## Academic Tables for NFL Player Performance Models

2025-03-23

Table 1: Offense Grades Model Results

|                          |   | Starter Models  |                 |                | On-Field Models |   | Attempt Models                          |   |   |
|--------------------------|---|-----------------|-----------------|----------------|-----------------|---|---|---|---|
| Variable                 | Starter LPM                             | Starter Probit  | Starter Logit   | On-Field LPM   | On-Field Probit | On-Field Logit                          | Attempt LPM                             | Attempt Probit                          | Attempt Logit                           |
| Quarterbacks             |   |                 |                 |                |                 |   |   |   |   |
| Short Grades Pass        | 0.023(0.016)                            | 0.075(0.048)    | 0.122(0.080)    | 0.032(0.014)** | 0.099(0.044)**  | 0.168(0.072)**                          | 0.007(0.004)                            | 0.030(0.021)                            | 0.051(0.037)                            |
| Medium Grades Pass       | -0.012(0.013)                           | -0.036(0.041)   | -0.062(0.068)   | -0.003(0.015)  | -0.003(0.045)   | -0.015(0.074)                           | 0.006(0.004)                            | 0.021(0.017)                            | 0.037(0.031)                            |
| Deep Grades Pass         | -0.011(0.013)                           | -0.038(0.040)   | -0.067(0.066)   | -0.020(0.013)  | -0.071(0.041)*  | -0.114(0.068)*                          | 0.007(0.004)*                           | 0.024(0.017)                            | 0.050(0.030)*                           |
| Running Backs            | ()                                      | ,               | ( ,             | ( /            | ( )             | (* (* * * * * * * * * * * * * * * * * * | ( )                                     | ()                                      | ( ,                                     |
| Grades Pass Block        | -0.016(0.010)                           | -0.051(0.032)   | -0.083(0.053)   | 0.012(0.010)   | 0.034(0.030)    | 0.056(0.050)                            | -0.005(0.003)                           | -0.026(0.014)*                          | -0.044(0.024)*                          |
| Grades Run               | 0.012(0.011)                            | 0.038(0.033)    | 0.064(0.054)    | -0.004(0.011)  | -0.012(0.033)   | -0.023(0.055)                           | -0.001(0.003)                           | -0.003(0.013)                           | -0.001(0.023)                           |
| Short Grades Pass        | 0.002(0.011)                            | 0.007(0.032)    | 0.009(0.053)    | -0.004(0.010)  | -0.010(0.031)   | -0.019(0.051)                           | -0.001(0.003)                           | -0.000(0.014)                           | -0.001(0.024)                           |
| Medium Grades Pass       | -0.012(0.009)                           | -0.036(0.028)   | -0.059(0.046)   | -0.005(0.009)  | -0.015(0.027)   | -0.024(0.044)                           | -0.001(0.003)                           | -0.006(0.013)                           | -0.009(0.022)                           |
| Deep Grades Pass         | -0.004(0.010)                           | -0.012(0.028)   | -0.020(0.047)   | -0.002(0.009)  | -0.007(0.027)   | -0.013(0.044)                           | 0.002(0.003)                            | 0.005(0.012)                            | 0.008(0.021)                            |
| WR1                      | 0.00 - (0.0 - 0)                        | 01012(01020)    | 0.020(0.02.)    | ()             | 0.001(0.021)    | 0.010(0.011)                            | <u>-</u> (,                             | 0.000(0.01-2)                           | 0.000(0.022)                            |
| Grades Run Block         | 0.005(0.015)                            | 0.009(0.045)    | 0.022(0.076)    | -0.012(0.019)  | -0.041(0.058)   | -0.059(0.097)                           | -0.006(0.004)                           | -0.026(0.019)                           | -0.049(0.033)                           |
| Short Grades Pass        | 0.005(0.013)                            | 0.013(0.040)    | 0.028(0.067)    | 0.001(0.016)   | -0.003(0.046)   | -0.008(0.076)                           | -0.001(0.004)                           | -0.004(0.017)                           | -0.013(0.030)                           |
| Medium Grades Pass       | 0.013(0.013)                            | 0.038(0.039)    | 0.065(0.065)    | -0.002(0.014)  | -0.002(0.042)   | -0.002(0.070)                           | 0.006(0.004)                            | 0.020(0.018)                            | 0.041(0.031)                            |
| Deep Grades Pass         | -0.000(0.011)                           | -0.000(0.033)   | -0.001(0.056)   | 0.004(0.012)   | 0.018(0.036)    | 0.029(0.059)                            | 0.002(0.003)                            | 0.014(0.014)                            | 0.023(0.025)                            |
| WR2                      | *************************************** | 0.000(0.000)    | 01002(01000)    | *****(******)  | ()              | *************************************** | *************************************** | *************************************** | *************************************** |
| Grades Run Block         | -0.018(0.015)                           | -0.051(0.045)   | -0.084(0.074)   | 0.029(0.036)   | 0.088(0.110)    | 0.153(0.180)                            | -0.002(0.004)                           | -0.007(0.019)                           | -0.003(0.034)                           |
| Short Grades Pass        | -0.012(0.013)                           | -0.037(0.039)   | -0.064(0.065)   | 0.012(0.024)   | 0.035(0.071)    | 0.060(0.119)                            | 0.008(0.004)**                          | 0.034(0.016)**                          | 0.056(0.029)*                           |
| Medium Grades Pass       | 0.017(0.012)                            | 0.052(0.035)    | 0.087(0.058)    | -0.003(0.020)  | -0.017(0.060)   | -0.025(0.101)                           | 0.001(0.003)                            | 0.001(0.016)                            | 0.002(0.027)                            |
| Deep Grades Pass         | 0.002(0.011)                            | 0.009(0.033)    | 0.013(0.054)    | 0.011(0.016)   | 0.042(0.049)    | 0.064(0.082)                            | 0.000(0.003)                            | 0.002(0.013)                            | 0.002(0.024)                            |
| WR3                      | 0.002(0.011)                            | 0.000(0.000)    | 0.010(0.001)    | 0.011(0.010)   | 0.012(0.010)    | 0.001(0.002)                            | 0.000(0.000)                            | 0.002(0.010)                            | 0.002(0.021)                            |
| Grades Run Block         | -0.005(0.014)                           | -0.012(0.041)   | -0.027(0.067)   | 0.022(0.027)   | 0.074(0.082)    | 0.115(0.137)                            | -0.001(0.004)                           | -0.004(0.017)                           | -0.006(0.030)                           |
| Short Grades Pass        | -0.012(0.011)                           | -0.041(0.033)   | -0.065(0.055)   | -0.002(0.021)  | -0.002(0.061)   | 0.006(0.102)                            | -0.003(0.003)                           | -0.013(0.014)                           | -0.020(0.025)                           |
| Medium Grades Pass       | 0.005(0.011)                            | 0.014(0.031)    | 0.024(0.051)    | 0.010(0.019)   | 0.010(0.057)    | 0.018(0.095)                            | 0.006(0.003)**                          | 0.024(0.014)*                           | 0.042(0.024)*                           |
| Deep Grades Pass         | 0.000(0.010)                            | 0.005(0.030)    | 0.005(0.050)    | 0.014(0.015)   | 0.052(0.046)    | 0.082(0.076)                            | 0.001(0.003)                            | 0.008(0.013)                            | 0.013(0.022)                            |
| TE1                      | 0.000(0.010)                            | 0.003(0.030)    | 0.003(0.030)    | 0.014(0.013)   | 0.002(0.040)    | 0.002(0.010)                            | 0.001(0.003)                            | 0.000(0.013)                            | 0.013(0.022)                            |
| Grades Pass Block        | 0.026(0.011)**                          | 0.080(0.034)**  | 0.136(0.057)**  | 0.024(0.011)** | 0.079(0.035)**  | 0.130(0.058)**                          | -0.002(0.003)                           | -0.012(0.014)                           | -0.018(0.026)                           |
| Grades Run Block         | -0.014(0.015)                           | -0.044(0.044)   | -0.076(0.073)   | -0.013(0.012)  | -0.041(0.038)   | -0.068(0.064)                           | -0.002(0.003)                           | 0.005(0.019)                            | 0.005(0.034)                            |
| Short Grades Pass        | 0.006(0.013)                            | 0.014(0.037)    | 0.022(0.062)    | 0.001(0.012)   | 0.001(0.038)    | 0.000(0.063)                            | 0.003(0.004)                            | 0.011(0.018)                            | 0.024(0.030)                            |
| Medium Grades Pass       | -0.019(0.011)*                          | -0.055(0.032)*  | -0.092(0.053)*  | 0.016(0.011)   | 0.046(0.032)    | 0.081(0.052)                            | 0.003(0.004)                            | 0.009(0.014)                            | 0.009(0.024)                            |
| Deep Grades Pass         | -0.019(0.011)                           | -0.007(0.029)   | -0.008(0.048)   | -0.015(0.009)  | -0.044(0.028)   | -0.072(0.047)                           | 0.003(0.003)                            | 0.008(0.014)                            | 0.017(0.022)                            |
| OL1                      | -0.002(0.010)                           | -0.007 (0.029)  | -0.000(0.040)   | -0.013(0.003)  | =0.044(0.028)   | -0.072(0.041)                           | 0.001(0.003)                            | 0.000(0.012)                            | 0.017(0.022)                            |
| Grades Pass Block        | 0.015(0.012)                            | 0.049(0.035)    | 0.082(0.059)    | -0.011(0.010)  | -0.033(0.029)   | -0.055(0.048)                           | -0.004(0.003)                           | -0.018(0.015)                           | -0.032(0.026)                           |
| Grades Run Block         | 0.008(0.012)                            | 0.026(0.042)    | 0.037(0.069)    | 0.006(0.010)   | 0.019(0.030)    | 0.035(0.050)                            | 0.001(0.004)                            | 0.001(0.017)                            | 0.005(0.031)                            |
| OL2                      | 0.000(0.014)                            | 0.020(0.042)    | 0.037(0.009)    | 0.000(0.010)   | 0.019(0.030)    | 0.033(0.030)                            | 0.001(0.004)                            | 0.001(0.017)                            | 0.003(0.031)                            |
| Grades Pass Block        | -0.009(0.012)                           | -0.026(0.034)   | -0.045(0.057)   | -0.005(0.010)  | -0.014(0.029)   | -0.025(0.048)                           | -0.001(0.003)                           | -0.008(0.015)                           | -0.018(0.026)                           |
| Grades Run Block         | -0.006(0.012)                           | -0.021(0.042)   | -0.045(0.057)   | -0.013(0.010)  | -0.014(0.029)   | -0.073(0.050)                           | 0.004(0.004)                            | 0.022(0.017)                            | 0.041(0.030)                            |
| OL3                      | -0.000(0.014)                           | -0.021(0.042)   | -0.052(0.009)   | -0.015(0.010)  | -0.041(0.050)   | -0.075(0.050)                           | 0.004(0.004)                            | 0.022(0.017)                            | 0.041(0.030)                            |
| Grades Pass Block        | 0.008(0.012)                            | 0.020(0.035)    | 0.041(0.059)    | 0.008(0.009)   | 0.025(0.029)    | 0.041(0.048)                            | 0.002(0.003)                            | 0.011(0.015)                            | 0.015(0.027)                            |
| Grades Run Block         | -0.015(0.014)                           | -0.045(0.042)   | -0.078(0.070)   | 0.008(0.009)   | 0.025(0.029)    | 0.041(0.048)                            | -0.004(0.004)                           | -0.020(0.018)                           | -0.038(0.032)                           |
| OL4                      | -0.013(0.014)                           | -0.043(0.042)   | -0.078(0.070)   | 0.004(0.009)   | 0.017(0.029)    | 0.020(0.048)                            | -0.004(0.004)                           | -0.020(0.018)                           | -0.058(0.052)                           |
| Grades Pass Block        | 0.023(0.012)*                           | 0.068(0.036)*   | 0.115(0.060)*   | 0.007(0.010)   | 0.017(0.030)    | 0.030(0.049)                            | -0.003(0.003)                           | -0.015(0.015)                           | -0.022(0.026)                           |
| Grades Run Block         |   |                 |                 |                |                 |   |   |   | 0.004(0.030)                            |
|                          | -0.008(0.013)                           | -0.025(0.038)   | -0.045(0.064)   | -0.013(0.010)  | -0.037(0.029)   | -0.065(0.047)                           | -0.000(0.004)                           | 0.003(0.017)                            | 0.004(0.030)                            |
| OL5<br>Grades Pass Block | 0.032(0.012)***                         | 0.091(0.037)**  | 0.151(0.061)**  | -0.012(0.010)  | -0.040(0.031)   | 0.007(0.051)                            | 0.001(0.009)                            | 0.010(0.015)                            | 0.015(0.027)                            |
|                          |   |                 |                 |                |                 | -0.067(0.051)                           | 0.001(0.003)                            | 0.013(0.015)                            |   |
| Grades Run Block         | -0.032(0.013)**                         | -0.098(0.039)** | -0.157(0.065)** | 0.010(0.010)   | 0.029(0.030)    | 0.048(0.050)                            | -0.002(0.004)                           | -0.009(0.017)                           | -0.018(0.030)                           |
| Perf. Measures           | 0.001/0.011)*                           | 0.004(0.047)    | 0.107(0.000)    | 0.010/0.011\*  | 0.054(0.040)    | 0.000(0.055)                            |   |   |   |
| GIMR                     | 0.021(0.011)*                           | 0.064(0.047)    | 0.107(0.083)    | 0.018(0.011)*  | 0.054(0.042)    | 0.083(0.075)                            |   |   |   |
| Control Variables        | N/                                      | V               | V               | V              | V               | V                                       | V                                       | V                                       | V                                       |
| Game Situation           | Yes                                     | Yes             | Yes             | Yes            | Yes             | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Coach Variables          | Yes                                     | Yes             | Yes             | Yes            | Yes             | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Team Stats               | Yes                                     | Yes             | Yes             | Yes            | Yes             | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Season/Team FE           | Yes                                     | Yes             | Yes             | Yes            | Yes             | Yes                                     | No                                      | No                                      | No                                      |
| Coach FE                 | No                                      | No              | No              | Yes            | Yes             | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Player Presence          | Yes                                     | Yes             | Yes             | Yes            | Yes             | Yes                                     | No                                      | No                                      | No                                      |
| Control Def. Players     | Yes                                     | Yes             | Yes             | Yes            | Yes             | Yes                                     | Yes                                     | Yes                                     | Yes                                     |
| Control Off. Players     | No                                      | No              | No              | No             | No              | No                                      | No                                      | No                                      | No                                      |

Table 2: Offense Yards Model Results

|                      |                  | Starter Models   |                  |                | On-Field Models |                | Attempt Models |                 |                |
|----------------------|------------------|------------------|------------------|----------------|-----------------|----------------|----------------|-----------------|----------------|
| Variable             | Starter LPM      | Starter Probit   | Starter Logit    | On-Field LPM   | On-Field Probit | On-Field Logit | Attempt LPM    | Attempt Probit  | Attempt Logit  |
| Quarterbacks         |                  |                  |                  |                |                 |                |                |                 |                |
| Short Yards          | 0.019(0.013)     | 0.056(0.040)     | 0.087(0.067)     | 0.020(0.014)   | 0.058(0.042)    | 0.092(0.069)   | 0.003(0.004)   | 0.007(0.017)    | 0.021(0.030)   |
| Medium Yards         | 0.026(0.013)**   | 0.092(0.040)**   | 0.148(0.067)**   | 0.004(0.014)   | 0.016(0.042)    | 0.024(0.070)   | 0.006(0.004)   | 0.024(0.018)    | 0.034(0.032)   |
| Deep Yards           | -0.036(0.012)*** | -0.114(0.036)*** | -0.189(0.060)*** | -0.017(0.012)  | -0.054(0.035)   | -0.087(0.058)  | 0.007(0.004)*  | 0.026(0.016)    | 0.044(0.029)   |
| Running Backs        |                  |                  |                  |                | ` ′             | ` ′            |                |                 |                |
| Grades Pass Block    | -0.011(0.010)    | -0.033(0.030)    | -0.055(0.050)    | 0.009(0.009)   | 0.026(0.027)    | 0.042(0.046)   | -0.004(0.003)  | -0.024(0.013)*  | -0.041(0.022)* |
| Yards                | 0.004(0.010)     | 0.016(0.029)     | 0.020(0.049)     | 0.016(0.009)*  | 0.047(0.027)*   | 0.076(0.045)*  | 0.006(0.003)*  | 0.025(0.013)*   | 0.043(0.023)*  |
| Short Yards          | -0.006(0.010)    | -0.019(0.030)    | -0.029(0.050)    | -0.016(0.010)  | -0.047(0.029)   | -0.073(0.048)  | 0.001(0.003)   | 0.007(0.013)    | 0.014(0.023)   |
| Medium Yards         | -0.019(0.009)**  | -0.057(0.026)**  | -0.097(0.043)**  | -0.007(0.008)  | -0.021(0.024)   | -0.037(0.041)  | -0.003(0.002)  | -0.025(0.012)** | -0.041(0.022)* |
| Deep Yards           | 0.005(0.009)     | 0.016(0.031)     | 0.027(0.051)     | -0.001(0.009)  | -0.006(0.027)   | -0.010(0.044)  | -0.004(0.003)* | -0.018(0.011)   | -0.030(0.020)  |
| WR1                  |                  |                  |                  |                |                 |                |                |                 |                |
| Grades Run Block     | 0.010(0.014)     | 0.025(0.043)     | 0.049(0.072)     | -0.010(0.019)  | -0.035(0.056)   | -0.052(0.094)  | -0.002(0.004)  | -0.007(0.017)   | -0.013(0.032)  |
| Short Yards          | -0.007(0.010)    | -0.024(0.031)    | -0.037(0.051)    | -0.000(0.011)  | -0.005(0.031)   | -0.007(0.052)  | -0.004(0.003)  | -0.019(0.013)   | -0.033(0.024)  |
| Medium Yards         | -0.001(0.011)    | -0.000(0.033)    | -0.002(0.055)    | -0.005(0.011)  | -0.010(0.033)   | -0.020(0.054)  | 0.001(0.003)   | 0.004(0.014)    | 0.012(0.025)   |
| Deep Yards           | 0.027(0.010)***  | 0.083(0.030)***  | 0.139(0.049)***  | 0.018(0.010)*  | 0.055(0.029)*   | 0.091(0.048)*  | 0.001(0.003)   | 0.006(0.013)    | 0.006(0.023)   |
| WR2                  |                  |                  |                  |                |                 |                |                |                 |                |
| Grades Run Block     | -0.017(0.014)    | -0.048(0.043)    | -0.083(0.071)    | 0.043(0.035)   | 0.129(0.107)    | 0.226(0.174)   | 0.002(0.004)   | 0.013(0.018)    | 0.032(0.032)   |
| Short Yards          | -0.010(0.010)    | -0.028(0.031)    | -0.050(0.051)    | 0.002(0.011)   | 0.005(0.034)    | 0.006(0.056)   | 0.004(0.003)   | 0.012(0.013)    | 0.023(0.023)   |
| Medium Yards         | -0.006(0.011)    | -0.022(0.033)    | -0.035(0.055)    | -0.017(0.012)  | -0.045(0.036)   | -0.080(0.060)  | -0.002(0.003)  | -0.011(0.014)   | -0.019(0.025)  |
| Deep Yards           | 0.012(0.010)     | 0.040(0.030)     | 0.068(0.050)     | 0.007(0.010)   | 0.022(0.031)    | 0.039(0.051)   | 0.002(0.003)   | 0.010(0.013)    | 0.015(0.023)   |
| WR3                  |                  | ` ′              |                  | ` ′            |                 |                |                |                 | ` ′            |
| Grades Run Block     | -0.004(0.013)    | -0.010(0.040)    | -0.021(0.064)    | 0.027(0.024)   | 0.089(0.076)    | 0.142(0.127)   | 0.002(0.004)   | 0.009(0.017)    | 0.017(0.029)   |
| Short Yards          | -0.009(0.010)    | -0.030(0.031)    | -0.045(0.052)    | 0.011(0.012)   | 0.026(0.035)    | 0.048(0.057)   | -0.002(0.003)  | -0.013(0.013)   | -0.020(0.024)  |
| Medium Yards         | -0.019(0.011)*   | -0.060(0.033)*   | -0.099(0.055)*   | 0.001(0.011)   | 0.002(0.033)    | 0.002(0.054)   | 0.004(0.003)   | 0.015(0.014)    | 0.029(0.025)   |
| Deep Yards           | 0.012(0.010)     | 0.040(0.029)     | 0.065(0.048)     | 0.002(0.010)   | 0.007(0.030)    | 0.011(0.049)   | 0.000(0.003)   | 0.003(0.012)    | 0.002(0.022)   |
| TE1                  | ( ,              | ( )              | ,                | ( ,            | ( )             | ( , , , ,      |                | ,               | ( ,            |
| Grades Pass Block    | 0.027(0.011)**   | 0.084(0.035)**   | 0.141(0.058)**   | 0.024(0.011)** | 0.081(0.033)**  | 0.132(0.056)** | -0.001(0.003)  | -0.008(0.014)   | -0.010(0.025)  |
| Grades Run Block     | -0.016(0.014)    | -0.054(0.041)    | -0.091(0.068)    | -0.009(0.011)  | -0.031(0.034)   | -0.051(0.057)  | 0.003(0.004)   | 0.017(0.018)    | 0.026(0.031)   |
| Short Yards          | 0.002(0.011)     | 0.006(0.033)     | 0.009(0.056)     | -0.007(0.011)  | -0.021(0.032)   | -0.036(0.053)  | 0.002(0.003)   | 0.015(0.016)    | 0.014(0.027)   |
| Medium Yards         | -0.015(0.011)    | -0.047(0.033)    | -0.077(0.054)    | 0.007(0.010)   | 0.017(0.031)    | 0.030(0.051)   | -0.001(0.003)  | -0.009(0.015)   | -0.013(0.027)  |
| Deep Yards           | -0.008(0.010)    | -0.028(0.030)    | -0.047(0.050)    | -0.004(0.009)  | -0.014(0.027)   | -0.023(0.045)  | -0.001(0.003)  | -0.004(0.013)   | -0.005(0.023)  |
| OL1                  |                  |                  |                  |                |                 |                |                |                 |                |
| Grades Pass Block    | 0.015(0.012)     | 0.045(0.035)     | 0.077(0.058)     | -0.012(0.010)  | -0.036(0.029)   | -0.060(0.048)  | -0.004(0.003)  | -0.017(0.015)   | -0.029(0.026)  |
| Grades Run Block     | 0.010(0.014)     | 0.030(0.041)     | 0.047(0.069)     | 0.006(0.010)   | 0.016(0.030)    | 0.032(0.050)   | 0.002(0.004)   | 0.003(0.017)    | 0.009(0.031)   |
| OL2                  |                  |                  |                  |                |                 |                |                |                 |                |
| Grades Pass Block    | -0.009(0.011)    | -0.027(0.034)    | -0.045(0.057)    | -0.004(0.010)  | -0.011(0.029)   | -0.018(0.048)  | -0.001(0.003)  | -0.008(0.015)   | -0.017(0.026)  |
| Grades Run Block     | -0.007(0.014)    | -0.022(0.041)    | -0.034(0.068)    | -0.014(0.010)  | -0.046(0.030)   | -0.079(0.050)  | 0.005(0.004)   | 0.029(0.017)*   | 0.053(0.030)*  |
| OL3                  |                  |                  |                  |                |                 |                |                |                 |                |
| Grades Pass Block    | 0.009(0.012)     | 0.025(0.035)     | 0.047(0.059)     | 0.008(0.009)   | 0.026(0.029)    | 0.043(0.048)   | 0.003(0.003)   | 0.013(0.015)    | 0.018(0.027)   |
| Grades Run Block     | -0.013(0.014)    | -0.039(0.042)    | -0.069(0.071)    | 0.003(0.009)   | 0.015(0.029)    | 0.022(0.048)   | -0.003(0.004)  | -0.016(0.018)   | -0.033(0.032)  |
| OL4                  |                  |                  |                  |                |                 |                |                |                 |                |
| Grades Pass Block    | 0.021(0.012)*    | 0.062(0.036)*    | 0.107(0.060)*    | 0.005(0.010)   | 0.013(0.030)    | 0.024(0.049)   | -0.002(0.003)  | -0.010(0.015)   | -0.013(0.026)  |
| Grades Run Block     | -0.006(0.013)    | -0.019(0.038)    | -0.035(0.064)    | -0.012(0.010)  | -0.033(0.029)   | -0.060(0.047)  | 0.000(0.004)   | 0.006(0.017)    | 0.009(0.030)   |
| OL5                  |                  |                  |                  |                |                 |                |                |                 |                |
| Grades Pass Block    | 0.024(0.012)**   | 0.069(0.036)*    | 0.114(0.060)*    | -0.013(0.010)  | -0.040(0.031)   | -0.067(0.052)  | 0.001(0.003)   | 0.011(0.015)    | 0.013(0.027)   |
| Grades Run Block     | -0.025(0.013)*   | -0.076(0.039)*   | -0.121(0.065)*   | 0.010(0.010)   | 0.026(0.030)    | 0.043(0.051)   | -0.000(0.004)  | -0.004(0.017)   | -0.008(0.030)  |
| Perf. Measures       |                  |                  |                  |                |                 |                |                |                 |                |
| GIMR                 | 0.023(0.012)**   | 0.073(0.051)     | 0.124(0.089)     | 0.022(0.011)** | 0.072(0.047)    | 0.115(0.082)   |                |                 |                |
| Control Variables    |                  |                  |                  |                |                 |                |                |                 |                |
| Game Situation       | Yes              | Yes              | Yes              | Yes            | Yes             | Yes            | Yes            | Yes             | Yes            |
| Coach Variables      | Yes              | Yes              | Yes              | Yes            | Yes             | Yes            | Yes            | Yes             | Yes            |
| Team Stats           | Yes              | Yes              | Yes              | Yes            | Yes             | Yes            | Yes            | Yes             | Yes            |
| Season/Team FE       | Yes              | Yes              | Yes              | Yes            | Yes             | Yes            | No             | No              | No             |
| Coach FE             | No               | No               | No               | Yes            | Yes             | Yes            | Yes            | Yes             | Yes            |
| Player Presence      | Yes              | Yes              | Yes              | Yes            | Yes             | Yes            | No             | No              | No             |
| Control Def. Players | Yes              | Yes              | Yes              | Yes            | Yes             | Yes            | Yes            | Yes             | Yes            |
|                      | No               | No               | No               | No             | No              | No             | No             | No              | No             |

Table 3: Offense Completions Model Results

|                        |                  | Starter Models                          |                         |   | On-Field Models                         |   | Attempt Models |   |   |  |
|------------------------|------------------|---|-------------------------|---|---|---|----------------|---|---|--|
| Variable               | Starter LPM      | Starter Probit                          | Starter Logit           | On-Field LPM                            | On-Field Probit                         | On-Field Logit                          | Attempt LPM    | Attempt Probit                          | Attempt Logit                           |  |
| Quarterbacks           |                  |   |                         |   |   |   |                |   |   |  |
| Short Completions      | 0.024(0.014)*    | 0.072(0.041)*                           | 0.114(0.068)*           | 0.030(0.014)**                          | 0.088(0.043)**                          | 0.141(0.072)*                           | -0.000(0.004)  | -0.002(0.018)                           | 0.006(0.031)                            |  |
| Medium Completions     | 0.022(0.014)     | 0.079(0.042)*                           | 0.127(0.070)*           | 0.001(0.015)                            | 0.005(0.044)                            | 0.005(0.073)                            | 0.008(0.004)*  | 0.028(0.018)                            | 0.042(0.033)                            |  |
| Deep Completions       | -0.032(0.012)*** | -0.102(0.037)***                        | -0.168(0.062)***        | -0.025(0.012)**                         | -0.077(0.036)**                         | -0.124(0.059)**                         | 0.005(0.004)   | 0.018(0.017)                            | 0.032(0.029)                            |  |
| Running Backs          | 0.00=(0.01=)     | ·····                                   | ( <del>-</del> )        | *****(*******)                          | ()                                      | *************************************** | 0.000(0.00-)   | 0.020(0.021)                            | *************************************** |  |
| Grades Pass Block      | -0.012(0.010)    | -0.037(0.030)                           | -0.061(0.050)           | 0.011(0.009)                            | 0.030(0.027)                            | 0.048(0.046)                            | -0.004(0.003)  | -0.023(0.013)*                          | -0.039(0.022)*                          |  |
| Attempts               | 0.004(0.010)     | 0.016(0.030)                            | 0.020(0.050)            | 0.013(0.009)                            | 0.039(0.027)                            | 0.064(0.045)                            | 0.003(0.003)   | 0.015(0.013)                            | 0.026(0.024)                            |  |
| Short Receptions       | -0.004(0.010)    | -0.013(0.031)                           | -0.019(0.052)           | -0.018(0.010)*                          | -0.053(0.029)*                          | -0.082(0.047)*                          | 0.002(0.003)   | 0.010(0.014)                            | 0.019(0.025)                            |  |
| Medium Receptions      | -0.015(0.009)*   | -0.042(0.026)                           | -0.073(0.043)*          | -0.007(0.008)                           | -0.021(0.024)                           | -0.037(0.040)                           | -0.004(0.002)  | -0.022(0.011)*                          | -0.037(0.020)*                          |  |
| Deep Receptions        | 0.000(0.009)     | 0.004(0.031)                            | 0.005(0.052)            | -0.004(0.009)                           | -0.014(0.026)                           | -0.024(0.043)                           | -0.002(0.003)  | -0.008(0.012)                           | -0.012(0.021)                           |  |
| WR1                    | 0.000(0.000)     | *************************************** | ······(····· <u>-</u> ) | *************************************** | *************************************** | 0.021(0.010)                            | 0.00-(0.000)   | *****(********************************* | 0.01=(0.0=1)                            |  |
| Grades Run Block       | 0.008(0.014)     | 0.018(0.043)                            | 0.039(0.072)            | -0.010(0.019)                           | -0.035(0.056)                           | -0.052(0.094)                           | -0.002(0.004)  | -0.007(0.017)                           | -0.013(0.032)                           |  |
| Short Receptions       | -0.009(0.014)    | -0.030(0.031)                           | -0.047(0.052)           | -0.003(0.011)                           | -0.013(0.032)                           | -0.022(0.053)                           | -0.002(0.004)  | -0.011(0.014)                           | -0.019(0.024)                           |  |
| Medium Receptions      | 0.006(0.011)     | 0.021(0.034)                            | 0.034(0.057)            | -0.003(0.011)                           | -0.004(0.034)                           | -0.009(0.056)                           | -0.001(0.003)  | -0.005(0.015)                           | -0.004(0.026)                           |  |
| Deep Receptions        | 0.022(0.010)**   | 0.067(0.030)**                          | 0.113(0.051)**          | 0.015(0.010)                            | 0.046(0.030)                            | 0.076(0.050)                            | 0.001(0.003)   | 0.004(0.013)                            | 0.004(0.023)                            |  |
| WR2                    | 0.022(0.010)     | 0.001(0.000)                            | 0.110(0.001)            | 0.010(0.010)                            | 0.040(0.000)                            | 0.010(0.000)                            | 0.001(0.000)   | 0.004(0.010)                            | 0.004(0.020)                            |  |
| Grades Run Block       | -0.018(0.014)    | -0.051(0.043)                           | -0.087(0.071)           | 0.045(0.035)                            | 0.133(0.106)                            | 0.229(0.173)                            | 0.003(0.004)   | 0.015(0.018)                            | 0.034(0.032)                            |  |
| Short Receptions       | -0.018(0.014)    | -0.031(0.043)                           | -0.056(0.052)           | -0.003(0.012)                           | -0.009(0.035)                           | -0.017(0.058)                           | 0.005(0.004)   | 0.016(0.018)                            | 0.034(0.032)                            |  |
| Medium Receptions      | -0.002(0.011)    | -0.032(0.031)                           | -0.014(0.056)           | -0.003(0.012)                           | -0.029(0.038)                           | -0.051(0.063)                           | -0.003(0.003)  | -0.013(0.014)                           | -0.020(0.024)                           |  |
|                        | 0.007(0.011)     |   | 0.041(0.050)            | 0.007(0.010)                            | 0.023(0.031)                            | 0.039(0.052)                            | 0.002(0.003)   | 0.009(0.013)                            | 0.013(0.023)                            |  |
| Deep Receptions<br>WR3 | 0.007(0.010)     | 0.024(0.030)                            | 0.041(0.030)            | 0.007(0.010)                            | 0.025(0.051)                            | 0.039(0.032)                            | 0.002(0.003)   | 0.009(0.013)                            | 0.013(0.023)                            |  |
|                        | 0.005(0.010)     | 0.010(0.040)                            | 0.005(0.005)            | 0.004(0.005)                            | 0.050(0.050)                            | 0.104(0.105)                            | 0.000(0.004)   | 0.000(0.015)                            | 0.015(0.000)                            |  |
| Grades Run Block       | -0.005(0.013)    | -0.013(0.040)                           | -0.025(0.065)           | 0.024(0.025)                            | 0.078(0.076)                            | 0.124(0.127)                            | 0.002(0.004)   | 0.008(0.017)                            | 0.015(0.029)                            |  |
| Short Receptions       | -0.010(0.011)    | -0.032(0.032)                           | -0.050(0.054)           | 0.014(0.012)                            | 0.035(0.037)                            | 0.066(0.061)                            | -0.001(0.003)  | -0.005(0.014)                           | -0.007(0.024)                           |  |
| Medium Receptions      | -0.016(0.012)    | -0.052(0.035)                           | -0.085(0.058)           | 0.001(0.012)                            | 0.001(0.035)                            | -0.001(0.058)                           | 0.003(0.003)   | 0.010(0.015)                            | 0.018(0.026)                            |  |
| Deep Receptions        | 0.006(0.010)     | 0.022(0.030)                            | 0.035(0.050)            | 0.006(0.010)                            | 0.018(0.030)                            | 0.029(0.050)                            | -0.000(0.003)  | 0.001(0.013)                            | -0.001(0.022)                           |  |
| TE1                    |                  |   |                         |   | /                                       |   |                |   |   |  |
| Grades Pass Block      | 0.028(0.011)**   | 0.087(0.035)**                          | 0.146(0.058)**          | 0.026(0.011)**                          | 0.085(0.033)**                          | 0.140(0.056)**                          | -0.002(0.003)  | -0.010(0.014)                           | -0.013(0.025)                           |  |
| Grades Run Block       | -0.017(0.014)    | -0.056(0.041)                           | -0.094(0.069)           | -0.008(0.011)                           | -0.028(0.034)                           | -0.047(0.057)                           | 0.003(0.004)   | 0.017(0.018)                            | 0.027(0.031)                            |  |
| Short Receptions       | 0.001(0.011)     | 0.005(0.035)                            | 0.009(0.058)            | -0.014(0.011)                           | -0.044(0.033)                           | -0.074(0.054)                           | 0.004(0.004)   | 0.019(0.016)                            | 0.024(0.028)                            |  |
| Medium Receptions      | -0.020(0.011)*   | -0.062(0.034)*                          | -0.102(0.056)*          | 0.006(0.011)                            | 0.016(0.032)                            | 0.029(0.053)                            | -0.001(0.004)  | -0.008(0.016)                           | -0.014(0.028)                           |  |
| Deep Receptions        | -0.004(0.010)    | -0.015(0.030)                           | -0.025(0.050)           | 0.001(0.009)                            | 0.001(0.028)                            | 0.003(0.047)                            | -0.003(0.003)  | -0.012(0.013)                           | -0.019(0.023)                           |  |
| OL1                    |                  |   |                         |   |   |   |                |   |   |  |
| Grades Pass Block      | 0.015(0.012)     | 0.046(0.035)                            | 0.079(0.058)            | -0.011(0.010)                           | -0.034(0.029)                           | -0.057(0.049)                           | -0.004(0.003)  | -0.017(0.015)                           | -0.028(0.026)                           |  |
| Grades Run Block       | 0.010(0.014)     | 0.031(0.041)                            | 0.048(0.069)            | 0.007(0.010)                            | 0.020(0.030)                            | 0.037(0.050)                            | 0.002(0.004)   | 0.004(0.017)                            | 0.011(0.031)                            |  |
| OL2                    |                  |   |                         |   |   |   |                |   |   |  |
| Grades Pass Block      | -0.009(0.011)    | -0.026(0.034)                           | -0.043(0.057)           | -0.003(0.010)                           | -0.008(0.029)                           | -0.014(0.048)                           | -0.000(0.003)  | -0.006(0.015)                           | -0.015(0.026)                           |  |
| Grades Run Block       | -0.005(0.014)    | -0.018(0.041)                           | -0.028(0.068)           | -0.014(0.010)                           | -0.044(0.030)                           | -0.076(0.050)                           | 0.005(0.004)   | 0.030(0.017)*                           | 0.055(0.030)*                           |  |
| OL3                    |                  |   |                         |   |   |   |                |   |   |  |
| Grades Pass Block      | 0.011(0.012)     | 0.029(0.035)                            | 0.054(0.059)            | 0.008(0.009)                            | 0.026(0.029)                            | 0.043(0.048)                            | 0.003(0.003)   | 0.012(0.015)                            | 0.017(0.027)                            |  |
| Grades Run Block       | -0.014(0.014)    | -0.041(0.042)                           | -0.073(0.070)           | 0.004(0.009)                            | 0.018(0.029)                            | 0.026(0.048)                            | -0.003(0.004)  | -0.016(0.018)                           | -0.032(0.032)                           |  |
| OL4                    |                  |   |                         |   |   |   |                |   |   |  |
| Grades Pass Block      | 0.022(0.012)*    | 0.065(0.036)*                           | 0.112(0.061)*           | 0.005(0.010)                            | 0.015(0.030)                            | 0.026(0.049)                            | -0.002(0.003)  | -0.009(0.015)                           | -0.012(0.026)                           |  |
| Grades Run Block       | -0.007(0.013)    | -0.023(0.038)                           | -0.041(0.064)           | -0.012(0.010)                           | -0.034(0.029)                           | -0.062(0.047)                           | 0.000(0.004)   | 0.006(0.017)                            | 0.010(0.030)                            |  |
| OL5                    |                  |   |                         |   |   |   |                |   |   |  |
| Grades Pass Block      | 0.026(0.012)**   | 0.074(0.036)**                          | 0.122(0.060)**          | -0.012(0.010)                           | -0.038(0.031)                           | -0.064(0.052)                           | 0.001(0.003)   | 0.011(0.015)                            | 0.014(0.027)                            |  |
| Grades Run Block       | -0.025(0.013)*   | -0.077(0.039)**                         | -0.123(0.065)*          | 0.009(0.010)                            | 0.025(0.030)                            | 0.041(0.051)                            | -0.000(0.004)  | -0.004(0.017)                           | -0.008(0.030)                           |  |
| Perf. Measures         | ( /              | ( ,                                     |                         | ( /                                     | ( ,                                     | ( ,                                     | ( )            | ( )                                     | ( ,                                     |  |
| GIMR.                  | 0.022(0.012)*    | 0.070(0.051)                            | 0.119(0.089)            | 0.021(0.011)*                           | 0.067(0.046)                            | 0.106(0.080)                            |                |   |   |  |
| Control Variables      | 0.022(0.012)     | 0.010(0.001)                            | 0.110(0.000)            | 0.021(0.011)                            | 0.001(0.010)                            | 0.100(0.000)                            |                |   |   |  |
| Game Situation         | Yes              | Yes                                     | Yes                     | Yes                                     | Yes                                     | Yes                                     | Yes            | Yes                                     | Yes                                     |  |
| Coach Variables        | Yes              | Yes                                     | Yes                     | Yes                                     | Yes                                     | Yes                                     | Yes            | Yes                                     | Yes                                     |  |
| Team Stats             | Yes              | Yes                                     | Yes                     | Yes                                     | Yes                                     | Yes                                     | Yes            | Yes                                     | Yes                                     |  |
| Season/Team FE         | Yes              | Yes                                     | Yes                     | Yes                                     | Yes                                     | Yes                                     | No             | No                                      | No                                      |  |
| Coach FE               | No               | No                                      | No                      | Yes                                     | Yes                                     | Yes                                     | Yes            | Yes                                     | Yes                                     |  |
| Player Presence        | Yes              | Yes                                     | Yes                     | Yes                                     | Yes                                     | Yes                                     | No<br>No       | Yes<br>No                               | Yes<br>No                               |  |
|                        | Yes<br>Yes       | Yes                                     | Yes                     | Yes                                     | Yes                                     | Yes                                     | Yes            | Yes                                     | Yes                                     |  |
| Control Def. Players   |                  |   |                         |   |   |   |                |   |   |  |
| Control Off. Players   | No               | No                                      | No                      | No                                      | No                                      | No                                      | No             | No                                      | No                                      |  |

Table 4: Defense Stops Model Results

|                      |                  | Starter Models   |                  |                 | On-Field Models |                 | Attempt Models  |                 |                 |  |
|----------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|
| Variable             | Starter LPM      | Starter Probit   | Starter Logit    | On-Field LPM    | On-Field Probit | On-Field Logit  | Attempt LPM     | Attempt Probit  | Attempt Logit   |  |
| DL1                  |                  |                  |                  |                 |                 |                 |                 | -               |                 |  |
| Grades Stops         | 0.008(0.009)     | 0.021(0.026)     | 0.038(0.044)     | -0.008(0.009)   | -0.024(0.027)   | -0.040(0.045)   | 0.001(0.002)    | -0.001(0.011)   | -0.001(0.019)   |  |
| Productivity Stops   | -0.016(0.009)*   | -0.049(0.026)*   | -0.082(0.044)*   | -0.004(0.009)   | -0.008(0.026)   | -0.015(0.044)   | -0.001(0.002)   | -0.006(0.011)   | -0.011(0.019)   |  |
| DL2                  | 0.010(0.000)     | 0.010(0.020)     | 0.002(0.011)     | 0.001(0.000)    | 0.000(0.020)    | 0.010(0.011)    | 0.001(0.002)    | 0.000(0.011)    | 0.011(0.010)    |  |
| Grades Stops         | -0.008(0.009)    | -0.023(0.027)    | -0.037(0.045)    | 0.010(0.009)    | 0.032(0.028)    | 0.049(0.046)    | 0.003(0.002)    | 0.009(0.010)    | 0.013(0.019)    |  |
| Productivity Stops   | -0.011(0.009)    | -0.034(0.027)    | -0.059(0.045)    | -0.016(0.009)*  | -0.045(0.027)*  | -0.073(0.045)   | -0.005(0.002)*  | -0.018(0.011)   | -0.030(0.019)   |  |
| DL3                  | ( ,              | ( ,              |                  | ( ,             | ( /             | ( )             | ( ,             | ( )             | ,               |  |
| Grades Stops         | -0.009(0.009)    | -0.030(0.027)    | -0.047(0.044)    | 0.006(0.011)    | 0.016(0.034)    | 0.023(0.056)    | 0.002(0.002)    | 0.009(0.011)    | 0.013(0.019)    |  |
| Productivity Stops   | -0.003(0.009)    | -0.008(0.026)    | -0.014(0.044)    | -0.009(0.010)   | -0.024(0.030)   | -0.041(0.050)   | -0.003(0.002)   | -0.012(0.011)   | -0.021(0.019)   |  |
| DL4                  |                  | ( ,              | ( ,              | ( ,             | ( ,             | ( ,             | ( )             | ( ,             | ( ,             |  |
| Grades Stops         | -0.000(0.009)    | -0.001(0.027)    | -0.010(0.046)    | -0.001(0.011)   | -0.002(0.034)   | -0.004(0.056)   | -0.001(0.003)   | -0.009(0.011)   | -0.015(0.020)   |  |
| Productivity Stops   | -0.012(0.009)    | -0.035(0.028)    | -0.055(0.046)    | -0.021(0.010)** | -0.062(0.031)** | -0.106(0.051)** | -0.002(0.003)   | -0.009(0.012)   | -0.019(0.020)   |  |
| LB1                  | ( ,              | ( ,              |                  | ()              | ( ,             | ,               | ( )             | ,               | ( ,             |  |
| Grades Stops         | -0.006(0.009)    | -0.017(0.028)    | -0.026(0.047)    | -0.001(0.010)   | -0.002(0.029)   | -0.004(0.049)   | 0.004(0.003)    | 0.016(0.012)    | 0.026(0.021)    |  |
| Zone Stops           | -0.012(0.010)    | -0.034(0.029)    | -0.058(0.048)    | -0.003(0.010)   | -0.009(0.031)   | -0.017(0.052)   | -0.002(0.003)   | -0.011(0.012)   | -0.017(0.021)   |  |
| Man Stops            | -0.005(0.009)    | -0.013(0.028)    | -0.025(0.046)    | -0.001(0.009)   | -0.000(0.028)   | 0.001(0.046)    | -0.001(0.003)   | 0.000(0.011)    | 0.004(0.020)    |  |
| LB2                  |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Grades Stops         | -0.002(0.010)    | -0.005(0.029)    | -0.008(0.049)    | -0.019(0.010)*  | -0.054(0.031)*  | -0.092(0.051)*  | 0.001(0.003)    | 0.005(0.012)    | 0.013(0.021)    |  |
| Zone Stops           | 0.005(0.010)     | 0.012(0.030)     | 0.020(0.050)     | 0.012(0.010)    | 0.030(0.031)    | 0.054(0.051)    | 0.002(0.003)    | 0.009(0.012)    | 0.016(0.021)    |  |
| Man Stops            | -0.008(0.009)    | -0.024(0.027)    | -0.044(0.046)    | -0.013(0.010)   | -0.037(0.028)   | -0.063(0.047)   | -0.001(0.002)   | -0.003(0.011)   | -0.004(0.020)   |  |
| LB3                  |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Grades Stops         | -0.004(0.010)    | -0.010(0.031)    | -0.018(0.052)    | -0.009(0.013)   | -0.030(0.038)   | -0.051(0.063)   | -0.000(0.003)   | -0.000(0.012)   | -0.002(0.022)   |  |
| Zone Stops           | -0.006(0.010)    | -0.018(0.030)    | -0.030(0.050)    | 0.009(0.011)    | 0.027(0.032)    | 0.043(0.054)    | -0.001(0.003)   | -0.003(0.012)   | -0.000(0.021)   |  |
| Man Stops            | -0.025(0.009)*** | -0.074(0.028)*** | -0.122(0.046)*** | -0.001(0.009)   | -0.002(0.028)   | -0.004(0.046)   | 0.003(0.003)    | 0.012(0.011)    | 0.023(0.020)    |  |
| LB4                  |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Grades Stops         | -0.002(0.010)    | -0.002(0.032)    | -0.005(0.053)    | -0.001(0.013)   | -0.006(0.038)   | -0.014(0.063)   | 0.003(0.003)    | 0.014(0.013)    | 0.032(0.023)    |  |
| Zone Stops           | 0.002(0.010)     | 0.001(0.031)     | 0.006(0.051)     | 0.000(0.011)    | 0.003(0.034)    | 0.010(0.057)    | 0.001(0.003)    | 0.000(0.013)    | -0.005(0.022)   |  |
| Man Stops            | 0.004(0.009)     | 0.013(0.028)     | 0.017(0.047)     | 0.001(0.009)    | 0.002(0.027)    | 0.005(0.045)    | 0.000(0.003)    | 0.001(0.012)    | 0.003(0.021)    |  |
| CB1                  |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Grades Stops         | 0.018(0.009)**   | 0.057(0.027)**   | 0.094(0.045)**   | 0.016(0.009)*   | 0.047(0.028)    | 0.079(0.047)*   | -0.000(0.002)   | -0.003(0.011)   | -0.006(0.019)   |  |
| Zone Stops           | 0.000(0.009)     | -0.000(0.028)    | 0.002(0.046)     | 0.011(0.009)    | 0.031(0.028)    | 0.055(0.046)    | 0.004(0.003)    | 0.021(0.011)*   | 0.035(0.020)*   |  |
| Man Stops            | 0.005(0.009)     | 0.012(0.028)     | 0.017(0.046)     | 0.011(0.009)    | 0.032(0.027)    | 0.053(0.045)    | -0.003(0.002)   | -0.010(0.011)   | -0.017(0.020)   |  |
| CB2                  |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Grades Stops         | -0.004(0.009)    | -0.011(0.027)    | -0.017(0.045)    | 0.000(0.009)    | 0.002(0.028)    | 0.003(0.047)    | -0.000(0.003)   | 0.003(0.011)    | 0.003(0.020)    |  |
| Zone Stops           | 0.001(0.009)     | 0.001(0.028)     | -0.002(0.046)    | 0.001(0.009)    | 0.007(0.028)    | 0.006(0.047)    | -0.001(0.003)   | -0.007(0.011)   | -0.009(0.019)   |  |
| Man Stops            | -0.015(0.009)    | -0.045(0.027)*   | -0.075(0.045)*   | 0.001(0.009)    | 0.001(0.027)    | -0.002(0.046)   | -0.001(0.002)   | -0.001(0.011)   | -0.005(0.020)   |  |
| CB3                  |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Grades Stops         | -0.010(0.009)    | -0.033(0.028)    | -0.056(0.047)    | 0.001(0.009)    | 0.001(0.028)    | 0.001(0.047)    | 0.005(0.003)*   | 0.021(0.011)*   | 0.037(0.020)*   |  |
| Zone Stops           | 0.005(0.009)     | 0.018(0.028)     | 0.026(0.047)     | 0.004(0.010)    | 0.013(0.031)    | 0.023(0.052)    | -0.003(0.002)   | -0.016(0.011)   | -0.032(0.020)   |  |
| Man Stops            | 0.025(0.009)***  | 0.069(0.028)**   | 0.119(0.047)**   | 0.009(0.009)    | 0.024(0.027)    | 0.045(0.045)    | -0.004(0.002)   | -0.004(0.011)   | -0.011(0.020)   |  |
| S1                   |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Grades Stops         | -0.003(0.010)    | -0.010(0.029)    | -0.017(0.048)    | -0.004(0.010)   | -0.011(0.030)   | -0.023(0.049)   | 0.003(0.003)    | 0.012(0.012)    | 0.020(0.021)    |  |
| Zone Stops           | -0.005(0.010)    | -0.014(0.029)    | -0.023(0.048)    | -0.002(0.009)   | -0.005(0.028)   | -0.012(0.046)   | -0.001(0.003)   | -0.005(0.011)   | -0.005(0.020)   |  |
| Man Stops            | 0.006(0.009)     | 0.014(0.028)     | 0.025(0.047)     | 0.009(0.010)    | 0.027(0.029)    | 0.047(0.048)    | -0.003(0.003)   | -0.012(0.012)   | -0.024(0.020)   |  |
| S2                   |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Grades Stops         | 0.005(0.010)     | 0.016(0.030)     | 0.028(0.049)     | 0.019(0.010)*   | 0.057(0.031)*   | 0.094(0.051)*   | 0.001(0.003)    | 0.006(0.012)    | 0.009(0.022)    |  |
| Zone Stops           | 0.004(0.010)     | 0.013(0.029)     | 0.020(0.049)     | -0.005(0.010)   | -0.013(0.031)   | -0.025(0.051)   | 0.001(0.003)    | 0.009(0.012)    | 0.019(0.021)    |  |
| Man Stops            | 0.017(0.009)*    | 0.050(0.028)*    | 0.083(0.046)*    | -0.004(0.009)   | -0.015(0.028)   | -0.028(0.046)   | -0.000(0.003)   | -0.002(0.011)   | 0.000(0.020)    |  |
| S3                   |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Grades Stops         | -0.011(0.010)    | -0.032(0.029)    | -0.057(0.048)    | -0.005(0.011)   | -0.016(0.034)   | -0.025(0.057)   | 0.004(0.003)    | 0.018(0.012)    | 0.033(0.021)    |  |
| Zone Stops           | -0.010(0.009)    | -0.028(0.027)    | -0.048(0.046)    | 0.002(0.011)    | 0.003(0.033)    | 0.005(0.055)    | -0.001(0.003)   | -0.005(0.011)   | -0.009(0.020)   |  |
| Man Stops            | -0.004(0.009)    | -0.012(0.027)    | -0.016(0.045)    | 0.012(0.010)    | 0.039(0.029)    | 0.066(0.050)    | -0.006(0.003)** | -0.022(0.011)** | -0.040(0.020)** |  |
| Perf. Measures       |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| GIMR                 | 0.018(0.015)     | 0.046(0.048)     | 0.068(0.082)     | 0.015(0.016)    | 0.033(0.049)    | 0.048(0.082)    |                 |                 |                 |  |
| Control Variables    |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |
| Game Situation       | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |
| Coach Variables      | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |
| Team Stats           | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |
| Season/Team FE       | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | No              | No              | No              |  |
| Coach FE             | No               | No               | No               | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |
| Player Presence      | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | No              | No              | No              |  |
| Control Off. Players | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |
|                      |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |

Note: Marginal effects reported with standard errors in parentheses and significance levels. \*\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

Table 5: Defense Grades Model Results

|                            |                  | Starter Models   |                  |                 | On-Field Models |                 |                 | Attempt Models  | Attempt Models  |  |  |  |
|----------------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|--|--|
| Variable                   | Starter LPM      | Starter Probit   | Starter Logit    | On-Field LPM    | On-Field Probit | On-Field Logit  | Attempt LPM     | Attempt Probit  | Attempt Logit   |  |  |  |
| DL1                        |                  |                  |                  |                 |                 |                 |                 | -               |                 |  |  |  |
| Grades Run Defense         | 0.033(0.013)**   | 0.096(0.039)**   | 0.160(0.065)**   | -0.004(0.011)   | -0.013(0.034)   | -0.018(0.056)   | -0.002(0.004)   | -0.016(0.018)   | -0.026(0.031)   |  |  |  |
| Grds Pass Rush Def         | -0.015(0.012)    | -0.048(0.037)    | -0.082(0.062)    | -0.016(0.011)   | -0.047(0.034)   | -0.081(0.056)   | -0.005(0.004)   | -0.012(0.017)   | -0.028(0.030)   |  |  |  |
| DL2                        | 0.010(0.012)     | 0.010(0.001)     | 0.002(0.002)     | 0.010(0.011)    | 0.011(0.001)    | 0.001(0.000)    | 0.000(0.001)    | 0.012(0.011)    | 0.020(0.000)    |  |  |  |
| Grades Run Defense         | -0.004(0.014)    | -0.013(0.040)    | -0.019(0.067)    | 0.003(0.024)    | 0.016(0.071)    | 0.022(0.119)    | 0.003(0.004)    | 0.019(0.017)    | 0.033(0.031)    |  |  |  |
| Grds Pass Rush Def         | 0.005(0.013)     | 0.011(0.039)     | 0.016(0.064)     | -0.021(0.023)   | -0.067(0.070)   | -0.106(0.116)   | 0.000(0.004)    | 0.003(0.016)    | 0.003(0.029)    |  |  |  |
| DL3                        | 0.000(0.020)     | 0.022(0.000)     | 01020(01002)     | 0.02-(0.020)    | 0.001(0.010)    | 01100(01110)    | 0.000(0.00-)    | 0.000(0.020)    | 0.000(0.020)    |  |  |  |
| Grades Run Defense         | -0.021(0.013)    | -0.068(0.040)*   | -0.110(0.067)    | -0.017(0.042)   | -0.063(0.123)   | -0.096(0.203)   | -0.001(0.004)   | -0.001(0.018)   | -0.010(0.032)   |  |  |  |
| Grds Pass Rush Def         | 0.006(0.013)     | 0.021(0.039)     | 0.037(0.065)     | 0.004(0.045)    | 0.025(0.133)    | 0.019(0.219)    | 0.001(0.004)    | 0.003(0.017)    | 0.004(0.030)    |  |  |  |
| DL4                        | ( ,              | ( ,              | ( ,              | ( ,             | ( ,             | ( ,             | ( )             | ( )             | ( )             |  |  |  |
| Grades Run Defense         | -0.000(0.013)    | 0.001(0.039)     | -0.005(0.066)    | -0.043(0.051)   | -0.137(0.151)   | -0.235(0.251)   | 0.001(0.004)    | -0.001(0.019)   | 0.000(0.033)    |  |  |  |
| Grds Pass Rush Def         | -0.014(0.013)    | -0.041(0.040)    | -0.062(0.066)    | -0.016(0.053)   | -0.037(0.157)   | -0.074(0.261)   | 0.001(0.004)    | 0.016(0.018)    | 0.023(0.033)    |  |  |  |
| LB1                        | ()               | ()               | ( ,              | ( ,             | ( )             |                 | ( )             | ( ,             | ( )             |  |  |  |
| Grades Run Defense         | -0.006(0.012)    | -0.014(0.036)    | -0.025(0.060)    | 0.005(0.010)    | 0.013(0.030)    | 0.022(0.050)    | 0.002(0.004)    | 0.006(0.016)    | 0.011(0.029)    |  |  |  |
| Man Grades Cov Def         | -0.004(0.009)    | -0.013(0.029)    | -0.020(0.048)    | 0.005(0.008)    | 0.017(0.025)    | 0.028(0.042)    | 0.003(0.003)    | 0.013(0.012)    | 0.024(0.022)    |  |  |  |
| Zone Grades Cov Def        | -0.013(0.011)    | -0.045(0.034)    | -0.074(0.056)    | -0.001(0.010)   | -0.009(0.030)   | -0.011(0.049)   | -0.007(0.003)** | -0.029(0.014)** | -0.048(0.025)*  |  |  |  |
| LB2                        |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| Grades Run Defense         | 0.028(0.011)**   | 0.089(0.034)***  | 0.146(0.057)**   | -0.012(0.017)   | -0.032(0.052)   | -0.053(0.086)   | 0.006(0.004)    | 0.028(0.016)*   | 0.052(0.027)*   |  |  |  |
| Man Grades Cov Def         | -0.007(0.010)    | -0.024(0.030)    | -0.043(0.049)    | 0.003(0.013)    | 0.013(0.040)    | 0.017(0.067)    | -0.002(0.003)   | -0.010(0.012)   | -0.019(0.021)   |  |  |  |
| Zone Grades Cov Def        | -0.001(0.011)    | -0.004(0.032)    | -0.008(0.054)    | 0.012(0.017)    | 0.027(0.051)    | 0.047(0.085)    | -0.008(0.003)** | -0.031(0.014)** | -0.053(0.025)** |  |  |  |
| LB3                        |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| Grades Run Defense         | 0.003(0.012)     | 0.011(0.036)     | 0.019(0.060)     | -0.034(0.036)   | -0.098(0.108)   | -0.172(0.178)   | -0.006(0.004)   | -0.022(0.015)   | -0.041(0.027)   |  |  |  |
| Man Grades Cov Def         | -0.011(0.010)    | -0.030(0.031)    | -0.049(0.051)    | 0.018(0.019)    | 0.052(0.055)    | 0.087(0.092)    | 0.000(0.003)    | 0.007(0.013)    | 0.015(0.023)    |  |  |  |
| Zone Grades Cov Def        | 0.011(0.012)     | 0.032(0.034)     | 0.051(0.057)     | -0.041(0.028)   | -0.122(0.084)   | -0.209(0.140)   | 0.000(0.003)    | -0.006(0.015)   | -0.007(0.026)   |  |  |  |
| LB4                        |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| Grades Run Defense         | 0.006(0.012)     | 0.016(0.037)     | 0.025(0.061)     | 0.029(0.039)    | 0.076(0.118)    | 0.130(0.198)    | -0.004(0.003)   | -0.023(0.015)   | -0.044(0.026)*  |  |  |  |
| Man Grades Cov Def         | 0.015(0.012)     | 0.049(0.035)     | 0.082(0.058)     | -0.004(0.018)   | -0.016(0.054)   | -0.025(0.090)   | 0.002(0.003)    | 0.004(0.015)    | 0.013(0.025)    |  |  |  |
| Zone Grades Cov Def        | 0.005(0.013)     | 0.010(0.039)     | 0.020(0.064)     | -0.000(0.030)   | 0.004(0.092)    | -0.000(0.153)   | 0.005(0.003)    | 0.032(0.016)**  | 0.054(0.027)*   |  |  |  |
| CB1                        |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| Grades Run Defense         | 0.031(0.013)**   | 0.093(0.040)**   | 0.156(0.066)**   | 0.010(0.016)    | 0.031(0.048)    | 0.048(0.081)    | -0.001(0.004)   | -0.009(0.018)   | -0.012(0.032)   |  |  |  |
| Man Grades Cov Def         | -0.014(0.012)    | -0.045(0.036)    | -0.077(0.061)    | -0.030(0.014)** | -0.088(0.041)** | -0.150(0.069)** | 0.001(0.004)    | 0.003(0.016)    | 0.005(0.028)    |  |  |  |
| Zone Grades Cov Def<br>CB2 | -0.012(0.013)    | -0.035(0.039)    | -0.058(0.064)    | -0.011(0.015)   | -0.032(0.046)   | -0.050(0.076)   | 0.000(0.004)    | 0.004(0.018)    | -0.000(0.031)   |  |  |  |
| Grades Run Defense         | -0.053(0.013)*** | -0.157(0.041)*** | -0.262(0.068)*** | -0.018(0.020)   | -0.052(0.059)   | -0.089(0.098)   | -0.001(0.004)   | -0.006(0.018)   | -0.009(0.031)   |  |  |  |
| Man Grades Cov Def         | -0.010(0.012)    | -0.025(0.036)    | -0.038(0.061)    | 0.006(0.018)    | 0.020(0.054)    | 0.030(0.090)    | -0.001(0.003)   | -0.007(0.015)   | -0.008(0.026)   |  |  |  |
| Zone Grades Cov Def        | 0.030(0.012)**   | 0.090(0.038)**   | 0.146(0.064)**   | -0.008(0.021)   | -0.023(0.064)   | -0.035(0.105)   | 0.002(0.004)    | 0.009(0.016)    | 0.011(0.029)    |  |  |  |
| CB3                        |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| Grades Run Defense         | 0.011(0.012)     | 0.033(0.036)     | 0.056(0.060)     | 0.032(0.033)    | 0.100(0.100)    | 0.162(0.165)    | -0.005(0.004)   | -0.012(0.016)   | -0.024(0.028)   |  |  |  |
| Man Grades Cov Def         | 0.005(0.012)     | 0.011(0.035)     | 0.026(0.058)     | -0.001(0.030)   | 0.009(0.087)    | 0.015(0.145)    | 0.005(0.003)    | 0.026(0.015)*   | 0.046(0.027)*   |  |  |  |
| Zone Grades Cov Def        | -0.003(0.013)    | -0.008(0.038)    | -0.020(0.063)    | 0.030(0.034)    | 0.084(0.101)    | 0.139(0.168)    | -0.002(0.004)   | -0.016(0.017)   | -0.026(0.031)   |  |  |  |
| S1                         |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| Grades Run Defense         | -0.025(0.014)*   | -0.076(0.043)*   | -0.124(0.071)*   | -0.019(0.014)   | -0.057(0.040)   | -0.095(0.067)   | -0.000(0.004)   | -0.006(0.019)   | 0.004(0.034)    |  |  |  |
| Man Grades Cov Def         | 0.005(0.014)     | 0.013(0.042)     | 0.018(0.070)     | 0.000(0.013)    | -0.001(0.039)   | -0.003(0.066)   | -0.002(0.004)   | -0.007(0.018)   | -0.013(0.031)   |  |  |  |
| Zone Grades Cov Def        | 0.015(0.013)     | 0.049(0.039)     | 0.079(0.065)     | 0.013(0.012)    | 0.044(0.037)    | 0.070(0.062)    | 0.001(0.004)    | -0.002(0.018)   | -0.005(0.031)   |  |  |  |
| S2                         |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| Grades Run Defense         | -0.022(0.015)    | -0.064(0.044)    | -0.109(0.074)    | -0.002(0.027)   | -0.008(0.079)   | -0.022(0.130)   | 0.004(0.004)    | 0.013(0.019)    | 0.016(0.035)    |  |  |  |
| Man Grades Cov Def         | 0.019(0.014)     | 0.057(0.042)     | 0.092(0.069)     | -0.009(0.026)   | -0.030(0.080)   | -0.046(0.132)   | 0.005(0.004)    | 0.027(0.019)    | 0.047(0.033)    |  |  |  |
| Zone Grades Cov Def        | -0.002(0.014)    | -0.004(0.044)    | -0.005(0.073)    | 0.007(0.026)    | 0.027(0.080)    | 0.049(0.134)    | 0.002(0.004)    | 0.018(0.020)    | 0.037(0.035)    |  |  |  |
| S3                         |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| Grades Run Defense         | 0.008(0.013)     | 0.023(0.038)     | 0.033(0.064)     | 0.010(0.044)    | 0.029(0.137)    | 0.038(0.234)    | 0.002(0.004)    | 0.016(0.016)    | 0.028(0.029)    |  |  |  |
| Man Grades Cov Def         | -0.026(0.012)**  | -0.079(0.037)**  | -0.128(0.062)**  | -0.013(0.043)   | -0.030(0.127)   | -0.049(0.213)   | -0.005(0.004)   | -0.020(0.016)   | -0.045(0.028)   |  |  |  |
| Zone Grades Cov Def        | 0.010(0.014)     | 0.030(0.042)     | 0.055(0.070)     | 0.012(0.047)    | 0.026(0.145)    | 0.056(0.245)    | 0.002(0.004)    | 0.001(0.018)    | 0.009(0.032)    |  |  |  |
| Perf. Measures             |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| GIMR                       | 0.023(0.011)**   | 0.066(0.044)     | 0.108(0.077)     | 0.018(0.011)*   | 0.052(0.040)    | 0.079(0.070)    |                 |                 |                 |  |  |  |
| Control Variables          |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |
| Game Situation             | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |  |  |
| Coach Variables            | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |  |  |
| Team Stats                 | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |  |  |
| Season/Team FE             | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | No              | No              | No              |  |  |  |
| Coach FE                   | No               | No               | No               | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |  |  |
| Player Presence            | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | No              | No              | No              |  |  |  |
| Control Off. Players       | Yes              | Yes              | Yes              | Yes             | Yes             | Yes             | Yes             | Yes             | Yes             |  |  |  |
| Control Def. Players       | No               | No               | No               | No              | No              | No              | No              | No              | No              |  |  |  |
|                            |                  |                  |                  |                 |                 |                 |                 |                 |                 |  |  |  |

Note: Marginal effects reported with standard errors in parentheses and significance levels. \*\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

Table 6: Defense Tackles Model Results

|                      |                | Starter Models |                |                 | On-Field Models |                 | Attempt Models  |                |                 |
|----------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|
| Variable             | Starter LPM    | Starter Probit | Starter Logit  | On-Field LPM    | On-Field Probit | On-Field Logit  | Attempt LPM     | Attempt Probit | Attempt Logit   |
| DL1                  |                |                |                |                 |                 |                 |                 |                |                 |
| Grades Tackles       | 0.009(0.009)   | 0.027(0.027)   | 0.047(0.044)   | -0.009(0.009)   | -0.028(0.026)   | -0.046(0.044)   | 0.003(0.002)    | 0.010(0.011)   | 0.020(0.019)    |
| Productivity Sacks   | -0.012(0.009)  | -0.037(0.026)  | -0.060(0.043)  | -0.006(0.009)   | -0.018(0.027)   | -0.031(0.044)   | -0.002(0.002)   | -0.006(0.011)  | -0.015(0.019)   |
| DL2                  | -0.012(0.003)  | -0.001(0.020)  | -0.000(0.040)  | -0.000(0.003)   | -0.010(0.021)   | -0.001(0.044)   | -0.002(0.002)   | -0.000(0.011)  | -0.010(0.013)   |
| Grades Tackles       | -0.012(0.009)  | -0.033(0.027)  | -0.054(0.045)  | 0.016(0.009)*   | 0.050(0.028)*   | 0.078(0.047)*   | 0.003(0.002)    | 0.010(0.011)   | 0.014(0.019)    |
| Productivity Sacks   | -0.012(0.009)  | -0.023(0.027)  | -0.039(0.043)  | -0.010(0.009)   | -0.028(0.026)   | -0.044(0.044)   | -0.005(0.002)** | -0.020(0.011)* | -0.035(0.019)*  |
| DL3                  | -0.008(0.009)  | -0.023(0.020)  | -0.035(0.043)  | -0.010(0.003)   | -0.028(0.020)   | =0.044(0.044)   | -0.003(0.002)   | -0.020(0.011)  | -0.035(0.015)   |
| Grades Tackles       | -0.015(0.009)* | -0.046(0.027)* | -0.076(0.044)* | 0.001(0.012)    | 0.002(0.035)    | -0.001(0.058)   | 0.003(0.002)    | 0.015(0.011)   | 0.024(0.019)    |
| Productivity Sacks   | -0.005(0.009)  | -0.013(0.026)  | -0.021(0.044)  | -0.002(0.012)   | -0.003(0.030)   | -0.001(0.038)   | -0.006(0.002)** | -0.021(0.011)* | -0.040(0.019)** |
| DL4                  | -0.003(0.003)  | -0.013(0.020)  | -0.021(0.044)  | -0.002(0.010)   | -0.003(0.030)   | -0.000(0.049)   | -0.000(0.002)   | -0.021(0.011)  | =0.040(0.019)   |
| Grades Tackles       | 0.003(0.009)   | 0.008(0.027)   | 0.005(0.046)   | 0.007(0.012)    | 0.023(0.037)    | 0.035(0.061)    | -0.001(0.003)   | -0.008(0.011)  | -0.012(0.020)   |
| Productivity Sacks   | -0.009(0.009)  | -0.025(0.027)  | -0.038(0.046)  | -0.017(0.012)   | -0.049(0.030)   | -0.081(0.049)*  | -0.001(0.003)   | -0.016(0.011)  | -0.012(0.020)   |
| LB1                  | -0.009(0.009)  | -0.023(0.021)  | -0.056(0.045)  | -0.017(0.010)   | -0.049(0.050)   | -0.061(0.049)   | -0.004(0.002)   | -0.010(0.012)  | -0.032(0.020)   |
| Grades Tackles       | -0.003(0.011)  | -0.011(0.034)  | -0.016(0.056)  | 0.012(0.011)    | 0.035(0.034)    | 0.055(0.058)    | 0.004(0.003)    | 0.017(0.014)   | 0.024(0.025)    |
|                      |                |                |                |                 |                 |                 |                 |                |                 |
| Man Tackles          | -0.004(0.011)  | -0.015(0.032)  | -0.027(0.054)  | -0.003(0.011)   | -0.009(0.032)   | -0.015(0.054)   | 0.001(0.003)    | 0.001(0.013)   | 0.010(0.023)    |
| Zone Tackles         | -0.005(0.012)  | -0.013(0.036)  | -0.020(0.060)  | -0.011(0.013)   | -0.036(0.039)   | -0.055(0.064)   | -0.001(0.003)   | -0.003(0.015)  | -0.002(0.027)   |
| LB2                  | 0.000(0.011)   | 0.005(0.004)   | 0.000(0.055)   | 0.005(0.010)**  | 0.000(0.000)**  | 0.100/0.000\**  | 0.001(0.000)    | 0.000(0.014)   | 0.015(0.005)    |
| Grades Tackles       | -0.002(0.011)  | -0.005(0.034)  | -0.008(0.057)  | -0.025(0.012)** | -0.073(0.037)** | -0.122(0.062)** | 0.001(0.003)    | 0.006(0.014)   | 0.017(0.025)    |
| Man Tackles          | -0.007(0.011)  | -0.019(0.032)  | -0.034(0.053)  | 0.003(0.011)    | 0.010(0.032)    | 0.016(0.053)    | 0.001(0.003)    | 0.011(0.013)   | 0.009(0.023)    |
| Zone Tackles         | -0.001(0.013)  | -0.005(0.038)  | -0.004(0.063)  | 0.013(0.012)    | 0.036(0.037)    | 0.059(0.062)    | -0.000(0.003)   | -0.007(0.015)  | -0.009(0.027)   |
| LB3                  |                |                |                |                 |                 |                 |                 |                |                 |
| Grades Tackles       | -0.006(0.012)  | -0.014(0.037)  | -0.025(0.062)  | -0.018(0.016)   | -0.055(0.046)   | -0.091(0.077)   | -0.002(0.003)   | -0.006(0.014)  | -0.011(0.025)   |
| Man Tackles          | -0.019(0.011)* | -0.052(0.033)  | -0.088(0.055)  | 0.007(0.011)    | 0.021(0.033)    | 0.034(0.055)    | 0.004(0.003)    | 0.016(0.013)   | 0.035(0.023)    |
| Zone Tackles         | 0.007(0.013)   | 0.015(0.038)   | 0.030(0.063)   | 0.009(0.014)    | 0.027(0.041)    | 0.043(0.068)    | -0.001(0.003)   | -0.004(0.016)  | -0.008(0.027)   |
| LB4                  |                |                |                |                 |                 |                 |                 |                |                 |
| Grades Tackles       | -0.002(0.012)  | -0.004(0.035)  | -0.012(0.058)  | -0.002(0.015)   | -0.012(0.045)   | -0.020(0.076)   | 0.001(0.003)    | 0.005(0.015)   | 0.016(0.026)    |
| Man Tackles          | 0.006(0.011)   | 0.017(0.032)   | 0.030(0.054)   | -0.015(0.011)   | -0.046(0.033)   | -0.073(0.054)   | 0.002(0.003)    | 0.008(0.013)   | 0.017(0.024)    |
| Zone Tackles         | 0.001(0.011)   | 0.004(0.034)   | 0.011(0.057)   | 0.015(0.013)    | 0.048(0.041)    | 0.081(0.068)    | -0.001(0.003)   | -0.001(0.015)  | -0.009(0.025)   |
| CB1                  |                |                |                |                 |                 |                 |                 |                |                 |
| Grades Tackles       | 0.008(0.009)   | 0.026(0.027)   | 0.042(0.044)   | 0.005(0.009)    | 0.013(0.028)    | 0.020(0.046)    | 0.001(0.003)    | 0.005(0.011)   | 0.008(0.019)    |
| Man Tackles          | 0.005(0.010)   | 0.013(0.031)   | 0.024(0.052)   | 0.023(0.010)**  | 0.067(0.031)**  | 0.112(0.051)**  | -0.003(0.003)   | -0.013(0.013)  | -0.021(0.023)   |
| Zone Tackles         | -0.001(0.010)  | -0.004(0.029)  | -0.009(0.049)  | 0.006(0.010)    | 0.020(0.030)    | 0.034(0.049)    | 0.002(0.003)    | 0.011(0.012)   | 0.017(0.021)    |
| CB2                  |                |                |                |                 |                 |                 |                 |                |                 |
| Grades Tackles       | -0.007(0.009)  | -0.019(0.027)  | -0.032(0.045)  | 0.002(0.010)    | 0.008(0.030)    | 0.014(0.050)    | 0.002(0.003)    | 0.012(0.011)   | 0.021(0.020)    |
| Man Tackles          | 0.013(0.010)   | 0.040(0.029)   | 0.066(0.049)   | 0.008(0.010)    | 0.025(0.031)    | 0.038(0.052)    | -0.002(0.003)   | -0.006(0.012)  | -0.020(0.022)   |
| Zone Tackles         | -0.010(0.010)  | -0.028(0.029)  | -0.049(0.049)  | -0.004(0.010)   | -0.010(0.031)   | -0.023(0.052)   | 0.003(0.003)    | 0.009(0.012)   | 0.019(0.021)    |
| CB3                  |                |                |                |                 |                 |                 |                 |                |                 |
| Grades Tackles       | -0.003(0.010)  | -0.010(0.030)  | -0.021(0.050)  | 0.003(0.011)    | 0.005(0.034)    | 0.011(0.056)    | 0.002(0.003)    | 0.005(0.012)   | 0.009(0.021)    |
| Man Tackles          | 0.018(0.010)*  | 0.051(0.030)*  | 0.082(0.051)   | -0.006(0.011)   | -0.019(0.034)   | -0.029(0.056)   | 0.001(0.003)    | 0.010(0.013)   | 0.014(0.023)    |
| Zone Tackles         | 0.004(0.010)   | 0.013(0.030)   | 0.024(0.050)   | 0.001(0.013)    | 0.003(0.037)    | 0.006(0.062)    | -0.002(0.003)   | -0.007(0.012)  | -0.015(0.021)   |
| S1                   |                |                |                |                 |                 |                 |                 |                |                 |
| Grades Tackles       | -0.004(0.010)  | -0.014(0.029)  | -0.023(0.049)  | 0.005(0.010)    | 0.014(0.029)    | 0.022(0.048)    | 0.000(0.003)    | -0.004(0.012)  | -0.004(0.021)   |
| Man Tackles          | -0.005(0.010)  | -0.014(0.030)  | -0.024(0.050)  | 0.004(0.010)    | 0.008(0.031)    | 0.018(0.051)    | -0.004(0.003)   | -0.012(0.013)  | -0.018(0.022)   |
| Zone Tackles         | 0.006(0.010)   | 0.019(0.029)   | 0.032(0.049)   | -0.001(0.010)   | -0.004(0.029)   | -0.011(0.048)   | -0.002(0.003)   | -0.008(0.012)  | -0.014(0.021)   |
| S2                   |                | ` ′            |                |                 | ` ′             |                 |                 |                | ` ′             |
| Grades Tackles       | 0.003(0.010)   | 0.014(0.029)   | 0.022(0.048)   | 0.009(0.012)    | 0.028(0.035)    | 0.045(0.058)    | 0.003(0.003)    | 0.017(0.012)   | 0.024(0.021)    |
| Man Tackles          | 0.010(0.010)   | 0.031(0.031)   | 0.054(0.051)   | -0.001(0.011)   | 0.001(0.033)    | -0.004(0.055)   | -0.002(0.003)   | -0.014(0.013)  | -0.022(0.021)   |
| Zone Tackles         | -0.001(0.010)  | -0.006(0.030)  | -0.011(0.049)  | -0.003(0.012)   | -0.011(0.036)   | -0.019(0.060)   | -0.003(0.003)   | -0.009(0.012)  | -0.012(0.022)   |
| S3                   | 0.001(0.010)   | 3.000(0.000)   | 3.011(0.020)   | 3.000(0.012)    | 0.011(0.000)    | 0.010(0.000)    | 3.000(0.000)    | 0.000(0.012)   | 0.012(0.022)    |
| Grades Tackles       | -0.007(0.010)  | -0.023(0.032)  | -0.038(0.053)  | 0.014(0.013)    | 0.045(0.040)    | 0.077(0.067)    | 0.003(0.003)    | 0.014(0.013)   | 0.025(0.023)    |
| Man Tackles          | -0.006(0.010)  | -0.019(0.031)  | -0.032(0.052)  | -0.004(0.013)   | -0.012(0.039)   | -0.018(0.065)   | -0.003(0.003)   | -0.009(0.014)  | -0.026(0.023)   |
| Zone Tackles         | -0.005(0.010)  | -0.014(0.032)  | -0.023(0.053)  | -0.004(0.013)   | -0.012(0.039)   | -0.048(0.070)   | -0.003(0.003)   | -0.005(0.014)  | -0.005(0.023)   |
| Perf. Measures       | -0.003(0.011)  | =0.014(0.032)  | -0.023(0.003)  | -0.008(0.014)   | -0.027(0.042)   | -0.040(0.070)   | -0.001(0.003)   | -0.003(0.013)  | -0.003(0.023)   |
| GIMR                 | 0.019(0.014)   | 0.048(0.046)   | 0.076(0.078)   | 0.017(0.014)    | 0.046(0.047)    | 0.070(0.080)    |                 |                |                 |
| Control Variables    | 0.019(0.014)   | 0.040(0.040)   | 0.070(0.078)   | 0.017(0.014)    | 0.040(0.047)    | 0.070(0.000)    |                 |                |                 |
| Game Situation       | Yes            | Yes            | Yes            | Yes             | Yes             | Yes             | Yes             | Yes            | Yes             |
| Coach Variables      | Yes            | Yes            | Yes            | Yes             | Yes             | Yes             | Yes             | Yes            | Yes             |
|                      |                |                |                |                 |                 |                 |                 |                |                 |
| Team Stats           | Yes            | Yes            | Yes            | Yes             | Yes             | Yes             | Yes             | Yes            | Yes             |
| Season/Team FE       | Yes            | Yes            | Yes            | Yes             | Yes             | Yes             | No              | No             | No              |
| Coach FE             | No             | No             | No             | Yes             | Yes             | Yes             | Yes             | Yes            | Yes             |
| Player Presence      | Yes            | Yes            | Yes            | Yes             | Yes             | Yes             | No              | No             | No              |
| Control Off. Players | Yes            | Yes            | Yes            | Yes             | Yes             | Yes             | Yes             | Yes            | Yes             |
| Control Def. Players | No             | No             | No             | No              | No              | No              | No              | No             | No              |

Note: Marginal effects reported with standard errors in parentheses and significance levels. \* \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01