

**Online Appendix for**  
**“Survey Mode Effects in a Developing Country:**  
**Comparing Phone and Face-to-Face Surveys in Costa Rica”**

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**A. Question Wording**

Internal efficacy:

*Usted siente que entiende bien los asuntos políticos más importantes del país. ¿Hasta qué punto está de acuerdo o en desacuerdo con esta frase? (1) Muy en desacuerdo – (7) Muy de acuerdo*

You feel that you understand the most important political issues of this country. How much do you agree or disagree with this statement? (1) Strongly disagree – (7) Strongly agree

Government should reduce inequality

*El Estado costarricense debe implementar políticas firmes para reducir la desigualdad de ingresos entre ricos y pobres. ¿Hasta qué punto está de acuerdo o en desacuerdo con esta frase? (1) Muy en desacuerdo – (7) Muy de acuerdo*

The Costa Rican government should implement strong policies to reduce income inequality between the rich and the poor. To what extent do you agree or disagree with this statement? (1) Strongly disagree – (7) Strongly agree

Same-sex marriage

*¿Con qué firmeza aprueba o desaprueba que las parejas del mismo sexo puedan tener el derecho a casarse? (1) Desaprueba firmemente – (10) Aprueba firmemente*

How strongly do you approve or disapprove of same-sex couples having the right to marry? (1) Strongly disapprove – (10) Strongly approve

Abortion when mother’s health at risk

*¿Cree usted que se justificaría la interrupción del embarazo, o sea, un aborto, cuando peligra la salud de la madre? (1) Sí, (0) No*

Do you think it's justified to interrupt a pregnancy, that is, to have an abortion, when the mother's health is in danger? (1) Yes, (0) No

Turnout (round 1)

Face-to-face: *¿Votó usted en la primera ronda de las últimas elecciones presidenciales de 2018? (1) Sí, (0) No*

Phone: *¿Votó usted en las elecciones de febrero de 2018 (primera ronda)? (1) Sí votó, (2) No votó*

Did you vote in the first round of the last presidential elections of 2018? (1) Yes, (0) No

Turnout (round 2)

Face-to-face: *Votó usted en la segunda ronda de las últimas elecciones presidenciales de 2018? (1) Sí, (0) No*

Phone: *¿Votó usted en la s elecciones de abril de 2018 (segunda ronda)? (1) Sí votó, (2) No votó*

Did you vote in the second round of the last presidential elections of 2018? (1) Yes, (0) No

Vote choice (round 1)

Face-to-face: *¿Por quién votó para Presidente en la primera ronda de las últimas elecciones presidenciales de 2018? (0) Ninguno (fue a votar pero dejó la boleta en blanco), (97) Ninguno (anuló su voto), (601) Carlos Alvarado Quesada (PAC), (602) Fabricio Alvarado Muñoz (PRN), (603) Antonio Álvarez Desanti (PLN), (604) Rodolfo Piza Rocafort (PUSC), (605) Juan Diego Castro Fernández (PIN), (606) Rodolfo Hernández Gómez (PRSC), (607) Otto Guevara Guth (ML), (608) Edgardo Araya Sibaja (FA), (677) Otro*

Who did you vote for in the first round of the last presidential election of 2018? (0) No one (blank vote), (97) No one (null vote), (601) Carlos Alvarado Quesada (PAC), (602) Fabricio Alvarado Muñoz (PRN), (603) Antonio Álvarez Desanti (PLN), (604) Rodolfo Piza Rocafort (PUSC), (605) Juan Diego Castro Fernández (PIN), (606) Rodolfo Hernández Gómez (PRSC), (607) Otto Guevara Guth (ML), (608) Edgardo Araya Sibaja (FA), (677) Other

Phone: *¿Por quién votó usted? (0) No votó, (97) Ninguno (anuló el voto), (1) Rodolfo Piza (PUSC), (2) Antonio Álvarez (PLN), (3) Carlos Alvarado (PAC), (4) Otto Guevara (ML), (5) Edgardo Araya (FA), (6) Rodolfo Hernández (RSC), (7) Juan Diego Castro (PIN), (8) Sergio Mena (NG), (9) John Vega (PT), (11) Fabricio Alvarado (RN), (10) Otro*

For whom did you vote? (0) Didn't Vote, (97) No one (cast a null ballot), (1) Rodolfo Piza (PUSC), (2) Antonio Álvarez (PLN), (3) Carlos Alvarado (PAC), (4) Otto Guevara (ML), (5) Edgardo Araya (FA), (6) Rodolfo Hernández (RSC), (7) Juan Diego Castro (PIN), (8) Sergio Mena (NG), (9) John Vega (PT), (11) Fabricio Alvarado (RN), (10) Other

Vote choice (round 2)

Face-to-face: *¿Y por quién votó para Presidente en la segunda vuelta de las elecciones presidenciales del 2018? (0) Ninguno (fue a votar pero dejó la boleta en blanco), (97) Ninguno (anuló su voto), (601) Carlos Alvarado Quesada (PAC), (602) Fabricio Alvarado Muñoz (PRN)*

For whom did you vote in the second round of the presidential elections in 2018? (0) No one (blank vote), (97) No one (null vote), (601) Carlos Alvarado Quesada (PAC), (602) Fabricio Alvarado Muñoz (PRN)

Phone: *¿Por quién votó usted el pasado 01 de abril? (3) Carlos Alvarado, (11) Fabricio Alvarado, (96) Se abstuvo, (97) Anuló el voto, (98) Votó en blanco*

For whom did you vote on April 1st? (3) Carlos Alvarado, (11) Fabricio Alvarado, (96) Abstained, (97) Null vote, (98) Cast a blank vote

## B. Additional Tables

**Table A1. Comparing demographic distributions**

Variable	Face-to-Face Sample	Phone Sample	ENAH0 2018
Gender			
Female	50.0%	52.9%	52.3%
Male	50.0%	47.1%	47.7%
Age group			
18-25	<i>22.1%</i>	<i>21.7%</i>	18.1%
26-35	<i>25.7%</i>	<i>24.3%</i>	20.4%
36-45	16.4%	19.4%	17.9%
46-55	<i>14.2%</i>	16.9%	16.6%
56-65	<i>11.1%</i>	<i>10.6%</i>	14.0%
65+	<b>10.5%</b>	<b>7.1%</b>	13.0%
Education level			
Primary or less	<b>32.3%</b>	<b>27.5%</b>	41.8%
Secondary	<b>47.9%</b>	<b>38.8%</b>	39.1%
Tertiary	<b>19.8%</b>	<b>33.8%</b>	19.1%
Household assets			
Computer	52.8%	56.8%	48.9%
Landline phone	<b>33.0%</b>	<b>28.4%</b>	
Internet access	67.9%	69.8%	75.6%
Province			<b>Census 2011</b>
San José	<b>40.0%</b>	<b>32.8%</b>	32.7%
Alajuela	<i>17.3%</i>	20.4%	20.0%
Cartago	<i>10.0%</i>	10.7%	10.7%
Heredia	9.9%	9.7%	10.2%
Guanacaste	<i>6.4%</i>	7.9%	7.7%
Puntarenas	<b>6.3%</b>	<b>9.5%</b>	9.7%
Limón	<i>9.9%</i>	8.9%	9.0%

*Note:* Bolded values identify statistically significant ( $p < 0.05$ ) differences between the two survey samples. Italicized values identify statistically significant ( $p < 0.05$ ) differences between a survey and the benchmark (ENAH0 or Census).

**Table A2: Comparing distributions with and without matching**

	<b>Face-to-Face Sample (No Matching)</b>	<b>Phone Sample (No Matching)</b>	<b>Face-to-Face Sample (CEM Weights)</b>	<b>Phone Sample (CEM Weights)</b>
College	0.20 (0.01)	0.34 (0.02)	0.31 (0.01)	0.31 (0.02)
65+	0.10 (0.01)	0.07 (0.01)	0.06 (0.01)	0.06 (0.01)
Female	0.50 (0.01)	0.53 (0.02)	0.52 (0.02)	0.52 (0.02)
Landline	0.33 (0.01)	0.28 (0.02)	0.27 (0.01)	0.27 (0.02)
Computer	0.53 (0.01)	0.57 (0.02)	0.58 (0.02)	0.58 (0.02)
Internet	0.68 (0.01)	0.70 (0.02)	0.73 (0.01)	0.73 (0.02)
San Jose	0.40 (0.01)	0.33 (0.02)	0.34 (0.01)	0.34 (0.02)
Puntarenas	0.06 (0.01)	0.09 (0.01)	0.05 (0.01)	0.05 (0.01)
Female Interviewer	0.46 (0.01)	0.69 (0.02)	0.69 (0.01)	0.69 (0.02)
<i>N</i>	1,501	720	1,085	631

*Note:* Standard errors in parentheses.

**Table A3.** Comparing substantive responses across modes

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<b>Variable</b>	<b>Face-to-Face Sample</b>	<b>Phone Sample</b>	<b>Difference</b>
Internal efficacy	0.609 (0.008)	0.615 (0.012)	-0.007 (0.015)
Inequality	0.855 (0.007)	0.838 (0.011)	0.016 (0.013)
Abortion	0.659 (0.015)	0.582 (0.020)	<b>0.077</b> (0.025)
Same-sex marriage	0.380 (0.012)	0.336 (0.017)	<b>0.045</b> (0.021)
Turnout (R1)	0.724 (0.014)	0.786 (0.016)	<b>-0.062</b> (0.021)
Turnout (R2)	0.653 (0.014)	0.734 (0.018)	<b>-0.081</b> (0.023)
C. Alvarado vote (R1)	0.385 (0.019)	0.385 (0.023)	-0.000 (0.029)
C. Alvarado vote (R2)	0.658 (0.019)	0.636 (0.024)	0.022 (0.030)

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*Note:* Standard errors in parentheses. Bolded differences are statistically significant ( $p < 0.05$ ).

**Table A4.** Comparing endpoint responses across modes

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<b>Variable</b>	<b>Face-to-Face Sample</b>	<b>Phone Sample</b>	<b>Difference</b>
Internal efficacy (strongly disagree)	0.042 (0.006)	0.108 (0.012)	<b>-0.066</b> (0.013)
Internal efficacy (strongly agree)	0.140 (0.011)	0.200 (0.016)	<b>-0.059</b> (0.019)
Inequality (strongly disagree)	0.026 (0.005)	0.057 (0.009)	<b>-0.030</b> (0.011)
Inequality (strongly agree)	0.613 (0.015)	0.622 (0.020)	-0.010 (0.025)
Same-sex marriage (strongly disapprove)	0.397 (0.015)	0.547 (0.020)	<b>-0.150</b> (0.025)
Same-sex marriage (strongly approve)	0.183 (0.012)	0.217 (0.017)	-0.033 (0.020)

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Note: Standard errors in parentheses. Bolded differences are statistically significant ( $p < 0.05$ ).

**Table A5.** Comparing substantive responses across modes (one-to-one matching)

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<b>Variable</b>	<b>Face-to-Face Sample</b>	<b>Phone Sample</b>	<b>Difference</b>
Internal efficacy	0.610 (0.012)	0.620 (0.013)	-0.010 (0.017)
Inequality	0.844 (0.011)	0.842 (0.012)	0.003 (0.016)
Abortion	0.658 (0.021)	0.579 (0.022)	<b>0.079</b> <b>(0.030)</b>
Same-sex marriage	0.367 (0.017)	0.331 (0.018)	0.035 (0.025)
Turnout (R1)	0.705 (0.020)	0.775 (0.018)	<b>-0.070</b> <b>(0.026)</b>
Turnout (R2)	0.629 (0.021)	0.723 (0.019)	<b>-0.095</b> <b>(0.028)</b>
C. Alvarado vote (R1)	0.398 (0.027)	0.389 (0.025)	0.009 (0.037)
C. Alvarado vote (R2)	0.633 (0.027)	0.633 (0.025)	0.001 (0.037)

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*Note:* Standard errors in parentheses. Bolded differences are statistically significant ( $p < 0.05$ ).



**Table A6.** Comparing endpoint responses across modes (one-to-one matching)

<b>Variable</b>	<b>Face-to-Face Sample</b>	<b>Phone Sample</b>	<b>Difference</b>
Internal efficacy (strongly disagree)	0.040 (0.008)	0.097 (0.013)	<b>-0.057</b> <b>(0.015)</b>
Internal efficacy (strongly agree)	0.139 (0.015)	0.211 (0.018)	<b>-0.072</b> <b>(0.023)</b>
Inequality (strongly disagree)	0.029 (0.007)	0.056 (0.010)	<b>-0.027</b> <b>(0.012)</b>
Inequality (strongly agree)	0.607 (0.021)	0.627 (0.021)	-0.020 (0.030)
Same-sex marriage (strongly disapprove)	0.412 (0.021)	0.552 (0.022)	<b>-0.139</b> <b>(0.030)</b>
Same-sex marriage (strongly approve)	0.174 (0.016)	0.211 (0.018)	-0.037 (0.024)

Note: Standard errors in parentheses. Bolded differences are statistically significant ( $p < 0.05$ ).