SUPPLEMENTAL MATERIALS:

TELEVISION NEWS, ECONOMIC PERCEPTIONS AND POLITICAL PREFERENCES IN BRITAIN, 1997-2001

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Appendix 1: Tests for Weak Exogeneity in the Hypothesised Relationships outlined in Figure 3

Weak exogeneity tests are generally variants on the procedure first advocated by Hausman (1978). Consider a two-equation model in which Y_t is a function of X_t and X_t is a function of Z_t. Following Charemza and Deadman (1992: 265-266), X_t can be regarded as weakly exogenous to Y_t if two conditions obtain:

(a) The residuals from the equation for X_t (that is, the version of the equation for X_t that excludes any error correction mechanism) are non-significant when added to the equation for Y_t.

(b) The error correction term from the equation for Y_t (that is: $Y_{t-1} - b_0 - b_1X_t$) is non-significant when added to the equation for X_t.

In the model described in Figure 3 there are implicitly four error correction equations:

1. $dLab_t = b_0 + b_1dLabm_t + b_2Sep2000 + a_1 (Lab_{t-1} - c_0 - c_1Labm_{t-1}) + u1_t$
2. $dLabm_t = g_0 + g_1dPexpt + g_2Sep2000 + a_2 (Labm_{t-1} - h_0 - h_1Pexp_{t-1}) + u2_t$
3. $dPexp_t = j_0 + j_1dEcbal_t + j_2dEcbal_{t-1} + j_3UN_{t-1} + a_3 (Pexp_{t-1} - k_0 - k_1Ecbal_{t-1}) + u3_t$
4. $dEcbal_t = m_0 + m_1dIR_t + a_4 (Ecbal_{t-1} - n_0 - n_1IR_{t-1}) + u4_t$

where Lab is Labour support; Labm is Labour versus Conservative Economic Management Competence; Pexp is Aggregate Personal Financial Expectations; Ecbal is the monthly balance of positive minus negative television news on BBC and ITN; d is the difference operator and the u_i terms are random errors.

In order to conduct tests (a) and (b) above, these four equations need to be considered as three pairs (equations 1 and 2; equations 2 and 3; and equations 3 and 4) as follows:

Equations 1 and 2

1. $dLab_t = b_0 + b_1dLabm_t + b_2Sep2000 + a_1 (Lab_{t-1} - c_0 - c_1Labm_{t-1}) + u1_t$

2* $dLabm_t = g_0 + g_1dPexpt + g_2Sep2000 + u2_t$

where 2* is Equation 2 with the error correction term $(Labm_{t-1} - h_0 - h_1Pexp_{t-1})$ removed.
Test (a): add the residuals from the equation for dLabm ($u2_t$) to the equation for dLab.
Test (b): add the ECM from the equation for dLab $(Lab_{t-1} - c_0 - c_1Labm_{t-1})$ to the equation for dLabm.

These tests yield:

Table A1: Tests (a) and (b) for Equations 1 and 2*	*Coeff*	*St Error*	*Sig*
Test (a): add $u2_t$ to Equation 1	-.13	.13	.34
Test (b): add $(Lab_{t-1} - c_0 - c_1Labm_{t-1})$ to Equation 2*	.12	.27	.65

The non-significance of both error terms is consistent with Labm being weakly exogenous to Lab.

Equations 2 and 3

2. $dLabm_t = g_0 + g_1 dPexpt + g_2 Sep2000 + a_2 (Labm_{t-1} – h_0 – h_1 Pexp_{t-1}) + u2_t$

3* $dPexp_t = j_0 + j_1 dEcbal_t + j_2 dEcbal_{t-1} + j_3 UN_{t-1} + u3_t$

where 3* is Equation 3 with the error correction term ($Pexp_{t-1} – k_0 – k_1 Ecbal_{t-1}$) removed.
Test (a): add the residuals from the equation for dPexp ($u3_t$) to the equation for dLabm.
Test (b): add the ECM from the equation for dLabm ($Labm_{t-1} – h_0 – h_1 Pexp_{t-1}$) to the equation for dPexp.

These tests yield:

Table A2: Tests (a) and (b) for Equations 2 and 3*	*Coeff*	*St Error*	*Sig*
Test (a): add $u3_t$ to Equation 2	-.09	.22	.66
Test (b): add ($Labm_{t-1} – h_0 – h_1 Pexp_{t-1}$) to Equation 3	-.19	.09	.04

The non-significance of the added $u3_t$ term in Test (a) supports the weak exogeneity of Pexp to Labm. The significance of the error correction term in Test (b) contradicts the idea of Pexp as being weakly exogenous to Labm. The overall test is therefore indecisive. As a result, further tests, on individual-level panel data, are conducted below.

Equations 3 and 4

3. $dPexp_t = j_0 + j_1 dEcbal_t + j_2 dEcbal_{t-1} + j_3 UN_{t-1} + a_3 (Pexp_{t-1} – k_0 – k_1 Ecbal_{t-1}) + u3_t$

4* $dEcbal_t = m_0 + m_1 dIR_t + u4_t$

where 4* is Equation 4 with the error correction term ($Ecbal_{t-1} – n_0 – n_1 IR_{t-1}$) removed.
Test (a): add the residuals from the equation for dEcbal ($u4_t$) to the equation for ddPexp.
Test (b): add the ECM from the equation for dPexp ($Pexp_{t-1} – k_0 – k_1 Ecbal_{t-1}$) to the equation for dEcbal.

These tests yield:

Table A3: Tests (a) and (b) for Equations 3 and 4*	*Coeff*	*St Error*	*Sig*
Test (a): add $u4_t$ to Equation 3	.01	.10	.91
Test (b): add ($Pexp_{t-1} – k_0 – k_1 Ecbal_{t-1}$) to Equation 4	-.29	.31	.35

The non-significance of both error terms is consistent with Ecbal being weakly exogenous to Pexp.

We conduct no exogeneity tests for the impact of interest rates on the balance of television news coverage because we regard it as theoretically implausible to argue that television coverage could cause interest rate changes.

Further Individual-level Panel Data Tests on the Exogeneity of Personal Expectations to Perceptions of Labour Economic Management Competence

Given the indecisive nature of the above tests for the exogeneity of Pexp to Labm, it is clearly desirable to pursue the issue of exogeneity further. Fortunately, identical survey questions to those asked in our time-series analysis were also asked in the pre-post panel of the 2001 British Election Study. Using these data allows us to build individual-level equations for both Labm and Pexp, a task that is facilitated by the presence of wider set of potential explanatory variables than were available for our time-series analysis. Labm is measured as a dummy variable where unity means the respondent believes that Labour is the party best able to handle the situation if Britain were in economic difficulties; and zero means not. Pexp is measured as a 5-point Likert scale, which ranges from extreme pessimism (1) to extreme optimism (5). The Pexp equation is estimated using OLS; the Labm equation using logistic regression. We make explicit use of the pre-election/post-election panel design of the 2001 BES by using the pre-election wave Labm scores as a right-hand-side variable in the (post-election) Labm equation. We use the pre-election Pexp scores in the same way in the (post-election) Pexp equation. All other measures are taken from the post-election survey.

Tables A4 and A5 report the results of estimating separate equations for Labm and for Pexp. Both equations are well determined, with all coefficients significant and theoretically plausible. Table A6 reports the results of applying Hausman logic to the equations by adding the residuals from the Pexp equation to the Labm equation. The residuals are clearly non-significant, supporting the notion that Pexp is indeed weakly exogenous to Labm. Notwithstanding the indecisive result of our time-series exogeneity tests on the Labm = f(Pexp) relationship, the robustness of the individual-level results supports our claim of weak exogeneity. As a result, we conclude that our model of Labm is correctly specified and that the inferences we draw from it in the text of this paper are justified.

Table A4: Logistic Regression Model of Post-Election Labour Economic Management Competence/not

	Coeff	*St err*	*Sig*
Pre-election Labour Economic Management Competence/not	1.50	.13	.00
Post-election, Labour is the party best able to handle the most important issue/not	.81	.14	.00
Post-election feeling towards Blair (0-10 scale)	.28	.03	.00
Post-election feeling towards Hague (0-10 scale)	-.21	.03	.00
Labour Party Identifier/not	.57	.16	.00
Conservative Party Identifier/not	-.76	.19	.00
Post-election Personal Financial Expectations (1-5 scale)	.21	.08	.01
Social Class (1-4 scale: DE, C2, C1, AB)	-.21	.06	.00
Constant	-1.40	.34	.00
Nagelkerke pseudo-r2	.59		
-2 log likelihood	1739		
Percent correct	83.8		
N	2196		

Source: British Election Study 2001 Pre-Post Panel Survey; no other demographic controls significant

Table A5: OLS Model of Post-Election Personal Financial Expectations (5-point optimism scale)

	Coeff	*St err*	*Sig*
Pre-election Personal Financial Expectations	.24	.02	.00
Post-election Emotional Reactions to the national economy	.03	.01	.01
Post-election Emotional Reactions to own household economy	.06	.01	.00
Post-election National Financial Retrospections	.10	.02	.00
Post-election Personal Financial Retrospections	.15	.02	.00
Post-election sense of relative economic deprivation	-.05	.02	.00
Post-election ‘people like me have no say in what government does’ (1-5 Likert scale)	-.07	.02	.00
Female	.06	.03	.06
Age	-.005	.001	.00
Owner-occupier	-.14	.04	.00
Constant	2.20	.12	.00
Corrected r2	.32		
N	2039		

Source: British Election Study 2001 Pre-Post Panel Survey; no other demographic controls significant.

Definitions and measures for Emotional Reactions and Financial Retrospections derived from Harold Clarke et al, *Political Choice in Britain* (Oxford: Oxford University Press, 2004). Relative economic deprivation measured as a 5-point Likert scale based on agreement/disagreement with the statement, “There is often a gap between what people like me expect out of life and what we actually get”.

Table A6: Logistic Regression Model of Post-Election Labour Economic Management Competence/not, including residuals from Table A5

	Coeff	*St err*	*Sig*
Pre-election Labour Economic Management Competence/not	1.56	.14	.00
Post-election, Labour is the party best able to handle the most important issue/not	.77	.15	.00
Post-election feeling towards Blair (0-10 scale)	.29	.03	.00
Post-election feeling towards Hague (0-10 scale)	-.24	.03	.00
Labour Party Identifier/not	.47	.17	.00
Conservative Party Identifier/not	-.71	.20	.00
Post-election Personal Financial Expectations (1-5 scale)	.40	.16	.01
Social Class (1-4 scale: DE, C2, C1, AB)	-.16	.06	.01
Residuals from Post-election Personal Financial Expectations Model in Table A5	-.22	.19	.23
Constant	-1.97	.55	.00
Nagelkerke pseudo-r2	.60		
-2 log likelihood	1516		
Percent correct	85.1		
N	1983		

Source: British Election Study 2001 Pre-Post Panel Survey; no other demographic controls significant.

Appendix 2: Description of the Coding Frame used in the Content Analysis of Television Coverage of Economic News

The TV data were derived from an exhaustive search of BBC and ITN flagship news bulletin transcripts, taken from off-air transmissions stored on video tape. The focus was on a finite list of economic sub-themes which helped with unambiguous identification of what constituted 'economic news'. When such news was identified, we moved to isolate the economic key-terms in the text that composed the headline and anchor lead-in for the story. This allowed each key-term to be coded separately. The way that these key-term is handled in economic news stories helped facilitate this exercise since the issues themselves are generally represented in a linear fashion, i.e. they tend to 'rise', 'fall' or stay static. A great many of our key terms revolve around valence issues where rises and falls were considered to be unambiguously good and bad (rising unemployment, 'bad', falling unemployment 'good'; prices rising, 'bad', prices falling good, etc.).

The example below shows how economic news items were coded and collated:

> ANCHOR
> Following a further **interest rate** rise, Ford has confirmed that car **production** at its Dagenham plant is to end after more than 70 years. In total it'll mean the loss of around 3,000 **jobs** with car assembly at the plant ceasing within two years. But the company said the **job** losses would be offset by **investment** in diesel engine manufacturing, which would create 500 **jobs**.

The **bolded** key-terms represent the coded items in this news. The **interest rate** reference is negative (-); **production** is negative (-); first **jobs** reference negative (-); the second **jobs** reference is negative (-), but the last **jobs** reference is positive (+); the **investment** reference is positive also (+). Details of how our other 'key terms' were coded can be obtained from (gavin@liverpool.ac.uk). Such key-term codes were collated in two principal ways. The first took the absolute number of positive and negative codes for our key-terms, by subtracting the negatives from the positives. The second, subtracted negatives from the positives, but just focused on whether the resulting figure was either a positive or negative integer, thereby designating the story '+1' or '-1' respectively. The example below shows how this was achieved for the example above

News codes (All)

Within each news story we collated *all* codable key-terms into one count (in the example above there are five codable terms). This was sub-divided into a 'Total Story Count' and a 'Number Count'. The 'Total Story Count' takes all the codes and establishes whether, *on balance*, 'negative' key-terms outweigh 'positive' (thereby designating that day's news '–1') or 'positive' key-terms outweigh 'negative' (thereby designating that day's news '+1'. In the above example 'negative' key-terms outweigh 'positive', so the story is designated '-1'. If, however, we calculate the exact number of 'positive' and 'negative' codes (two 'positive' and four 'negative'), and subtract the 'negative' from the 'positive', we have what we term the 'Number Count' (in this instance '–2').

News codes (for sub-themes)

Jobs news codes (Jobs)
The focus here is on 'jobs' key-terms *alone*. The story contains news about jobs, therefore registers as a 'Codable Story (jobs)'. There are two 'negative' references and one 'positive', therefore the overall *balance* is negative, giving a 'Total Story Count (jobs)' of '-1'. If we subtract the two 'negative' reference from the one 'positive' we get a 'Number Count (jobs)', which in this instances also happens to be '-1'.

Prices news codes (Prices)
There are no references to prices or inflation in this story, therefore it would register '0' in 'Codable Story (prices)', as well as '0' in 'Total Story Count (prices)' and a '0' in 'Number Count (prices)'.

Interest Rate news codes (Int Rate)
The focus here is on 'interest rate' key-terms *alone*. The story contains news about interest rates, therefore registers as a 'Codable Story (Int Rate)'. There is a 'negative' references and no 'positive' ones, therefore the overall *balance* is negative, giving a 'Total Story Count (Int Rate)' of '-1'. If we subtract the 'negative' reference from zero 'positive' ones, we get a 'Number Count (Int Rate)', which in this instances also happens to be '-1'.

Appendix 3: Models of Labour Support and Labour versus Conservative Economic Management Competence Using Aggregate National and Personal Prospective Evaluations

	Dependent Variable					
	Change in Labour Support		*Change in Labour vs Conservative Economic Management*		*Change in Labour vs Conservative Economic Management*	
	B	*St err*	*B*	*St err*	*B*	*St err*
$dlabm_t$	.35**	.07				
$dlabm_{t-1}$	-.08	.06				
$dpexp_t$					.41**	.14
$dpexp_{t-1}$					.18	.11
$dgexp_t$	.02	.04	.19*	.08	.12	.08
$dgexp_{t-1}$	-.01	.03	.13	.08	.12	.08
$decbal_t$	-.03	.02	.04	.04	-.01	.04
$decbal_{t-1}$	.02	.02	.02	.04	-.04	.04
dun_t	4.14	4.98	-1.54	11.67	-1.52	10.59
dun_{t-1}	5.66	5.56	31.96**	11.41	20.03	11.31
$dinf_t$	-1.18	1.26	-5.21	2.85	-2.88	2.71
$dinf_{t-1}$	1.90	1.15	2.16	2.85	.18	2.55
dir_t	-1.96	1.80	.82	4.24	1.25	3.87
dir_{t-1}	1.89	1.97	8.38	4.44	5.89	4.13
September 2000	-4.28**	1.96	-10.27**	4.26	-9.31**	3.97
Constant	.26	.46	1.76	1.03	.95	.97
Corrected r2	.68		.35		.47	
LM (12) chisq	15.37	[.22]	13.90	[.30]	8.08	[.78]
ARCH (12)	6.19	[.91]	18.65	[.10]	10.10	[.61]
DW	2.34		1.73		1.84	
N	46		46		46	
Sample	97m8 to 01m5		97m8 to 01m5		97m9 to 01m5	

*** significant at 001; ** at .01; * at .05. All variables as defined in Table 2, except for dgexp, which represents the monthly change in aggregate national economic prospective evaluations – the percentage of MORI respondents who are optimistic about the national economy minus the percentage who are pessimistic.

Appendix 4: OLS Model of Labour Support, including Government Approval and Prime Ministerial Approval as Predictor Variables

	Change in Labour Support	
	b	*St err*
$dlabm_t$	.39**	.12
$dlabm_{t-1}$	-.12	.11
$dgovapp_t$	-.05	.17
$dgovapp_{t-1}$	.04	.18
$dblair_t$	-.03	.25
$dblair_{t-1}$	.05	.24
$dpexp_t$	.06	.09
$dpexp_{t-1}$	-.03	.08
$decbal_t$	-.03	.02
$decbal_{t-1}$	.02	.02
dun_t	5.49	5.62
dun_{t-1}	3.25	5.77
$dinf_t$	-.75	1.23
$dinf_{t-1}$	1.46	1.26
dir_t	-1.65	1.90
dir_{t-1}	1.33	1.86
September 2000	-4.63*	2.31
Constant	.21	.48
Corrected r2	.65	
LM (12) chisq	16.90	[.15]
ARCH (12)	10.73	[.55]
DW	2.42	
N	46	
Sample	97m8 to 01m5	

*** significant at 001; ** at .01; * at .05. Govapp refers to the percentage of respondents who approve of the government's record; Blair refers to the percentage of respondents who think Blair is doing a good job; d is the (first-)difference operator. All other terms defined as in Table 2.