ONLINE APPENDIX

APPENDIX A. SUMMARY STATISTICS, CORRELATIONS, AND PLOTS

Table A1. Summary Statistics for variables included in opinion poll and structural models exploring incumbent vote share in Argentinean general elections 1983-2019

| Variable	N	M	S/d	Min	Max
Incumbent Vote Share: Presidential elections	9	41.51	9.23	24.45	54.11
Incumbent Vote Share: Legislative elections	19	37.83	6.62	22.71	52.46
Incumbent Vote Share: Combined elections	28	39.01	7.59	22.71	54.11
Voting intention for Government in Presidential elections: mean polling result T-3-6	8	35.16	11.56	16.1	52
Voting intention for Government in Legislative elections: mean polling result T-3-6	13	33.72	11.01	14.96	52
Voting intention for Government in Combined elections: mean polling result T-3-6	21	34.27	10.95	14.98	52
Satisfaction with Government$_{t-6}$ in Presidential elections	9	42	10.64	26.76	55.49
Satisfaction with Government$_{t-6}$ in Legislative elections	19	46.20	11.10	31.36	67.33
Satisfaction with Government$_{t-6}$ in Combined elections	28	44.85	10.94	26.76	67.33
GDP$_{t-1 year}$	28	1.71	5.64	-10.9	10.1
Type of election	28	0.32	0.47	0	1

Source: Authors' own elaboration.

Table A2. Bivarate correlation matrix of independent variables with dependent variables included in opinion poll and structural models exploring incumbent vote share in Argentinean elections 1983-2019

Variable	Incumbent Vote Share: Presidential	Incumbent Vote Share: Legislative	Incumbent Vote Share: Combined
Voting intention for Government: mean polling result T-3-6	0.80	0.55	0.65
Satisfaction with Government$_{t-6}$	0.80	0.54	0.56
GDP$_{t-1\ year}$	0.78	0.28	0.46
Type of election	-	-	0.23

Note: Based on 8/13/21 for Polling model and 9/19/28 for structural mode
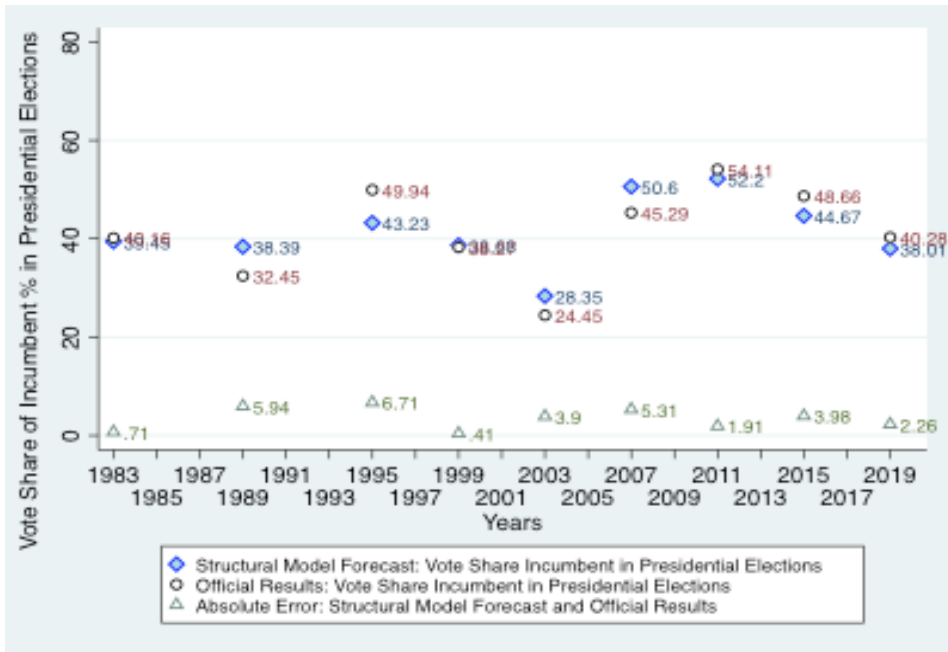
Source: Authors' own elaboration.

Figure A1. Within-sample forecasts of incumbent vote share in Legislative Electionsat T-3/6 months from election yielded from opinion polls (diamonds) compared with official results for 13 Argentinean general legislative elections 1989-2019 (white circles)
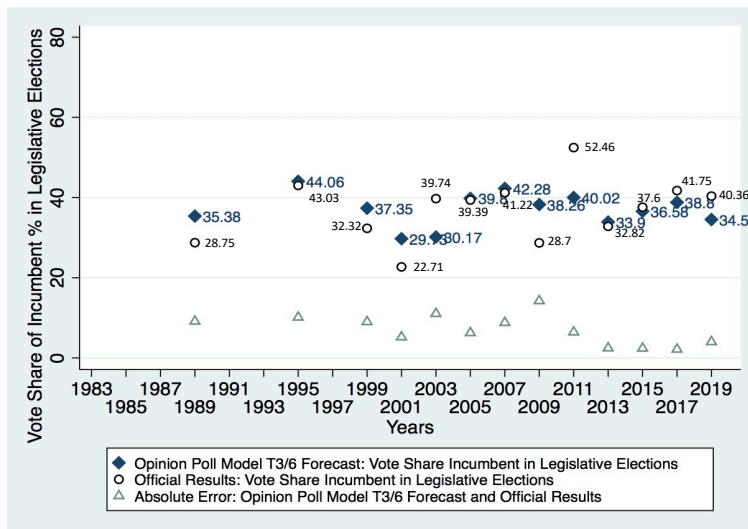
Note: Based on estimates from Table 1 Model II. Triangles are the absolute error between the within-in forecast and the official result.
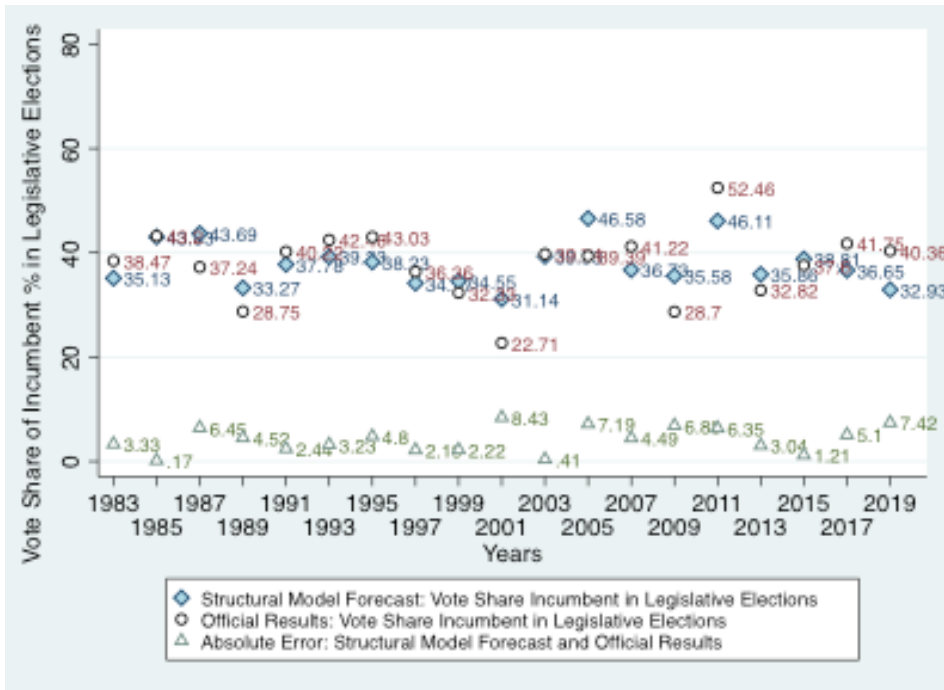
Source: Authors' own elaboration.

Figure A2. Within-sample forecasts of incumbent vote share in presidencial elections as a function of the at T-6 months from election yielded from Structural Model (diamonds) compared with official results (circles) for 9 Argentine presidential elections 1989-2019

Note: Based on estimates from Table 2 Model I. Green triangles are the absolute error between the within-sample forecasts and the official result.

Source: Authors' own elaboration.

Figure A3. Within-sample forecasts of incumbent vote share in Legislative elections at T-6 months from election yielded from Structural Model (diamonds) compared with official results (circles) for 19 Argentinean legislative elections 1983-2019

Note: Based on estimates from Table 2 Model II. Green triangles are the absolute error between the within-sample forecast and the official result.

Source: Authors' own elaboration.

APPENDIX B. VARIABLE OPERATIONALIZATIONS

Table B1. Incumbent Government in Argentina by elections 1983-2020

Election Year	Incumbent Government Composition by Party
1983	Peronist Party (PJ – Partido Justicialista)
1985	Radical Civic Union (UCR –Unión Cívica Radical)
1987	Radical Civic Union (UCR –Unión Cívica Radical)
1989	Radical Civic Union (UCR –Unión Cívica Radical)
1991	Peronist Party (PJ – Partido Justicialista)
1993	Peronist Party (PJ – Partido Justicialista)
1995	Peronist Party (PJ – Partido Justicialista)
1997	Peronist Party (PJ – Partido Justicialista)
1999	Peronist Party (PJ – Partido Justicialista)
2001	Alliance UCR-FREPASO
2003[1]	Peronist Party (PJ – Partido Justicialista)
2005	Peronist Party (PJ – FPV)
2007	Peronist Party (PJ – FPV)
2009	Peronist Party (PJ – FPV)
2011	Peronist Party (PJ – FPV)
2013	Peronist Party (PJ – FPV)

---

1. On January 2, 2002 Duhalde was nominated President of Argentina by the Legislative Assembly. That decision was made through a broad consensus in Peronism and the opposition, so allowing Duhalde to lead the country. Duhalde was invested by the deputies and senators with 262 votes in favor, 21 against and 18 abstentions, and with a mandate until December 10, 2003. That is, until the four-year exercise for which De la Rúa had been elected was finished. Therefore, there would be no early elections, being the majority opinion of the legislators that what was urgent was to obtain a stable Executive with the maximum partisan support.

Election Year	Incumbent Government Composition by Party
2015	Peronist Party (PJ – FPV)
2017	PRO (Cambiemos)
2019	PRO (Cambiemos)

Note: In 2001 there was a major institutional crisis, namely the president (UCR / Alianza) resigned and was succeeded by 3 more presidents who also resigned after a few days. Then, the Legislative Assembly nominated Eduardo Duhalde, senator of PJ party, as President with a mandate until December 10, 2003; therefore we put the votes that PJ obtained (as incumbent party). That is to say, Duhalde was of PJ, the party that was governing despite not having been elected at the polls.

Source: Authors' own elaboration.

Vote Share of the Incumbent Government

This variable measures the share of the total valid vote achieved by the incumbent government. The parties comprising the incumbent government for the said election year are detailed in Table B1. This was measured for presidential, legislative or combined elections.

The election data come from the National Electoral Department (DINE for its acronym in Spanish, Dirección Nacional Electoral) and the web site of Andy Tow, *https://www.andytow.com/blog/*.

Voting intention for Government: mean polling result $_{t-3/6}$

This variable measures the share of the total number of survey respondents reporting that they intended voting for the governing party in the next general election in surveys conducted between three to six months before the election. When multiple surveys were conducted in the said time period, the result is averaged. The parties comprising the incumbent government for the said election year are detailed in Table B1. This was measured for presidential, legislative or combined elections.

For most years, we collected voting intention polls conducted 6 months prior to the election. In few cases, we collected surveys that were conducted 3 or 4 months prior to the election. For the cases of the 1995 and 1989 presidential elections we collected surveys conducted one month before the election considered, since they were the only ones available.

We have searched in various available data sources on the internet in order to build our variable of voting intention for the incumbent in the months prior to the elections. We supplemented these data with a search of 3 national newspapers archives: *Página12*, *La Nación* and *Clarín*. (However, their digital files only go back to 1997 and 1998. For this reason, it was not possible to have a full set of pre-election polling data for legislative elections prior to that time).

Satisfaction with Government$_{t-6}$

This variable measures the share of public opinion measures of government approval, between three to six months before Election Day, coming from Executive Approval Database (EAD) 2.0 (Carlin, Hartlyn, Hellwig, Love, Martínez-Gallardo and Singer 2020). We used the median (not mean) approval percentage to the 3 to 6 months prior to the election, for each year it depended on the election date.

GDP$_{t-1\ year}$

This variable measures the annual percentage growth rate of GDP at market prices in local currency, at constant prices. The aggregates are expressed in United States dollars at constant 2010 prices. GDP is the sum of the gross added value of all resident producers in the economy plus all taxes on products, less any subsidy not included in the value of the products. It is calculated without making deductions for depreciation of manufactured goods or for depletion and degradation of natural resources. The variable GDP, is lagged one year with respect to the election. That is, the growth rate of the year before the election.

Type of election

This variable distinguished with value 1 presidential elections and with value 0 legislative elections.

For the incumbent vote share variable (Y) the lags are from 1983 to 1989 every 6 years, and from 1995 to 2019 every 4 years. In 1995 there was a constitutional reform that reduced presidential terms from 6 to 4 years. In the table that follows are the lags and time periods used for each variable:

Table B2. Time reference for GDP and Government approval variables

Y Incumbent vote share	GDP Growth	Government Approval
1983	1982	Median between April, May and June
1989	1988	Median between November, December and January
1995	1994	Median between November, December and January
1999	1998	Median between April, May and June
2003	2002	Median between October November, and December (previous year)
2007	2006	Median between April, May and June
2011	2010	Median between April, May and June
2015	2014	Median between April, May and June
2019	2018	Median between April, May and June

Source: Authors' own elaboration.

APPENDIX C. SUPPLEMENTARY ANALYSIS

Table C1. Within-sample forecasts of incumbent vote share from the Opinion Poll Model. Prediction error is the difference comparing the forecasts with official results incorporating 8/13/21 Argentine elections, 1989-2019 (Presidential, Legislative and combined elections)

Year of Election	Election Type	Prediction Errors Combined Elections	Prediction Errors Presidential Elections	Prediction Errors Legislative Elections
1989	Presidential	6.42		5.42
1995	Presidential	0.20		3.22
1999	Presidential	3.15		3.06
2003	Presidential	7.66		4.24
2007	Presidential	2.54		4.73
2011	Presidential	9.22		8.07

Year of Election	Election Type	Prediction Errors Combined Elections	Prediction Errors Presidential Elections	Prediction Errors Legislative Elections
2015	Presidential	8.22		8.67
2019	Presidential	2.53		3.92
1989	Legislative	6.15	6.63	
1995	Legislative	3.14	1.03	
1999	Legislative	5.12	5.02	
2001	Legislative	4.85	7.02	
2003	Legislative	11.60	9.57	
2005	Legislative	1.25	0.41	
2007	Legislative	2.64	1.06	
2009	Legislative	9.93	9.56	
2011	Legislative	11.54	12.44	
2013	Legislative	0.16	1.08	
2015	Legislative	1.13	1.01	
2017	Legislative	2.41	2.95	
2019	Legislative	6.58	5.84	
Average Absolute Error		5.07	4.89	5.17
Median Absolute Error		4.86	5.02	4.24

Source: Authors' own elaboration.

Table C2. Within-sample forecasts of incumbent vote share from the Structural Model. Prediction error is the difference comparing the forecasts with official results incorporating 9/19/28 Argentine elections, 1989-2019 (Presidential, Legislative and combined elections)

Year of Election	Election Type	Prediction Errors Combined Elections	Prediction Errors Presidential Elections	Prediction Errors Legislative Elections
1983	Presidential	4,40		6.57
1989	Presidential	2,36		5.51
1995	Presidential	10,57		2.05
1999	Presidential	3,01		0.09
2003	Presidential	1,08		0.41
2007	Presidential	0,70		0.99
2011	Presidential	6,62		2.76
2015	Presidential	8,32		
2019	Presidential	5,86		
1983	Legislative	1,71	3.33	
1985	Legislative	1,59	0.17	
1987	Legislative	8,57	6.45	
1989	Legislative	6,12	4.52	
1991	Legislative	0,98	2.44	
1993	Legislative	0,94	3.23	
1995	Legislative	2,67	4.80	
1997	Legislative	0,06	2.19	
1999	Legislative	4,22	2.22	
2001	Legislative	10,07	8.43	
2003	Legislative	0,36	0.41	
2005	Legislative	9,53	7.19	

Year of Election	Election Type	Prediction Errors Combined Elections	Prediction Errors Presidential Elections	Prediction Errors Legislative Elections
2007	Legislative	2,17	4.49	
2009	Legislative	8,89	6.88	
2011	Legislative	3,92	6.35	
2013	Legislative	4,64	3.04	
2015	Legislative	2,67	1.21	
2017	Legislative	3,60	5.10	
2019	Legislative	5,94	7.42	
Average Absolute Error		4,34	4,20	3.63
Median Absolute Error		3,60	4,49	6.42

Source: Authors' own elaboration.

Table C3. Out-of-sample forecasts of incumbent vote share as a function of the Opinion Poll Model using a jackknife approach and comparing the R² and the Root MSE of each Argentine presidential and legislative elections 1989-2019

Jackknife replications	Combined Elections			Legislative Elections			Presidential Elections		
	R2	Root MSE	N	R2	Root MSE	N	R2	Root MSE	N
Without 1989	0.49	6.64	20				0.64	6.49	7
Without 1995	0.42	6.85	20				0.62	6.74	7
Without 1999	0.48	6.80	20				0.65	6.85	7
Without 2003	0.45	6.49	20				0.39	6.45	7
Without 2007	0.46	6.82	20				0.68	6.54	7
Without 2011	0.45	6.41	20				0.67	5.77	7
Without 2015	0.49	6.51	20				0.74	5.63	7
Without 2019	0.47	6.82	20				0.67	6.73	7

Jackknife replications	Combined Elections			Legislative Elections			Presidential Elections		
	R2	Root MSE	N	R2	Root MSE	N	R2	Root MSE	N
Without 1989	0.46	6.67	20	0.30	6.75	12			
Without 1995	0.47	6.80	20	0.26	7.08	12			
Without 1999	0.47	6.73	20	0.32	6.90	12			
Without 2001	0.38	6.72	20	0.14	6.57	12			
Without 2003	0.58	6.08	20	0.47	6.12	12			
Without 2005	0.47	6.84	20	0.29	7.09	12			
Without 2007	0.47	6.81	20	0.28	7.09	12			
Without 2009	0.51	6.37	20	0.37	6.35	12			
Without 2011	0.50	6.18	20	0.29	5.72	12			
Without 2013	0.46	6.85	20	0.28	7.09	12			
Without 2015	0.47	6.85	20	0.30	7.09	12			
Without 2017	0.47	6.82	20	0.29	7.03	12			
Without 2019	0.50	6.64	20	0.34	6.82	12			
Median Root MSE		6.73			6.90			6.54	

Source: Authors' own elaboration.

Table C4. Out-of-sample forecasts of incumbent vote share from the Structural Model using a jackknife approach and comparing the R^2 and the Root MSE of each Argentine presidential and legislative elections 1983-2019

Jackknife replications	Type of Elections	Combined Elections			Legislative Elections			Presidential Elections		
		R2	Root MSE	N	R2	Root MSE	N	R2	Root MSE	N
Without 1983	Presidential	0.61	5.11	27				0.79	5.3	8
Without 1989	Presidential	0.63	4.94	27				0.82	4.6	8
Without 1995	Presidential	0.61	4.89	27				0.86	4.1	8
Without 1999	Presidential	0.61	5.11	27				0.79	5.3	8

Jackknife replications	Type of Elections	Combined Elections			Legislative Elections			Presidential Elections		
		R2	Root MSE	N	R2	Root MSE	N	R2	Root MSE	N
Without 2003	Presidential	0.56	5.02	27				0.63	5.1	8
Without 2007	Presidential	0.62	4.96	27				0.88	4.0	8
Without 2011	Presidential	0.55	5.10	27				0.72	5.3	8
Without 2015	Presidential	0.60	5.03	27				0.83	4.6	8
Without 2019	Presidential	0.61	5.09	27				0.81	5.1	8
Without 1983	Legislative	0.62	5.05	27	0.45	5.37	18			
Without 1985	Legislative	0.61	5.11	27	0.41	5.44	18			
Without 1987	Legislative	0.65	4.85	27	0.50	5.14	18			
Without 1989	Legislative	0.59	5.05	27	0.40	5.30	18			
Without 1991	Legislative	0.62	5.08	27	0.44	5.40	18			
Without 1993	Legislative	0.61	5.08	27	0.43	5.37	18			
Without 1995	Legislative	0.62	5.02	27	0.45	5.29	18			
Without 1997	Legislative	0.61	5.09	27	0.44	5.41	18			
Without 1999	Legislative	0.60	5.10	27	0.42	5.41	18			
Without 2001	Legislative	0.58	4.83	27	0.35	4.88	18			
Without 2003	Legislative	0.61	5.11	27	0.43	5.44	18			
Without 2005	Legislative	0.67	4.72	27	0.53	4.98	18			
Without 2007	Legislative	0.62	5.02	27	0.46	5.30	18			
Without 2009	Legislative	0.62	4.90	27	0.44	5.11	18			
Without 2011	Legislative	0.58	4.99	27	0.31	5.09	18			
Without 2013	Legislative	0.61	5.08	27	0.43	5.38	18			
Without 2015	Legislative	0.61	5.11	27	0.44	5.43	18			
Without 2017	Legislative	0.63	4.98	27	0.46	5.27	18			
Without 2019	Legislative	0.66	4.79	27	0.51	5.04	18			
Median Root MSE			5.05			5.30			5.1	

Source: Authors' own elaboration.

Table C5. Step-ahead forecasts of incumbent vote share as a function of the Opinion Poll Model are compared with the official result for Argentine presidential and legislative elections 1999-2019, via the calculation of their Absolute Forecasting Error

Year of Election	Absolute Forecasting Error PRES ELECTIONS	Absolute Forecasting Error LEG ELECTIONS	Absolute Forecasting Error PRES + LEG ELECTIONS
1999			4,57
2001		3,04	4,87
2003	1,29	17,36	3,5
2005		2,75	0,47
2007	1.30	1,56	1,89
2009		7,9	8,33
2011	12,17	15,46	11,96
2013		0,02	1,34
2015	11,08	2,23	0,74
2017		7,98	2,99
2019	6,67	4,99	3,29
Mean Absolute Error	6,50	6,33	3,99
Median Absolute Error	6,67	4,99	3,29

Note: Mean Absolute Error (MAE) of the step ahead forecast for presidential = 6.5, for legislative =6.33, and for combined elections= 3.99. – obtained from averaging the absolute errors between the predicted vote shares' from the step-ahead procedure and the official result. Median Absolute Error (MAE) out-of-sample for presidential = 6.67, for legislative =4.99 and for combined=3,29 – It is obtained from absolute errors between the predicted vote shares' from the step-ahead procedure and the official result, ordering them from lowest to highest and establishing the number that divides the absolute errors sample in two. Step-ahead procedure involves estimating the model on the entire time-series up to a particular year and estimating the vote share for the next election. For example, the 2019 vote share estimation is based on data from 1999-2015 only. Each subsequent estimate is based on re-estimating with an even smaller time series.

Source: Authors' own elaboration.

Table C6. Step-ahead forecasts of incumbent vote share from the Structural Model are compared with the official result for Argentine presidential and legislative elections 1991-2019, via the calculation of their Absolute Forecast Error

Year of Election	Absolute Forecasting Error PRES ELECTIONS	Absolute Forecasting Error LEG ELECTIONS	Absolute Forecasting Error PRES + LEG ELECTIONS
1991		2,18	2,28
1993		14,63	14,67
1995		5,13	3,35
1997		0,7	1,36
1999		1,2	3,07
2001		9,7	14,23
2003	17,86	3,48	0,95
2005		8,73	10,92
2007	13,75	5,86	1,53
2009		1,26	6,72
2011	4,3	7,73	1,44
2013		2,09	1,07
2015	11,91	0,42	5,58
2017		5,85	5,91
2019	6,5	8,38	2,53
Mean Absolute Error	10,86	5,16	5,04
Median Absolute Error	11,91	5,13	3,07

Note: Mean Absolute Error (MAE) of the step ahead forecast for presidential = 10.86, for legislative =5.16, and for combined elections= 5.04. – obtained from averaging the absolute errors between the predicted vote shares' from the step-ahead procedure and the official result. Median Absolute Error (MAE) out-of-sample for presidential = 11.91, for legislative =5.13 and for combined=3,07 – It is obtained from absolute errors between the predicted vote shares' from the step-ahead procedure and the official result, ordering them from lowest to highest and establishing the number that divides the absolute errors sample in two. Step-ahead procedure involves estimating the model on the entire time-series up to a particular year and estimating the vote share for the next election. For example, the 2019 vote share estimation is based on data from 1999-2015 only. Each subsequent estimate is based on re-estimating with an even smaller time series.

Source: Authors' own elaboration.