggerated information effects (Bartels 2006; Levendusky 2011). Survey experiments (e.g., Saris 1997), in their turn, conceivably overstate the influence of information relative to its typical influence in a natural information environment. In particular, even if people absorb the information in the real world, they might not process it as thoroughly as in an experiment (Barabas & Jerit 2010; see also Gaines et al. 2007; Kinder 2007).

4. The information items used in Semetko et al. (2003: 634a) measure recognition of EU-level and national political leaders and their functions, including the President of the European Commission, the labour party leader in the national parliament, the national ministers of social affairs and finance, as well as recognition of the value of the euro and the subject of the Schengen Agreement.

5. Moreover, as a practical matter, domain-specific information measures are almost never available from opinion surveys.

6. This possibility is implicitly acknowledged by Zaller (1992: 43, 336) and Price and Zaller (1993: 159–160), who recommend using the kind of domain-specific information measures used in this study.

7. Our study is funded by a VICI grant from the Netherlands Organisation for Scientific Research (NWO 453-07-002).

8. Respondents completed the pre-summit questionnaire between 29 November and 4 December 2008.

9. The post-summit survey was launched on 13 December, the day after the final summit day, and continued until 17 December 2008.
The TNS-NIPO database, from which our sample was randomly drawn, is nationally representative and draws on telephone, face-to-face and online recruitment. Data from our sample on age, gender and education mirror 2008 census data from Statistics Netherlands, the Dutch national statistical institute (detailed information can be obtained from the authors). For the purposes of the present article, slight deviations in the sample vis-à-vis the adult population are considered less problematic as we are interested in opinion change among the same individuals in the pre- and post-summit panel waves.

Boomgaarden et al.’s (2011) original index of utilitarian performance includes a fifth item, which states that ‘the EU fosters the preservation of the environment’. In this study, we exclude this item because environmental preservation was coincidentally a key issue at the December 2008 summit. Omitting this item from our index does not affect the substantial or statistical significance of the results reported here.


A fifth item of Boomgaarden et al.’s (2011) original index of democratic performance states ‘I trust the EU’. Our index does not include this item because it was only measured once (in the first panel wave).

KR-20, a measure of construct reliability for composite variables constructed from dichotomous items, is mathematically equivalent to Cronbach’s alpha (see Hayes 2005: 114).

In order to identify the most important EU-level actions emerging in the context of the December 2008 summit, and in order to safeguard the accuracy of these facts, we determined the final composition and reading of our performance-relevant information items within hours after the summit had formally ended. (All other items in the post-summit questionnaire were arranged well in advance of the fielding date.) Survey firm TNS-NIPO inserted the items into the t2 questionnaire, and then fielded the second-wave survey, the next day.

Because the performance-relevant information questions refer to expressions of EU performance that emerged in the period between the two panel waves, knowing the correct answer to these questions was undoubtedly almost completely contingent on recent exposure to media coverage about the summit (see Barabas & Jerit 2009). It is important to underscore that these questions tap information that was not available – and therefore could not have been acquired – until after respondents completed the first-wave questionnaire. Thus, pre-treatment bias is not a concern here (Barabas & Jerit 2010; Gaines et al. 2007).

The conceptual distinction between general and performance-relevant information is revealed empirically from a confirmatory factor analysis (see also Hobolt 2005: 107).

Another common approach to analysing change in two-wave panel data is the unconditional change score (CS) model (Allison 1990, 1994). An important advantage of the CS model is that the effects of all time-invariant factors, measured or unmeasured, are controlled. Another is that the estimates in this model are unbiased by measurement error in the lagged dependent variable. Such measurement error may lead to spurious effects of independent variables that are correlated with the lagged dependent variable. The CS model does not suffer from this problem because it does not include that variable (for a detailed account, see Johnson 2005). For instructional purposes, we therefore also note below the outcomes of equivalent CS models, as recommended by Johnson (2005: 1074).
19. Political interest is measured at $t_1$ by a single item with a response scale ranging from 1 (‘very little interest’) to 7 (‘very high interest’) ($M = 4.01$, $SD = 1.53$).

20. To see whether these results uphold in a CS model, we also estimate a model analysing raw change scores in each dependent variable (i.e., $Y_{i2} - Y_{i1}$) as a function of the predictor variables but without the lagged dependent variable. In the CS equivalent of Model 2, we find a positive and statistically significant effect of performance-relevant information on change in utilitarian performance judgements ($p < 0.001$) but no significant effect on change in democratic performance judgements. These findings are consistent with those of the LDV model and suggest that our findings are unlikely to be biased by measurement error or omitted variables (Johnson 2005).

21. Another argument generally used to stipulate stronger effects of factual information among the least informed is that respondents with more general information are more likely to already possess the particular information examined. This is not a valid argument in the present context since the performance-relevant facts examined here were not available in the information environment prior to $t_1$, when general political information was measured.

22. Before computing the interaction terms and entering the predictors into the regression analysis, we mean centre all of them. This does not affect the regression coefficient of the highest order term, but doing so here is sensible because it removes nonessential multicollinearity between first-order predictors and computed combinations of predictors (Cohen et al. 2003). This procedure is especially recommended when the models at hand, such as Model 4, contain several interaction terms (Hayes 2005: 467; Hayes & Matthes 2009: 934). We do not centre our dependent variables so that the regression coefficients of the predictors appear in the units of our original performance judgements scale.

23. Again, we also estimate a set of similar CS models in order to verify if we establish comparable findings when using change scores in performance judgements as the dependent variables. The results of the CS variant of Model 3 show no significant effect of the linear by linear interaction term on change in utilitarian or democratic performance judgements. In the CS variant of Model 4, we find a negative and significant effect of the curvilinear by linear interaction term on change in utilitarian performance judgements ($p < 0.01$), but no such effect on change in democratic performance judgements. Once again, these findings corroborate those of the LDV model.

References


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