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### Dynamics of political information transmission: How media coverage informs public judgments about politics

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# The Impact of Information Acquisition on EU Performance Judgments<sup>1</sup>

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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 judgments 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' judgments 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. We find that citizens who acquired performance-relevant information became more approving of the EU's utilitarian performance but did not change their judgments about its democratic performance. We also find that individuals with moderate levels of general political information were affected most strongly by new facts about performance. The implications of our findings for EU-level representative democracy are considered.

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Does political information influence citizens' judgments about the political performance of the European Union? Of necessity, citizens need relevant factual information in order to monitor the performance of political institutions and hold political elites accountable for their actions (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 behaviors are likely to be more strongly grounded in European vis-à-vis domestic considerations as levels of political information increase (de Vries, van der Brug, van Egmond, & van der Eijk, 2011; Hobolt, 2005; Karp, Banducci, & Bowler, 2003). However, virtually no studies have gone beyond this notion to investigate the dynamics of the relationship between political information and public judgments about the EU. Even if we accept that the political judgments 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, p. 286; Lipset, 1960, p. 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, p. 149) words, "allegiance 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 judgments 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 judgments 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 Judgments**

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). Recent 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 judgments* 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 judgments* contain evaluations of the EU's institutional functioning and democratic practices for articulating all competing public interests (Ibid.).

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 behavior 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 judgments 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).<sup>2</sup> 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 (*Ibid.*) 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 judgment. 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 multi-level 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 judgments 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 sensitize citizens to review performance and revise earlier judgments. A related issue is that media coverage of European affairs is generally rare, particularly relative to domestic politics (Peter & de Vreese, 2004; Peter, Semetko, & de Vreese, 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, Quirk, Jerit, & Rich, 2001).

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<sup>2</sup> In Saris's (1997, pp. 429-430) words, "the 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."

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 judgments.<sup>3</sup> But amid this uncertainty, one proposition makes intuitive sense: new facts about the EU should be more distinctive, and hence more consequential for judgments about EU performance, when the facts *bear directly upon* those judgments.

### 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 judgments 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 (2003) 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” (p. 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 infor-

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<sup>3</sup> Furthermore, the modest body of extant relevant research, though valuable, possibly overstates the impact of information on EU performance judgments. 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, Kuklinski, & Quirk, 2007; Kinder, 2007).

mation measure tailored to the summit outcomes would be more likely to correlate with opinions than the generic information measure that was used instead.<sup>4</sup>

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, Quirk, Jerit, Schwieder, & Rich, 2000, p. 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).<sup>5</sup> 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 judgments than general information.<sup>6</sup> 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, p. 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 judgments about Europe’s political performance. Ac-

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<sup>4</sup> The information items used in Semetko et al. (2003, p. 634a) measure recognition of EU-level and national political leaders and their functions, including the president of the European Commission, the social democratic 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.

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

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

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 judgment about EU performance will change.

*Hypothesis 1:* Performance-relevant information causes significant change in EU performance judgments.

### **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, Nevin, Gidengil, & Blais, 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 emphasizes 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 judgments (Delli Carpini & Keeter, 1996). This perspective suggests that general political information should increase the change-inducing influence of judgment-relevant facts (Gilens, 2001). But other insights suggest that performance-relevant information should be of relatively little influence to the judgments 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 judg-

ment. To the extent that all of this available information is considered when making a judgment, 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 *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. That is, 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 *moderate* levels of general political information.

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

*Research Question 1:* How, if at all, does general political information moderate the effect of performance-relevant information on EU performance judgments?

### **The December 2008 EU Summit**

The specific setting of this study is the European Council meeting – more widely known as EU summit – of December 11 and 12, 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<sub>2</sub> (compared with the 1990 level) and a boost in renewable sources to 20 percent of total energy use, both by the year 2020. Second, approval was required of a European economic recovery plan equivalent to €200bn 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 judgments about EU performance. Confronted with what one Brussels correspondent termed a “threefold crisis” (van der Kris, 2008), the summit addressed 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 institutionally-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. Respondents completed the pre-summit questionnaire between November 29 and December 4, 2008. 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 post-summit survey was launched on December 13, the day after the final summit day, and continued until December 17, 2008. The 1,127 respondents who also completed the second questionnaire form our sample.<sup>7</sup>

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<sup>7</sup> The sample is by and large representative of the Dutch adult population in terms of key sociodemographics (for details, see *Chapter 2* and *Appendix A*). 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.

### ***EU Performance Judgments***

Our dependent variables are utilitarian and democratic performance judgments. Evaluations of utilitarian performance incorporate judgments about the costs and benefits associated with the EU's actions and policies, thus reflecting perceptions of how much the individual citizen and his 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, p. 151), such as peace and stability or environmental protection (Boomgaarden, Schuck, Elenbaas, & de Vreese, 2011).

We measure utilitarian performance judgments 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."<sup>8</sup> 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).<sup>9</sup>

Democratic performance judgments, 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. study (2011) for another set of four survey items to measure these judgments 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."<sup>10</sup> 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 randomized order to avoid question order effects, are measured on a scale ranging from 1 to 7 and without

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<sup>8</sup> 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.

<sup>9</sup> Conceptually, our measure of utilitarian performance judgments resembles Semetko et al.'s (2003) "national-pragmatic attitudes" and, in reverse perspective, Lubbers and Scheepers's (2005; 2010) "instrumental euroscepticism."

<sup>10</sup> 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).

a “don’t know” option. The 1-7 scale allows respondents to articulate their judgments quite precisely, which is not the norm in this area of research (Gabel, 1998, p. 342; Sánchez-Cuenca 2000, p. 154). We average the responses to each set of items to create index measures of utilitarian performance judgments 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 judgments at  $t_1$  ( $M = 3.38$ ,  $SD = 0.92$ ,  $\alpha = 0.69$ ) and  $t_2$  ( $M = 3.33$ ,  $SD = 0.97$ ,  $\alpha = 0.73$ ).<sup>11</sup>

### ***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 materialized in the context of the December 2008 summit.<sup>12</sup> 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). From a purely theoretical perspective, then, the correct answers to these questions measure information that connects directly to judgments about EU performance (Druckman, 2005a; see also Gilens, 2001).<sup>13</sup> 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 (see Appendix B for a full overview). 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 ( $M = 2.31$ ,  $SD = 1.89$ ,  $KR-20 = 0.76$ ).<sup>14</sup>

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<sup>11</sup> We emphasize that this two-dimensional conceptualization of EU performance judgments (see Rohrschneider, 2002) is supported empirically. Utilitarian and democratic performance judgments 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.

<sup>12</sup> In order to identify the most important elite actions during the December 2008 summit, and to safeguard the accuracy of these facts, we determined the final composition and reading of the performance-relevant information items within hours *after* the summit had formally ended. The second-wave survey, with the new items inserted into the questionnaire, was then fielded the next day.

<sup>13</sup> Because we are primarily concerned with the *consequences* of acquiring information, irrespective of its origins (see Price & Zaller, 1993, pp. 159-160; Zaller, 1992, p. 43), our measure of performance-relevant information indicates nothing about the sources of that information. Of course, since the questions refer to expressions of elite performance that emerged in the period between the two panel waves, knowing the correct answer to these questions was almost completely contingent on recent exposure to media coverage about the summit (see *Chapter 2*; Barabas & Jerit, 2009). Here, it is important to note that these questions tap information that was not available – and so could not have been acquired – until *after* respondents completed the first-wave questionnaire. Thus, pre-treatment bias is not a concern (Barabas & Jerit, 2010; Gaines et al., 2007).

<sup>14</sup> KR-20, a measure of construct reliability for composite variables constructed from dichotomous items, is mathematically equivalent to Cronbach’s alpha (see Hayes, 2005, p. 114).

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).<sup>15</sup> These questions were asked in a multiple-choice format with five randomly rotating response categories and a don't know option (as specified in Appendix B). 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, p. 179).

### Analysis and 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 .21 for information acquired about the delegation of one commissioner per member state to the European Commission, to .38 for information obtained about Poland's fierce opposition to the original EU climate proposals (forcing the EU to water down these proposals). Table 1.1 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 CO<sub>2</sub>

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<sup>15</sup> The conceptual distinction between general and performance-relevant information is revealed empirically from a confirmatory factor analysis (see also Hobolt 2005, p. 107).

**Table 1.1** Performance-relevant information by levels of general political information

	Levels of general political information			
	Low	Medium-Low	Medium-High	High
EU to lower carbon emissions by 20 percentage points (compared to 1990)	32.6	55.1	69.8	72.0
Poland among strongest opponents of EU's initial climate plan	13.7	43.5	56.7	67.0
EU to boost economy with €200 billion stimulus package	15.6	38.8	55.3	56.6
EU to increase renewable energy to 20 per cent of total production	19.6	40.8	50.7	53.0
Irish government to hold second referendum on Lisbon Treaty	8.5	31.7	36.7	53.0
Each member state keeps Commissioner in the European Commission	3.3	16.5	16.3	26.2

*Note.* Cell entries are percentages.

emissions by 20 percentage points by 2020.

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 variation undoubtedly owes to variation in relevant media coverage (Barabas & Jerit, 2009; Iyengar, Hahn, Bonfadelli, & Marr, 2009). Indeed, patterns in the data shown in Table 1.1 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 judgments, such information may well be more likely to induce change in these judgments than general political information.

### ***The Partial Effect of Information on Performance Judgments***

Our model of preference for analyzing change in performance judgments is the lagged dependent variable (LDV) model (e.g., Eveland, Hayes, Shah, & Kwak, 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 judgments is correlated with the original judgment at  $t_1$  (Bartels, 1993; 2006). By controlling  $t_1$  judgments when predicting their  $t_2$  values, our political information variables thus predict change in judgments for fixed levels of prior judgments (Finkel, 1995).<sup>16</sup>

We first analyze the relationship between information and change in performance judgments 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 judgments.<sup>17</sup>

Table 1.2 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 judgments are shown in the first two columns of Table 1.2. Estimating Model 1, we find that, first of all, individual judgments 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. That is, 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 be-

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<sup>16</sup> Another common approach to analyzing 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, p. 1074).

<sup>17</sup> Political interest was measured at  $t_1$  by a single question (see Appendix B) and a 1-7 response scale, with 1 and 7 denoting "very little interest" and "very high interest," respectively ( $M = 4.01$ ,  $SD = 1.53$ ).

**Table 1.2** The effect of political information on  $t_2$  EU performance judgments

	Utilitarian performance judgments( $t_2$ )		Democratic performance judgments( $t_2$ )	
	Model 1	Model 2	Model 1	Model 2
Performance judgments( $t_1$ )	0.73*** (0.02)	0.72*** (0.02)	0.71*** (0.02)	0.71*** (0.02)
Political interest	0.05** (0.02)	0.03 (0.02)	0.00 (0.02)	0.00 (0.02)
General political information	0.03 (0.02)	-0.01 (0.03)	-0.04 (0.02)	-0.03 (0.02)
Performance-relevant information	—	0.07*** (0.01)	—	-0.01 (0.01)
Adjusted $R^2$	0.55	0.56	0.45	0.45

*Note.* Unstandardized regression coefficients with standard errors in parentheses.

\*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$  (two-tailed);  $n = 1127$ .

came more positive about utilitarian performance. We also find that, once  $t_1$  judgments and political interest are controlled, the effect of general political information on judgments at  $t_2$  is positive but insignificant.

In contrast, when we enter performance-relevant information into the model (Model 2), we see that its influence on  $t_2$  judgments is positive and statistically significant above and beyond the influence of the other predictors in the model. That is, holding prior judgments, 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 judgment 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 between political interest and change in utilitarian performance judgments. 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  $t_2$  democratic performance judgments as the dependent variable, as shown in the last two columns of Table 1.2. Again, we find a robust stability effect running from initial judgments to subsequent judgments. 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.<sup>18</sup> Overall, these analyses show that performance-relevant information can have a significant influence on political judgments beyond the effect of prior judgments and general political information, and this evidence supports *Hypothesis 1*.

### ***Who Is Most Affected by Performance-Relevant Information?***

The analyses above reveal that performance-relevant information is of greater direct importance for individual political judgments 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.<sup>19</sup> 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

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<sup>18</sup> To see whether these results uphold in a CS model, we also estimate a model analyzing 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 judgments ( $p < 0.001$ ) but no significant effect on change in democratic performance judgments. 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).

<sup>19</sup> 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.

second term is the curvilinear by linear component designed to capture a nonlinear interaction effect (Aiken & West, 1991; Cohen, Cohen, West, & Aiken, 2003).<sup>20</sup>

Table 1.3 presents the results from the two expanded models. The estimated effects of the predictors in Model 3 on  $t_2$  utilitarian and democratic performance judgments 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 judgments or  $t_2$  democratic performance judgments. 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. That is, 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 1.3. The results of Model 4 reveal that the higher order interaction term assessing the curvilinear by linear interaction has a significant effect on  $t_2$  utilitarian performance judgments. 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 judgments. 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.<sup>21</sup>

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<sup>20</sup> Before computing the interaction terms and entering the predictors into the regression analysis, we *mean center* 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, p. 467; Hayes & Matthes, 2009, p. 934). We do not center our dependent variables so that the regression coefficients of the predictors appear in the units of our original performance judgments scale.

<sup>21</sup> 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 judgments 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 judgments. In the CS variant of Model 4, we find a negative and significant effect of the curvilinear by

**Table 1.3** The interactive effects of performance-relevant information and general political information on  $t_2$  EU performance judgments

	Utilitarian performance judgments( $t_2$ )		Democratic performance judgments( $t_2$ )	
	Model 3	Model 4	Model 3	Model 4
Performance judgments( $t_1$ )	0.72*** (0.02)	0.72*** (0.02)	0.71*** (0.02)	0.71*** (0.02)
Political interest	0.03 (0.02)	0.03 (0.02)	0.00 (0.02)	0.00 (0.02)
General political information	-0.01 (0.03)	0.02 (0.03)	-0.04 (0.02)	-0.03 (0.03)
Performance-relevant information	0.07*** (0.01)	0.11*** (0.02)	-0.01 (0.01)	0.00 (0.02)
Performance-relevant information $\times$ General political information	-0.01 (0.01)	0.01 (0.02)	-0.01 (0.01)	-0.01 (0.01)
General political information <sup>2</sup>	—	-0.02 (0.03)	—	0.01 (0.03)
Performance-relevant information $\times$ General political information <sup>2</sup>	—	-0.04** (0.01)	—	-0.01 (0.01)
Adjusted $R^2$	0.56	0.57	0.45	0.45

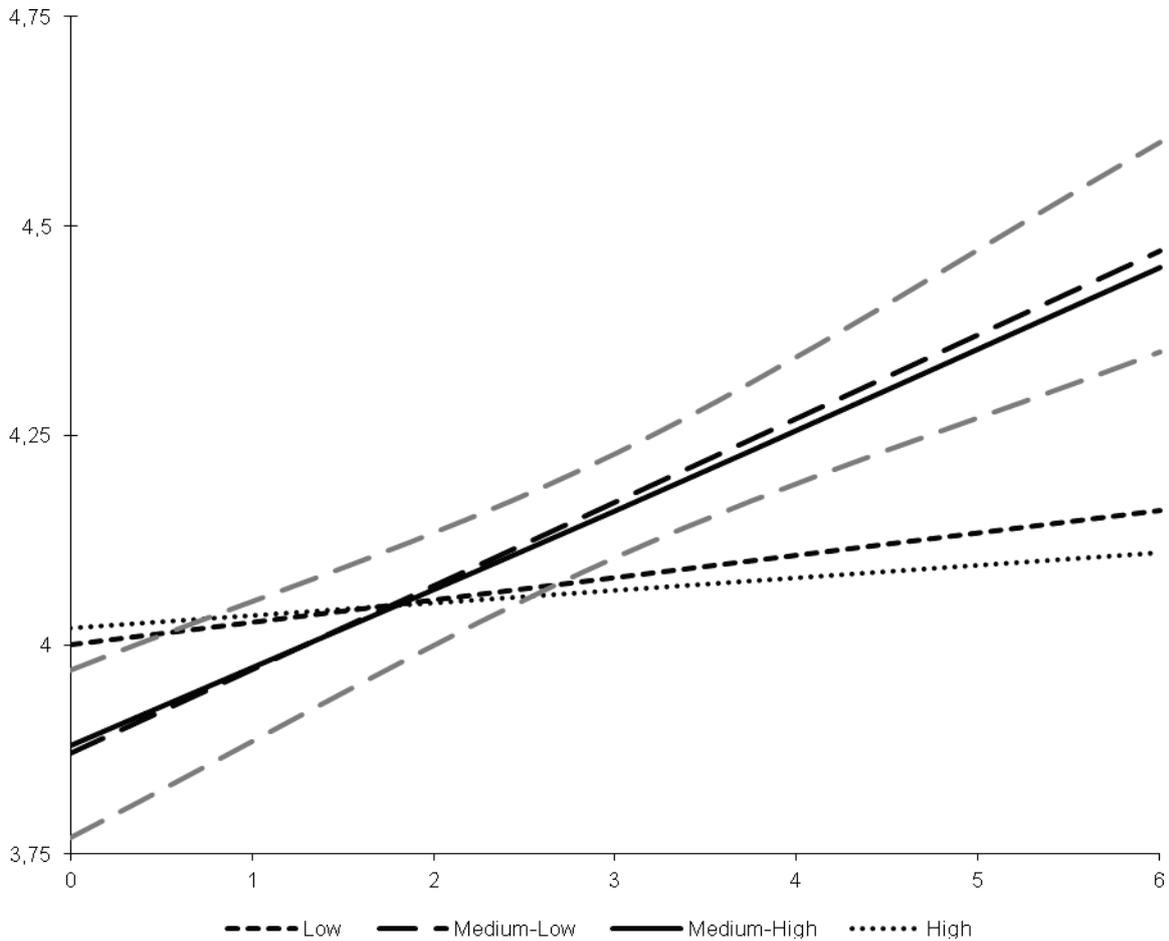
*Note.* Unstandardized regression coefficients with standard errors in parentheses.

\*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$  (two-tailed);  $n = 1127$ .

Figure 1.1 visualizes 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 performance-relevant information scaled in its original uncentered form. Although the influence of performance-relevant information on  $t_2$  utilitarian performance judgments is uniformly positive across all levels of general political information, it has fairly little impact on judgments 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 judgments scale for poorly and highly informed individuals, respectively. However, at intermediate levels of general political

linear interaction term on change in utilitarian performance judgments ( $p < 0.01$ ), but no such effect on change in democratic performance judgments. Once again, these findings corroborate those of the LDV model.

**Figure 1.1** Effects of performance-relevant information (x-axis) on  $t_2$  utilitarian performance judgments (y-axis) at different levels of general political information.



*Note.* The dashed lines in gray shading indicate 95-percent confidence intervals around the simulated effect among respondents with medium-low levels of general political information.

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 judgments.

The presence of a curvilinear by linear interaction in Model 4 predicting  $t_2$  utilitarian-based judgments 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 1.4. 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 *Research Question 1*, 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.

### Discussion and Conclusion

As Price and Zaller (1993, p. 134) write, “[o]nly 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 judgments about EU performance. That is, the influence of raw facts informing citizens about what the EU does can be powerful and distinctive enough to cause significant change in existing judgments about the EU.

It is worth repeating that the power of such information to alter the public’s political judgments 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 behavioral 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 (see Table 1.2), EU performance judgments are indeed “more a product of long-term political assessments than of short-term reactions” to new information (Bartels 2006, p. 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 (Ibid.).

**Table 1.4** The effect of performance-relevant information on  $t_2$  EU performance judgments at different levels of general political information

	Utilitarian performance judgments( $t_2$ )	Democratic performance judgments( $t_2$ )
General political information = Low (1)	0.03 (0.02)	-0.02 (0.02)
General political information = Medium-Low (2)	0.10*** (0.02)	0.00 (0.02)
General political information = Medium-High (3)	0.10*** (0.02)	0.00 (0.02)
General political information = High (4)	0.02 (0.02)	-0.02 (0.02)

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

But 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 judgments 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 does not only manifest itself in altered performance judgments, 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 judgments 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 judgments 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 great-

er 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, p. 243) state, then informing their opinions “is not merely a problem of reaching these citizens.” If, as Lupia and McCubbins (2000, p. 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, p. 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 behaviors. However, summits are scheduled only infrequently, and citizens can use the facts only if they have sufficient opportunity to acquire them (Delli Carpini & Keeter, 1996; Kuklinski et al., 2000). 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* (Ba-

rabas & 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.

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