# A    Cognitive performance in remote work - Appendix



(a) Engine evaluation before move



(b) Engine evaluation after move

Figure A1: Computation of error variable: An example

*Note:*    The chess engine evaluates the position before the Black player played move 24 (upper panel) with a pawn metric of +0.13 in White's favour. The optimal move for the Black player according to the chess engine is bishop to c4. However, the Black player chose to play pawn takes e4 (lower panel), which increases the pawn metric to +1.09 in White's favour. Black's error is thus computed as -0.13 - (-1.09) = 0.96. To compute the best move with a search depth of 25, the chess engine calculated 5,141 kilonodes of the game tree.

Table A1: Full estimation results

| Outcome variable: *Error* | (1) |
|---|---|
| Online | 0.017** |
| | (0.015) |
| *Move-specific controls* | |
| ln(ComplexityNodes) | 0.079*** |
| | (0.000) |
| ln(Remaining time before move in min) | -0.047*** |
| | (0.000) |
| \|Pawn metric of the position before the move\| | 0.018*** |
| | (0.000) |
| \|Pawn metric of the position before the move\| (squared) | -0.000*** |
| | (0.000) |
| *Game-specific controls* | |
| ELO score player | 0.000 |
| | (0.388) |
| ELO score opponent | 0.000*** |
| | (0.000) |
| Number of games played before game $g$ | |
| within the tournament | -0.000 |
| | (0.394) |
| during a specific day | -0.000 |
| | (0.786) |
| Constant | -1.267*** |
| | (0.000) |
| Number ind. moves | 214,810 |
| $R^2$ | 0.126 |
| Player FE | YES |
| Move FE | YES |

*Note:* The table shows the full estimation results based on Equation (2) in the main text. P-values are reported in parenthesis and are based on clustered standard errors at the game level. Section 2.2 in the main text describes the construction of the outcome variables. The opening phase of each game is excluded for each player ($m \leq 15$). *: $p < 0.1$, **: $p < 0.05$, ***: $p < 0.01$
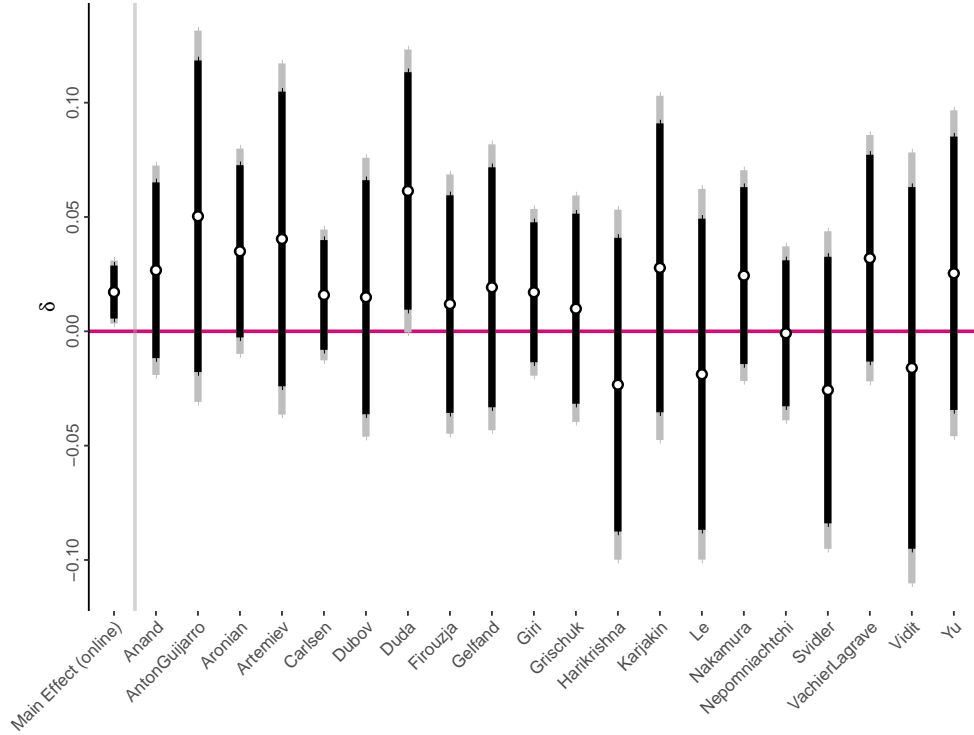
Figure A2: Effect heterogeneity by online player

*Note:* The figure shows the coefficient $\hat{\delta}$ estimated separately for each player who competed both online and offline. The left-most coefficient shows the main effect from column (3) of Table 3 in the main text for comparison. Dots represent the point estimate per player, and the grey (black) bars show the 95% (90%) confidence intervals based on clustered standard errors at the game level. Regressions contain player and move fixed effects, as well as the full set of control variables. The opening phase of each game is excluded for each player ($m \leq 15$).