Appendix: Democracy at Work: Moving beyond elections to improve well-being

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TABLE I (a)

Federal Social Programs, Incentivized (rather than voluntary) Health Councils and Infant Mortality 2006-2013. This model uses cross-sectional time series Negative Binomial Estimation with Fixed Effects.

|  |  |
| --- | --- |
| **Variable** | **Coefficient (SE)** |
| Incentivized Council Commitment  Family Health Program Coverage | 0.05 (0.24)  -0.002\*\* (0.0002) |
| Bolsa Família Coverage | -0.004\* (0.0002) |
| Bolsa Família Management | -0.23\*\* (0.03) |
| Competitive Mayor | 0.02  (0.01) |
| PT Mayor | -0.01 (0.02) |
| Presidential Vote | 0.002  (0.001) |
| Per Capita Healthcare Spending | -0.000006 (0.00002) |
| Low-Income Wages | 0.0006\*\*  (0.0002) |
| Constant | 1.99\*\* (0.25) |
| N | 20,268 |
| Wald Chi2 (6) | 199.57 |
| Prob> Chi2 | 0.000 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (b)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. This model uses continuous counts of the voluntary policy councils and health council meetings instead of dummy variables. This model uses cross-sectional time series Negative Binomial Estimation with Fixed Effects.

|  |  |  |
| --- | --- | --- |
| **Variable** | **Coefficient (SE)** | **Coefficient (SE)** |
| Voluntary Council Count  Health Council Meetings | -0.04\*\* (0.004) | 0.00004  (0.007) |
| Family Health Program Coverage | -0.002\*\* (0.0002) | -0.002\*\*  (0.0007) |
| Bolsa Familia Coverage | -0.0004 (0.0002) | 0.001  (0.001) |
| Bolsa Familia Management | -0.22\*\* (0.03) | -0.12  (0.10) |
| Competitive Mayoral | 0.02  (0.01) | 0.11  (0.11) |
| PT Mayor | -0.01 (0.02) | 0.05  (0.11) |
| Presidential Vote | 0.002  (0.001) | -0.001  (0.003) |
| Per Capita Healthcare Spending | 0.000004 (0.00002) | 0.00001  (0.00003) |
| Low Income Wages | 0.0007\*\*  (0.0002) | 0.001\*\*  (0.0004) |
| Constant | 2.31\*\* (0.07) | 1.90\*\*  (0.22) |
| N | 20,268 | 6,490 |
| Wald Chi2 | 265.44 | 23.42 |
| Prob> Chi2 | 0.000 | 0.00 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (c)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. These models use continuous measures of the mayor’s vote share and a dummy variable for mayors who run unopposed. Both models use cross-sectional time series Negative Binomial Estimation with Fixed Effects.

|  |  |  |
| --- | --- | --- |
| **Variable** | **Coefficient (SE)** |  |
| Voluntary Council Commitment  Family Health Program Coverage | -0.20\*\* (0.03)  -0.002\*\* (0.0002) | -0.20\*\* (0.03)  -0.002\*\* (0.0002) |
| Bolsa Familia Coverage | -0.0004\* (0.0002) | -0.0004\* (0.0002) |
| Bolsa Familia Management | -0.22\*\* (0.03) | -0.22\*\* (0.03) |
| Mayoral Vote Share | -0.001\*\*  (0.0004) |  |
| Unopposed Mayor |  | -0.05\*  (0.02) |
| PT Mayor | -0.01 (0.02) | -0.01 (0.02) |
| Presidential Vote | 0.002  (0.001) | 0.002  (0.001) |
| Per Capita Healthcare Spending | -0.000004 (0.00002) | -0.000003 (0.00002) |
| Median Low Income Wages | 0.0006\*\*  (0.00002) | 0.0007\*\*  (0.00002) |
| Constant | 2.14\*\* (0.07) | 2.08\*\*  (0.06) |
| N | 20,207 | 20,268 |
| Wald Chi2 (6) | 250.85 | 251.53 |
| Prob> Chi2 | 0.000 |  |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (d)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. This model includes a lagged dependent variable with cross-sectional time series Negative Binomial Estimation.

|  |  |
| --- | --- |
| **Variable** | **Coefficient (SE)** |
| Lagged Infant Mortality | 0.005\*\*  (0.0003) |
| Voluntary Council Commitment  Family Health Program Coverage | -0.04\*\* (0.01)  0.0004\*\* (0.0001) |
| Bolsa Familia Coverage | -0.0006\*\* (0.0002) |
| Bolsa Familia Management | -0.26\*\* (0.03) |
| Competitive Elections | -0.02\*  (0.01) |
| PT Mayor | -0.007 (0.01) |
| Presidential Vote | 0.0002  (0.0003) |
| Per Capita Healthcare Spending | -0.000004 (0.000006) |
| Median Low Income Wage | -0.0008\*\*  (0.00005) |
| Constant | 1.95\*\* (0.33) |
| N | 18,143 |
| Wald Chi2 (6) | 702.41 |
| Prob> Chi2 | 0.000 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (e)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. This model uses per capita municipal spending instead of healthcare spending. It uses cross-sectional time series Negative Binomial Estimation with Fixed Effects.

|  |  |
| --- | --- |
| **Variable** | **Coefficient (SE)** |
| Voluntary Council Commitment  Family Health Program Coverage | -0.20\*\* (0.03)  -0.002\*\* (0.0002) |
| Bolsa Familia Coverage | -0.0004\* (0.0002) |
| Bolsa Familia Management | -0.23\*\* (0.03) |
| PT Mayor | -0.02 (0.02) |
| Presidential Vote | 0.002  (0.001) |
| Per Capita Municipal GDP | -0.0000005 (0.000002) |
| Competitive Mayoral Elections | 0.02  (0.01) |
| Constant | 2.08\*\* (0.06) |
| N | 20,268 |
| Wald Chi2 (6) | 248.80 |
| Prob> Chi2 | 0.000 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (f)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. This model uses geographic dummy variables with cross-sectional time series Negative Binomial Estimation with Fixed Effects. Brazil’s Northeast is the omitted category.

|  |  |
| --- | --- |
| **Variable** | **Coefficient (SE)** |
| Voluntary Council Commitment  Family Health Program Coverage | -0.19\*\* (0.03)  -0.002\*\* (0.0002) |
| Bolsa Familia Coverage | -0.0003 (0.0002) |
| Bolsa Familia Management | -0.24\*\* (0.03) |
| Competitive Elections | 0.02  (0.01) |
| PT Mayor | -0.01 (0.02) |
| Presidential Vote | 0.003\*  (0.001) |
| Per Capita Healthcare Spending | -0.000008 (0.00002) |
| Median Low Income Wages | 0.002\*\*  (0.0002) |
| North | 0.13\*  (0.06) |
| South | -0.38\*\*  (0.05) |
| Center West | -0.33  (0.06) |
| Southeast | -0.24  (0.05) |
| Constant | 2.05\*\* (0.07) |
| N | 20,224 |
| Wald Chi2 (13) | 334.21 |
| Prob> Chi2 | 0.000 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test)

TABLE I (g)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2000-2013. This model excludes the *Bolsa Familia* management variable to extend the time-series back to 2000. It uses cross-sectional time series Negative Binomial Estimation with Fixed Effects.

|  |  |
| --- | --- |
| **Variable** | **Coefficient (SE)** |
| Voluntary Council Commitment  Family Health Program Coverage | -0.07\*\* (0.01)  -0.0015\*\* (0.00014) |
| Bolsa Familia Coverage | -0.0007\*\* (0.0001) |
| Competitive Mayoral Elections | 0.03\*  (0.01) |
| PT Mayor | -0.01 (0.01) |
| Presidential Vote | 0.001\*\*  (0.0003) |
| Per Capita Healthcare Spending | -0.00002\* (0.0001) |
| Low Income Median Wage | 0.0007\*  (0.0001) |
| Constant | 1.92\*\* (0.03) |
| N | 28,675 |
| Wald Chi2 (6) | 397.49 |
| Prob> Chi2 | 0.000 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (h)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. This model curtails the observations to eliminate potentially implausible observations for each variable. The model uses cross-sectional time series Negative Binomial Estimation with Fixed Effects.

|  |  |
| --- | --- |
| **Variable** | **Coefficient (SE)** |
| Voluntary Council Commitment  Family Health Program Coverage | -0.22\*\* (0.03)  -0.002\*\* (0.0002) |
| Bolsa Familia Coverage | -0.0005\* (0.0003) |
| Bolsa Familia Management | -0.23\*\* (0.03) |
| Competitive Mayor | 0.02  (0.01) |
| PT Mayor | -0.02 (0.02) |
| Presidential Vote | 0.002  (0.001) |
| Per Capita Healthcare Spending | 0.00001 (0.00001) |
| Median Low Income Wage | 0.001\*\*  (0.0002) |
| Constant | 31.91\*\* (1.55) |
| N | 20,092 |
| Wald Chi2 (6) | 262.12 |
| Prob> Chi2 | 0.000 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (i)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. This model uses Arellano-Bond Dynamic Panel Estimation for different

terciles of infant mortality.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Coefficient (SE)**  **(lowest tercile)** | **Coefficient (SE)**  **(middle tercile)** | **Coefficient (SE)**  **(highest tercile)** |
| Infant Mortality (L1) | 0.51\*\*  (0.05) | -0.09\*\*  (0.04) | -0.70\*\*  (0.08) |
| Infant Mortality (L2) | 0.31\*\*  (0.05) | -0.02  (0.02) | -0.35\*\*  (0.05) |
| Voluntary Council Commitment  Family Health Program Coverage | -8.41\*\* (1.06)  -0.06\*\* (0.02) | -9.07\*\*  (3.18)  -0.01  (0.01) | -3.11  (5.28)  0.04\*  (0.02) |
| Bolsa Familia Coverage | -0.08\*\* (0.01) | -0.02\*\*  (0.01) | 0.18\*\*  (0.02) |
| Bolsa Familia Management | -22.06\*\* (1.93) | -5.09  (1.12) | 21.30\*\*  (2.31) |
| Competitive Elections | 1.17  (0.62) | -0.85  (0.49) | -2.44\*  (1.15) |
| PT Mayor | -3.06\*\* (0.97) | 0.44  (0.78) | -1.52  (1.39) |
| Presidential Vote | 1.34\*\*  (0.24) | 1.12\*\*  (0.18) | -1.03\*  (0.40) |
| Per Capita Healthcare Spending | -0.01\* (0.002) | -0.01\*  (0.001) | 0.02\*\*  (0.004) |
| Median Low Income Wage | -0.16\*\*  (0.05) | -0.12\*  (0.05) | 0.51\*\*  (0.13) |
| Constant | Omitted | Omitted | Omitted |
| N | 5,350 | 4,338 | 2,708 |
| Wald Chi2 (6) | 1254.26 | 3923.64 | 1571.45 |
| Prob> Chi2 | 0.000 | 0.00 | 0.00 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (j)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. The first model uses Arellano-Bond Dynamic Panel Estimation. The second uses the same estimation, but with year dummies. 2007-2010 are significant and positive.

|  |  |  |
| --- | --- | --- |
| **Variable** | **Coefficient (SE)** | **Coefficient (SE)** |
| Infant Mortality (L1) | -0.10\*\*  (0.03) | 0.03  (0.03) |
| Infant Mortality (L2) | -0.02  (0.02) | 0.05\*\*  (0.02) |
| Voluntary Council Commitment  Family Health Program Coverage | -8.41\*\* (0.84)  -0.03\*\* (0.007) | -6.01\*\*  (0.85)  0.01  (0.01) |
| Bolsa Familia Coverage | -0.03\*\* (0.01) | -0.01  (0.01) |
| Bolsa Familia Management | -10.41\*\* (0.95) | -1.82  (1.18) |
| Competitive Elections | -0.05  (0.38) | -0.59  (0.41) |
| PT Mayor | -1.33\*\* (0.53) | -0.76  (0.57) |
| Presidential Vote | 0.65\*\*  (0.12) | 0.32\*\*  (0.11) |
| Per Capita Healthcare Spending | -0.003\*\* (0.001) | 0.0004  (0.0005) |
| Median Low Income Wages | 0.06\*  (0.03) | 0.05  (0.03) |
| Constant | Omitted | Omitted |
| N | 12,396 | 12,392 |
| Wald Chi2 (15) | 5072.72 | 11659.35 |
| Prob> Chi2 | 0.000 | 0.000 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (k)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. This model uses Nearest-Neighbor Propensity Score Matching with Treatment Effects.

|  |  |
| --- | --- |
| **Variable** | **Coefficient (SE)** |
| Voluntary Council Commitment | -0.79\*\* (0.22) |
| N | 20,515 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (l)

Federal Social Programs, Voluntary Policy Councils and Infant Mortality

2006-2013. This model uses Difference-in-Difference Estimation.

|  |  |
| --- | --- |
| **Variable** | **Coefficient (SE)** |
| Voluntary Council Commitment  Family Health Program Coverage | -7.23\*\* (0.92)  -0.005 (0.006) |
| Bolsa Familia Coverage | 0.01 (0.007) |
| Bolsa Familia Management | -1.54 (1.16) |
| Competitive Elections | -0.13 (0.43) |
| PT Mayor | -0.59 (0.55) |
| Presidential Vote | Omitted |
| Per Capita Healthcare Spending | -0.001 (0.001) |
| Median Low Income Wage | 0.23\*\*  (0.04) |
| Constant | -0.32\*\* (0.09) |
| N | 14,033 |
| Wald Chi2 (8) | 105.76 |
| Prob> Chi2 | 0.000 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).

TABLE I (m)

Federal Social Programs, Incentivized Policy Council Meetings and Infant Mortality 2006-2013. This model uses cross-sectional time series ordinary least squares with standard errors clustered on the municipality.

|  |  |
| --- | --- |
| **Variable** | **Coefficient (SE)** |
| Voluntary Council Commitment  Family Health Program Coverage | -6.12\*\* (1.34)  -0.008 (0.005) |
| Bolsa Familia Coverage | -0.009 (0.005) |
| Bolsa Familia Management | -3.65\*\* (0.85) |
| PT Mayor | 0.09 (0.06) |
| Presidential Vote | Dropped |
| Per Capita Healthcare Spending | -0.00003 (0.0005) |
| Competitive Mayoral Elections | 0.01  (0.30) |
| Constant | 2.15\*\* (0.48) |
| N | 20,515 |
| F | 18.28 |
| Prob> F | 0.000 |

\* indicates significance at better than 0.05 (two-tailed test).

\*\* indicates significance at better than 0.01 (two-tailed test).