## Joe Biden won popular votes in 2024 US Presidential Election\*

## **Table of contents**

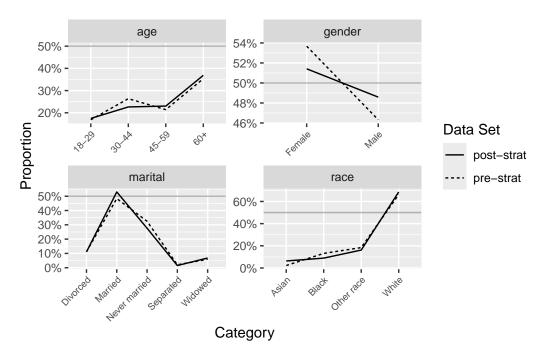


Figure 1: Voter Demographics (Age, Gender, Marital Status, Race)

<sup>\*</sup>Code and data in this analysis is available at:

## Voter Demographics (Education, State of Residence)

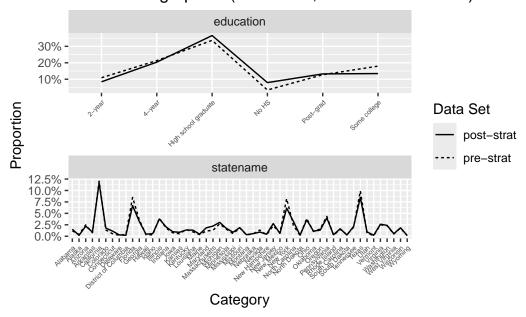


Figure 2: Voter Demographics (Education, State of Residence)

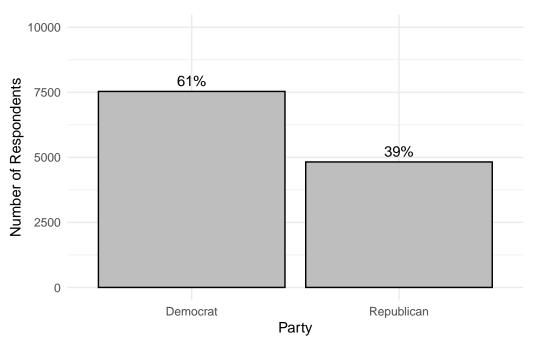


Figure 3: Proportion of the Two Parties in the Survey

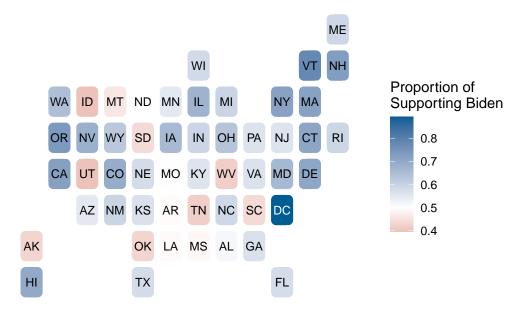


Figure 4: Support for Joe Biden and Donald Trump by State in the Sample

Table 1: Votes in 2020 from the Survey Respondents

Candidates	Number of Votes	Proportion (%)
Did not vote for President	4471	22.355
Donald Trump	6020	30.100
Howie Hawkins	92	0.460
Jo Jorgensen	259	1.295
Joe Biden	8942	44.710
Other	216	1.080

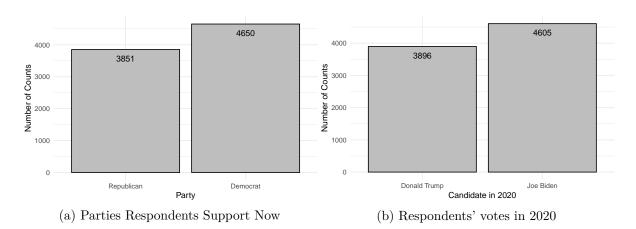


Figure 5: Distribution of Supporting Parties Now and Votes in 2020 from the Survey Respondents

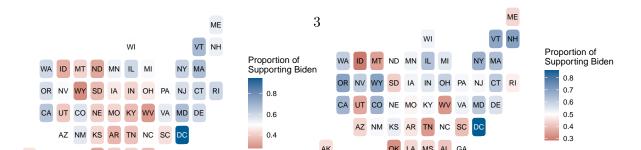


Table 2: Coefficients of the Voting Model

(Intercept) 0.56 0.25 2.27 0.02 0.08 raceBlack 0.71 0.16 4.45 0.00 0.39 raceOther race -0.05 0.15 -0.34 0.73 -0.36 raceWhite -0.44 0.15 -2.97 0.00 -0.73 genderMale -0.30 0.04 -7.57 0.00 -0.38 education4-year 0.42 0.07 5.78 0.00 0.28 educationHigh school -0.10 0.07 -1.52 0.13 -0.23 graduate educationPost-grad 0.84 0.08 10.04 0.00 0.67 educationSome college 0.17 0.07 2.24 0.02 0.02 statenameAlaska -0.63 0.35 -1.81 0.07 -1.32 statenameArkansas 0.09 0.28 0.32 0.75 -0.46 statenameColorado 0.86 0.24 3.53 0.00 0.39 statenameConnecticut 0.89 0.32 2.74 0.01 0.26 statenameDelaware 1.05 0.46 2.27 0.02 0.17 statenameDistrict of 1.72 0.51 3.38 0.00 0.81 Columbia statenameGeorgia 0.10 0.20 0.48 0.63 -0.30 statenameGlilinois 0.73 0.20 3.64 0.00 0.34 statenameIllinois 0.73 0.20 3.64 0.00 0.34 doubt 0.0	1.01 0.24 -0.15 -0.22 0.56 0.03 0.17 1.00 0.31 0.05 0.71
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.24 -0.15 -0.22 0.56 0.03 0.17 1.00 0.31 0.05 0.71
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-0.15 -0.22 0.56 0.03 0.17 1.00 0.31 0.05 0.71
genderMale   -0.30   0.04   -7.57   0.00   -0.38     education4-year   0.42   0.07   5.78   0.00   0.28     educationHigh school   -0.10   0.07   -1.52   0.13   -0.23     graduate   -0.07   0.12   -0.57   0.57   -0.30     educationNo HS   -0.07   0.12   -0.57   0.57   -0.30     educationPost-grad   0.84   0.08   10.04   0.00   0.67     educationSome college   0.17   0.07   2.24   0.02   0.02     statenameAlaska   -0.63   0.35   -1.81   0.07   -1.32     statenameArizona   0.30   0.21   1.42   0.16   -0.11     statenameArkansas   0.09   0.28   0.32   0.75   -0.46     statenameColifornia   0.89   0.18   4.82   0.00   0.53     statenameColorado   0.86   0.24   3.53   0.00   0.39     statenameDelaware   1.05	-0.22 0.56 0.03 0.17 1.00 0.31 0.05 0.71
education4-year   0.42   0.07   5.78   0.00   0.28     educationHigh school   -0.10   0.07   -1.52   0.13   -0.23     graduate   educationNo HS   -0.07   0.12   -0.57   0.57   -0.30     educationPost-grad   0.84   0.08   10.04   0.00   0.67     educationSome college   0.17   0.07   2.24   0.02   0.02     statenameAlaska   -0.63   0.35   -1.81   0.07   -1.32     statenameArizona   0.30   0.21   1.42   0.16   -0.11     statenameArkansas   0.09   0.28   0.32   0.75   -0.46     statenameColifornia   0.89   0.18   4.82   0.00   0.53     statenameColorado   0.86   0.24   3.53   0.00   0.39     statenameDelaware   1.05   0.46   2.27   0.02   0.17     statenameDistrict of   1.72   0.51   3.38   0.00   0.81     Columbia <td>0.56 0.03 0.17 1.00 0.31 0.05 0.71</td>	0.56 0.03 0.17 1.00 0.31 0.05 0.71
educationHigh school   -0.10   0.07   -1.52   0.13   -0.23     graduate   educationNo HS   -0.07   0.12   -0.57   0.57   -0.30     educationPost-grad   0.84   0.08   10.04   0.00   0.67     educationSome college   0.17   0.07   2.24   0.02   0.02     statenameAlaska   -0.63   0.35   -1.81   0.07   -1.32     statenameArizona   0.30   0.21   1.42   0.16   -0.11     statenameArkansas   0.09   0.28   0.32   0.75   -0.46     statenameColifornia   0.89   0.18   4.82   0.00   0.53     statenameColorado   0.86   0.24   3.53   0.00   0.39     statenameConnecticut   0.89   0.32   2.74   0.01   0.26     statenameDelaware   1.05   0.46   2.27   0.02   0.17     statenameFlorida   0.38   0.19   2.07   0.04   0.02     statenameHa	0.03 0.17 1.00 0.31 0.05 0.71
graduate   educationNo HS   -0.07   0.12   -0.57   0.57   -0.30     educationPost-grad   0.84   0.08   10.04   0.00   0.67     educationSome college   0.17   0.07   2.24   0.02   0.02     statenameAlaska   -0.63   0.35   -1.81   0.07   -1.32     statenameArizona   0.30   0.21   1.42   0.16   -0.11     statenameArkansas   0.09   0.28   0.32   0.75   -0.46     statenameCalifornia   0.89   0.18   4.82   0.00   0.53     statenameColorado   0.86   0.24   3.53   0.00   0.39     statenameConnecticut   0.89   0.32   2.74   0.01   0.26     statenameDelaware   1.05   0.46   2.27   0.02   0.17     statenameDistrict of   1.72   0.51   3.38   0.00   0.81     Columbia   statenameGeorgia   0.10   0.20   0.48   0.63   -0.30	0.17 1.00 0.31 0.05 0.71
educationNo HS	1.00 0.31 0.05 0.71
educationPost-grad   0.84   0.08   10.04   0.00   0.67     educationSome college   0.17   0.07   2.24   0.02   0.02     statenameAlaska   -0.63   0.35   -1.81   0.07   -1.32     statenameArizona   0.30   0.21   1.42   0.16   -0.11     statenameArkansas   0.09   0.28   0.32   0.75   -0.46     statenameCalifornia   0.89   0.18   4.82   0.00   0.53     statenameColorado   0.86   0.24   3.53   0.00   0.39     statenameConnecticut   0.89   0.32   2.74   0.01   0.26     statenameDelaware   1.05   0.46   2.27   0.02   0.17     statenameDistrict of   1.72   0.51   3.38   0.00   0.81     Columbia   statenameFlorida   0.38   0.19   2.07   0.04   0.02     statenameHawaii   0.66   0.40   1.66   0.10   -0.10     statenameIllino	1.00 0.31 0.05 0.71
educationSome college   0.17   0.07   2.24   0.02   0.02     statenameAlaska   -0.63   0.35   -1.81   0.07   -1.32     statenameArizona   0.30   0.21   1.42   0.16   -0.11     statenameArkansas   0.09   0.28   0.32   0.75   -0.46     statenameCalifornia   0.89   0.18   4.82   0.00   0.53     statenameColorado   0.86   0.24   3.53   0.00   0.39     statenameConnecticut   0.89   0.32   2.74   0.01   0.26     statenameDelaware   1.05   0.46   2.27   0.02   0.17     statenameDistrict of   1.72   0.51   3.38   0.00   0.81     Columbia   statenameFlorida   0.38   0.19   2.07   0.04   0.02     statenameGeorgia   0.10   0.20   0.48   0.63   -0.30     statenameHawaii   0.66   0.40   1.66   0.10   -0.10     statenameIlinois<	$0.31 \\ 0.05 \\ 0.71$
statenameAlaska -0.63 0.35 -1.81 0.07 -1.32   statenameArizona 0.30 0.21 1.42 0.16 -0.11   statenameArkansas 0.09 0.28 0.32 0.75 -0.46   statenameCalifornia 0.89 0.18 4.82 0.00 0.53   statenameColorado 0.86 0.24 3.53 0.00 0.39   statenameConnecticut 0.89 0.32 2.74 0.01 0.26   statenameDelaware 1.05 0.46 2.27 0.02 0.17   statenameDistrict of 1.72 0.51 3.38 0.00 0.81   Columbia 0.38 0.19 2.07 0.04 0.02   statenameGeorgia 0.10 0.20 0.48 0.63 -0.30   statenameHawaii 0.66 0.40 1.66 0.10 -0.10   statenameIdaho -0.29 0.38 -0.75 0.45 -1.05   statenameIllinois 0.73 0.20 3.64 0.00 0.34	$0.05 \\ 0.71$
statenameArizona 0.30 0.21 1.42 0.16 -0.11   statenameArkansas 0.09 0.28 0.32 0.75 -0.46   statenameCalifornia 0.89 0.18 4.82 0.00 0.53   statenameColorado 0.86 0.24 3.53 0.00 0.39   statenameConnecticut 0.89 0.32 2.74 0.01 0.26   statenameDelaware 1.05 0.46 2.27 0.02 0.17   statenameDistrict of 1.72 0.51 3.38 0.00 0.81   Columbia 0.38 0.19 2.07 0.04 0.02   statenameGeorgia 0.10 0.20 0.48 0.63 -0.30   statenameHawaii 0.66 0.40 1.66 0.10 -0.10   statenameIdaho -0.29 0.38 -0.75 0.45 -1.05   statenameIllinois 0.73 0.20 3.64 0.00 0.34	0.71
statenameArkansas 0.09 0.28 0.32 0.75 -0.46   statenameCalifornia 0.89 0.18 4.82 0.00 0.53   statenameColorado 0.86 0.24 3.53 0.00 0.39   statenameConnecticut 0.89 0.32 2.74 0.01 0.26   statenameDelaware 1.05 0.46 2.27 0.02 0.17   statenameDistrict of 1.72 0.51 3.38 0.00 0.81   Columbia 0.38 0.19 2.07 0.04 0.02   statenameGeorgia 0.10 0.20 0.48 0.63 -0.30   statenameHawaii 0.66 0.40 1.66 0.10 -0.10   statenameIdaho -0.29 0.38 -0.75 0.45 -1.05   statenameIllinois 0.73 0.20 3.64 0.00 0.34	
statenameCalifornia 0.89 0.18 4.82 0.00 0.53   statenameColorado 0.86 0.24 3.53 0.00 0.39   statenameConnecticut 0.89 0.32 2.74 0.01 0.26   statenameDelaware 1.05 0.46 2.27 0.02 0.17   statenameDistrict of 1.72 0.51 3.38 0.00 0.81   Columbia 0.38 0.19 2.07 0.04 0.02   statenameFlorida 0.38 0.19 2.07 0.04 0.02   statenameGeorgia 0.10 0.20 0.48 0.63 -0.30   statenameHawaii 0.66 0.40 1.66 0.10 -0.10   statenameIdaho -0.29 0.38 -0.75 0.45 -1.05   statenameIllinois 0.73 0.20 3.64 0.00 0.34	0.64
statenameColorado   0.86   0.24   3.53   0.00   0.39     statenameConnecticut   0.89   0.32   2.74   0.01   0.26     statenameDelaware   1.05   0.46   2.27   0.02   0.17     statenameDistrict of   1.72   0.51   3.38   0.00   0.81     Columbia   0.38   0.19   2.07   0.04   0.02     statenameGeorgia   0.10   0.20   0.48   0.63   -0.30     statenameHawaii   0.66   0.40   1.66   0.10   -0.10     statenameIdaho   -0.29   0.38   -0.75   0.45   -1.05     statenameIllinois   0.73   0.20   3.64   0.00   0.34	0.04
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1.25
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1.34
statenameDistrict of Columbia 1.72 0.51 3.38 0.00 0.81   statenameFlorida 0.38 0.19 2.07 0.04 0.02   statenameGeorgia 0.10 0.20 0.48 0.63 -0.30   statenameHawaii 0.66 0.40 1.66 0.10 -0.10   statenameIdaho -0.29 0.38 -0.75 0.45 -1.05   statenameIllinois 0.73 0.20 3.64 0.00 0.34	1.54
Columbia <th< td=""><td>2.00</td></th<>	2.00
statenameFlorida 0.38 0.19 2.07 0.04 0.02   statenameGeorgia 0.10 0.20 0.48 0.63 -0.30   statenameHawaii 0.66 0.40 1.66 0.10 -0.10   statenameIdaho -0.29 0.38 -0.75 0.45 -1.05   statenameIllinois 0.73 0.20 3.64 0.00 0.34	2.84
statenameGeorgia 0.10 0.20 0.48 0.63 -0.30   statenameHawaii 0.66 0.40 1.66 0.10 -0.10   statenameIdaho -0.29 0.38 -0.75 0.45 -1.05   statenameIllinois 0.73 0.20 3.64 0.00 0.34	
statenameHawaii 0.66 0.40 1.66 0.10 -0.10   statenameIdaho -0.29 0.38 -0.75 0.45 -1.05   statenameIllinois 0.73 0.20 3.64 0.00 0.34	0.75
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.49
statenameIllinois $0.73$ $0.20$ $3.64$ $0.00$ $0.34$	1.46
	0.46
	1.12
statenameIndiana $0.57$ $0.22$ $2.56$ $0.01$ $0.14$	1.01
statenameIowa 0.85 0.28 3.03 0.00 0.31	1.41
statenameKansas 0.40 0.31 1.29 0.20 -0.20	1.01
statenameKentucky 0.44 0.23 1.89 0.06 -0.02	0.90
statenameLouisiana -0.09 0.26 -0.35 0.73 -0.60	
statenameMaine $0.67$ $0.36$ $1.87$ $0.06$ $-0.03$	1.39
statenameMaryland $0.66$ $0.25$ $2.61$ $0.01$ $0.17$	1.17
statenameMassachusetts $1.00$ $0.25$ $3.97$ $0.00$ $0.51$	1.49
statenameMichigan $0.42$ $0.21$ $2.03$ $0.04$ $0.01$	0.83
statenameMinnesota $0.33$ $0.23$ $1.45$ $0.15$ $-0.12$	0.79
statename Mississippi $-0.13$ $0.31$ $-0.42$ $0.67$ $-0.73$	0.47
statename Missouri $0.11$ $0.22$ $0.50$ $0.62$ $-0.33$	0.55
statenameMontana -0.14 0.39 -0.37 0.71 -0.91	0.62
statenameNebraska 0.40 0.31 1.27 0.20 -0.21	1.02

Table 2: Coefficients of the Voting Model

term	estimate	$\operatorname{std.error}$	statistic	p.value	conf.low	conf.high
statenameNevada	0.83	0.24	3.40	0.00	0.35	1.31
statenameNew Hampshire	1.24	0.41	2.98	0.00	0.45	2.09
statenameNew Jersey	0.24	0.21	1.10	0.27	-0.18	0.65
statenameNew Mexico	0.47	0.28	1.69	0.09	-0.07	1.01
statenameNew York	0.89	0.19	4.73	0.00	0.52	1.26
statenameNorth Carolina	0.30	0.21	1.41	0.16	-0.12	0.72
statenameNorth Dakota	0.06	0.44	0.14	0.89	-0.81	0.94
statenameOhio	0.70	0.20	3.51	0.00	0.31	1.09
statenameOklahoma	-0.12	0.25	-0.47	0.64	-0.62	0.38
statenameOregon	1.17	0.24	4.87	0.00	0.70	1.65
statenamePennsylvania	0.43	0.20	2.18	0.03	0.04	0.81
statenameRhode Island	0.46	0.44	1.04	0.30	-0.40	1.34
statenameSouth Carolina	-0.30	0.23	-1.29	0.20	-0.75	0.15
statenameSouth Dakota	-0.08	0.37	-0.22	0.83	-0.81	0.64
statename Tennessee	-0.17	0.22	-0.79	0.43	-0.61	0.26
statenameTexas	0.26	0.18	1.43	0.15	-0.10	0.62
statenameUtah	-0.39	0.29	-1.33	0.18	-0.96	0.18
statenameVermont	1.38	0.61	2.27	0.02	0.27	2.71
statenameVirginia	0.23	0.21	1.11	0.27	-0.18	0.65
statenameWashington	0.71	0.22	3.29	0.00	0.29	1.13
statenameWest Virginia	-0.02	0.32	-0.07	0.94	-0.65	0.60
statename Wiscons in	0.55	0.22	2.48	0.01	0.12	0.99
statenameWyoming	0.51	0.55	0.92	0.36	-0.56	1.65
marital Married	-0.43	0.07	-6.58	0.00	-0.56	-0.30
maritalNever married	0.06	0.08	0.84	0.40	-0.08	0.21
maritalSeparated	0.01	0.15	0.08	0.93	-0.28	0.31
marital Widowed	-0.26	0.10	-2.72	0.01	-0.46	-0.07
age 30-44	-0.08	0.07	-1.25	0.21	-0.21	0.05
age 45-59	-0.31	0.07	-4.40	0.00	-0.45	-0.17
age60+	-0.27	0.07	-3.86	0.00	-0.40	-0.13

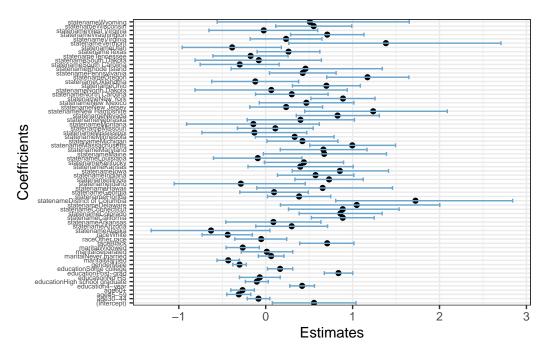


Figure 7: Estimates of Coefficients in the Model

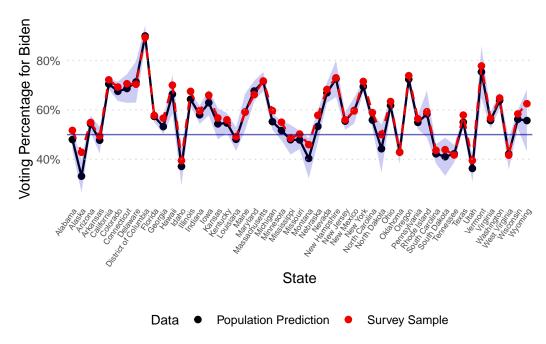


Figure 8: Proportion of Voters in Each State Voting for Biden

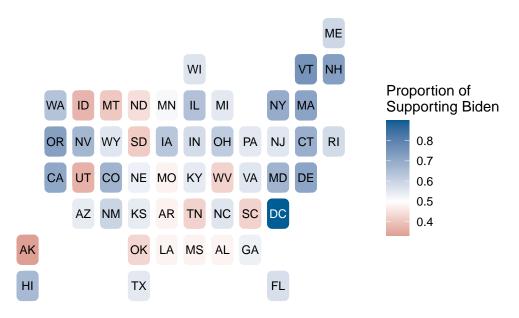


Figure 9: Predicted support for Joe Biden and Donald Trump by State

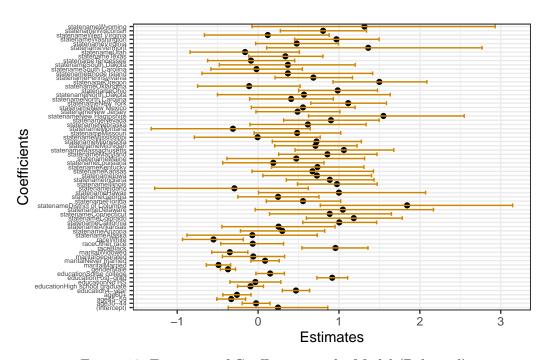


Figure 10: Estimates of Coefficients in the Model (Balanced)

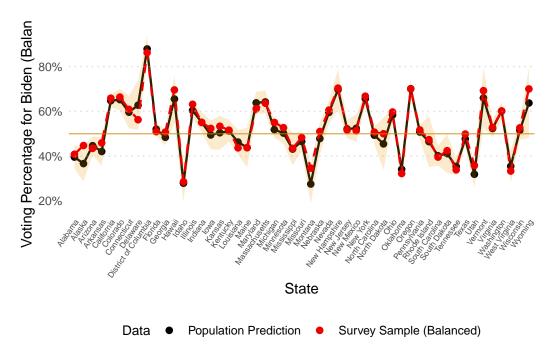


Figure 11: Proportion of Voters in Each State Voting for Biden (Balanced)

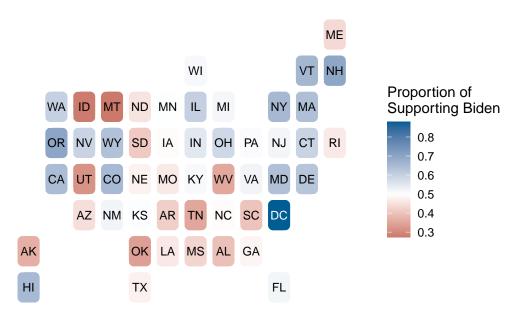


Figure 12: Predicted support for Joe Biden and Donald Trump by State (Using Balanced Survey Results)