Electoral Studies 41 (2016) 283–288

Contents lists available at ScienceDirect

Electoral Studies

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

The wisdom of crowds: What do citizens forecast for the 2015 British General Election?

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ARTICLE INFO

Article history:
Available online 2 December 2015

Keywords:
Citizen forecasting
Combining forecasts
Condorcet's jury theorem
Election forecasting
Election surveys

ABSTRACT

Who do you think will win in your constituency? Most citizens correctly answer this question, and groups are even better at answering it. Combining individual forecasts results in the 'wisdom of crowds' explained by Condorcet's jury theorem. This paper demonstrates the accuracy of citizen forecasts in seven British General Elections between 1964 and 2010, and reports what citizens interviewed in February and March forecasted for the election in May 2015. 'Citizen forecasting' predicts vote shares and winners in constituency elections, and seat numbers and governments in national elections. The paper also introduces a new method for predicting vote shares from citizen forecasts. Citizen forecasts are direct, accurate, and comprehensible. Pollsters should collect them and communicate their results more often.

1. Introduction

"Who do you think will win in your constituency?" When asked a version of this question several weeks before the date of the election, most citizens correctly answered it in Great Britain (Murr, 2011) and in the United States (Rothschild and Wolfers, 2013; Graefe, 2014; Murr, 2015b). Citizens are good forecasters, and groups of citizens are even better ones. Consider the 2010 British General Election. When asked the above question, 56 percent of citizens correctly answered it, whereas 86 percent of groups did (Murr, 2011). In other words, moving from individual to group forecasts increased the share of correctly forecasted constituencies by 30 percentage points, demonstrating the 'wisdom of crowds'.

Why and when does citizen forecasting work? And what do citizens forecast for the 2015 British General Election? To answer these and other questions, this paper first reviews the evidence and theory of the 'wisdom of crowds'. Because in Britain the 'wisdom of crowds' model was tested only in the 2010 British General Election, the paper then extends the evidence of the 'wisdom of crowds' back in time to six additional elections between 1964 and 2005. The paper shows that the 'wisdom of crowds' model predicts well in changing political contexts: for instance, it correctly predicted the Conservative re-election in 1992 and the Labour landslide in 1997. Finally, the paper reports for the first time an election forecast of the 'wisdom of crowds' model before the result is known with certainty. Using data collected in all 632 mainland constituencies in February and March, it predicts which party will win, and what vote share each party will receive in May 2015. The paper concludes by summarising the main findings and discussing their implications for election polling.

2. Citizen forecasting and Condorcet's jury theorem

'Citizen forecasting' is one of many approaches to election forecasting. It asks citizens who they think will win. It then predicts the winning party to be the one who most citizens say will win. And it uses the proportion of citizens who say that a party will win to predict its vote or seat share. This approach has been applied in different countries (e.g., Lewis-Beck and Skalaban, 1989; Lewis-Beck and Stegmaier, 2011), at different levels (e.g., Lewis-Beck and Stegmaier, 2011; Murr, 2011), and has recently been extended to Members of Parliament (MPs) by treating British party leadership elections as a form of citizen forecasting (Murr, 2015a).

Several studies have shown that citizens accurately predict a wide range of election outcomes at different levels in the United States and Great Britain. In US presidential elections, citizen forecasting predicts with high accuracy who wins the state (Rothschild and Wolfers, 2013; Graefe, 2014; Murr, 2015b) and who wins the Presidency (Lewis-Beck and Tien, 1999; Murr, 2015b), as well as what share of the popular vote candidates receive in each state (Murr, 2015b) and in the nation as a whole (Lewis-Beck and Tien,

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http://dx.doi.org/10.1016/j.electstud.2015.11.018
0261-3794/

1999). Indeed, Graefe (2014) finds that so-called vote expectation surveys are more accurate than expert judgement, traditional polls, prediction markets, and quantitative models in predicting who will win and the winner's share of the popular vote.

In British General Elections, citizen forecasting predicts with high accuracy who wins the constituency (Murr, 2011) and who forms the government (Lewis-Beck and Stegmaier, 2011; Murr, 2011), as well as what share of the popular vote parties receive in each constituency (Murr, 2011) and what share of seats parties receive in Westminster (Lewis-Beck and Stegmaier, 2011; Murr, 2011). In addition to citizens, MPs correctly forecast most elections. Murr (2015a) uses the votes of MPs in party leadership elections as a form of citizen forecasting and demonstrates that as a group, MPs correctly forecast who becomes Prime Minister most of the time.

Murr (2011) explains the accuracy of citizen forecasting with Condorcet's jury theorem. Condorcet (1785) showed for a binary choice task that if every group member choses the correct alternative with the same, larger than 50 percent probability, then as the group size increases to infinity, the probability that a group deciding by plurality rule chooses the correct alternative approaches unity. For instance, if every citizen forecasts with 60 percent probability, then a group of 25 citizens correctly forecasts with 85 percent probability (Murr, 2015b). Condorcet's jury theorem has been generalised in several ways, which makes it applicable to citizen forecasting (Murr, 2011). Condorcet's jury theorem has been also used as a framework to suggest ways of increasing the accuracy of group decision-making. For instance, Murr (2015b) shows that 'delegating and weighting' citizen forecasts based on estimated forecasting competence increases the proportion of correctly forecasted states in US presidential elections from 82 to 87 percent.

3. The present research

In the 2010 British General Election, the 'wisdom of crowds' model correctly predicted most constituencies and a hung parliament with the Conservatives as the largest party (Murr, 2011). Does the 'wisdom of crowds' model accurately forecast previous British General Elections as well? This paper presents novel evidence showing that it does. This paper analyses citizen forecasts from six additional British Election Studies between 1963 and 2005. These elections represent different political environments. Nevertheless, the 'wisdom of crowds' model accurately predicts who will win in a constituency, how many seats each party will win, and who becomes Prime Minister.

Citizens correctly forecasted most constituency elections in the past, but their forecasts had never been publicised before the election results were known with certainty. This paper does so for the first time. What do citizens forecast for the 2015 British General Election? Who will win in each constituency? And with what vote share? How many seats will each party win in total? And who will become Prime Minister? To answer these questions, I used a grant from the John Fell OUP Research Fund to commission a large-scale YouGov survey in February and March, asking citizens in all 632 mainland constituencies to predict which party will win in their constituency in May 2015.

4. The 'wisdom of crowds' in British General Elections (1964–2010)

4.1. Data

Seven British Election Studies (BES) asked citizens to predict which party will win in their constituency. The first study to do so was the BES in 1963, about a year before the election. Since 1987 every election study asked some of its respondents to predict which party will win the constituency: either during the campaign—as in 1987, 1992, and 1997—or before the campaign—as in 2001, 2005, and 2010. Both the number of respondents and the number of constituencies increased over time. For instance, the 1963 survey interviewed about 2000 respondents in 79 constituencies, whereas the 2010 survey interviewed about 17,000 respondents in 629 constituencies.

4.2. Are groups better than individuals at predicting which party will win?

Table 1 compares the forecasting accuracy of individuals and groups in these seven General Elections between 1963 and 2010. Table 1 shows that in all elections citizens are better than chance in predicting which party will win in their constituency. It also shows that groups predict better than individuals. Consider the 1964 election. Whereas about 71 percent of citizens correctly predicted which party would win in their constituency, about 92 percent of groups did—an increase of 21 percentage points. Across all

Table 1
Accuracy of individual and group forecasts of which party will win in constituency (1964–2010).

	1964		1987		1992		1997		2001		2005		2010		Overall	
	IND	GRU	IND	GRU	IND	GRU	IND	GRU	IND	GRU	IND	GRU	IND	GRU	IND	GRU
Correct	0.71	0.92	0.62	0.80	0.68	0.79	0.72	0.83	0.70	0.88	0.65	0.89	0.55	0.85	0.61	0.85
Incorrect	0.15	0.08	0.13	0.11	0.19	0.12	0.22	0.13	0.27	0.09	0.21	0.08	0.24	0.13	0.22	0.11
Tied	0.00	–	0.20	0.09	–	0.08	–	0.04	–	0.04	–	0.03	0.21	0.02	0.12	0.04
Don't know	0.14	–	0.04	–	0.14	–	0.06	–	0.03	–	0.15	–	–	–	0.05	–
N	1981	79	1491	224	1313	248	1809	178	3219	128	7778	639	16,787	629	35,668	2125

Note: The citizen forecasts come from the following surveys. 1964: Political Change in Britain, 1963–1970 (wave one in 1963). "How about here in (name of constituency)? Which party has the best chance of winning in this constituency?"; 1987: British Election Campaign Study, 1987 (wave one). "At this point in the campaign, how do the parties seem to be doing in your constituency? First the Conservatives. Would you say that at the moment, they look like having a very good chance of winning in your constituency, or some chance, very little chance, or none at all? And Labour? And the Alliance? (S&W ONLY the NATS?)"; 1992: British General Election Panel Study, 1987–1992 (wave two). "Which party do you think will win in your constituency?"; 1997: British General Election Study, 1997, Campaign Panel (wave three). "Which party do you think will win in your constituency?"; 2001: British Election Panel Study, 2001 (wave one). "Which party do you think is most likely to win the election in this constituency?"; 2005: British Election Study, 2005, Internet Rolling Campaign Panel Data and British Parliamentary Constituency Database (wave one). "Which party do you think is most likely to win the election in your local constituency?"; 2010: British Election Study, 2010, Campaign Internet Panel Survey, All Waves and Constituency-Level Political Variables (wave one). "On a scale that runs from 0 to 10, where 0 means very unlikely and 10 means very likely, how likely is it that [the Labour Party/the Conservative Party/the Liberal Democrat Party/the Scottish National Party (SNP)/Plaid Cymru/one of the other parties like the BNP, the Greens, Respect or UKIP (or the Scottish Socialists if you live in Scotland)] will win the election in your local constituency?". The constituency election results for 1963 to 1997 come from www.politicsresources.net. For 2001 to 2010 they were included in the British Election Study computer files.