

Statistical Comparison of Model Effects for NFL Player Performance

Revised table generation function that shows differences and significance tests

across player types (Starter, On-Field, Attempt) for each model type (LPM, Probit, Logit)

Table 1: Offense Grades - Model Comparison of Player Type Differences

| Variable | LPM | | | Probit | | | Logit | | |
|----------------------|---------------------------|--------------------------|---------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|----------------------------|-----------------------------|
| | Starter vs On-Field (LPM) | Starter vs Attempt (LPM) | On-Field vs Attempt (LPM) | Starter vs On-Field (Probit) | Starter vs Attempt (Probit) | On-Field vs Attempt (Probit) | Starter vs On-Field (Logit) | Starter vs Attempt (Logit) | On-Field vs Attempt (Logit) |
| Quarterbacks | | | | | | | | | |
| Short Grades Pass | -0.003(0.022) | 0.021(0.017) | 0.023(0.015) | -0.003(0.025) | 0.028(0.019) | 0.031(0.017)* | -0.004(0.026) | 0.030(0.020) | 0.034(0.018)* |
| Medium Grades Pass | -0.012(0.020) | -0.020(0.014) | -0.008(0.013) | -0.017(0.023) | -0.021(0.016) | -0.004(0.017) | -0.016(0.024) | -0.022(0.017) | -0.006(0.016) |
| Deep Grades Pass | 0.008(0.019) | -0.019(0.013) | -0.027(0.014)** | 0.012(0.022) | -0.022(0.016) | -0.034(0.016)** | 0.010(0.023) | -0.025(0.016) | -0.035(0.016)** |
| Running Backs | | | | | | | | | |
| Grades Pass Block | -0.033(0.015)** | -0.017(0.011) | 0.016(0.011) | -0.039(0.017)** | -0.020(0.012) | 0.019(0.012) | -0.040(0.017)** | -0.022(0.013)* | 0.018(0.012) |
| Grades Run | 0.016(0.015) | 0.012(0.011) | -0.003(0.011) | 0.020(0.018) | 0.015(0.013) | -0.005(0.013) | 0.016(0.018) | 0.016(0.013) | -0.007(0.013) |
| Short Grades Pass | 0.007(0.015) | 0.005(0.011) | -0.002(0.011) | 0.007(0.017) | 0.005(0.012) | -0.002(0.012) | 0.004(0.013) | -0.002(0.012) | -0.002(0.012) |
| Medium Grades Pass | -0.010(0.013) | -0.014(0.010) | -0.004(0.009) | -0.011(0.015) | -0.016(0.011) | -0.005(0.011) | -0.011(0.015) | -0.016(0.011) | -0.005(0.011) |
| Deep Grades Pass | -0.002(0.013) | -0.006(0.010) | -0.006(0.009) | -0.002(0.015) | -0.008(0.011) | -0.005(0.011) | -0.003(0.016) | -0.008(0.012) | -0.005(0.011) |
| WR1 | | | | | | | | | |
| Grades Run Block | 0.018(0.025) | 0.013(0.016) | -0.005(0.020) | 0.021(0.028) | 0.012(0.018) | -0.009(0.023) | 0.021(0.030) | 0.013(0.019) | -0.008(0.024) |
| Short Grades Pass | 0.010(0.021) | 0.002(0.014) | 0.000(0.016) | 0.005(0.023) | 0.003(0.016) | -0.002(0.018) | 0.007(0.024) | 0.005(0.016) | -0.002(0.019) |
| Medium Grades Pass | 0.015(0.019) | 0.010(0.014) | -0.004(0.015) | 0.016(0.022) | 0.014(0.016) | -0.002(0.017) | 0.017(0.023) | 0.015(0.016) | -0.002(0.017) |
| Deep Grades Pass | -0.001(0.017) | -0.002(0.012) | -0.001(0.013) | -0.004(0.019) | -0.003(0.013) | 0.001(0.014) | -0.004(0.020) | -0.002(0.014) | 0.002(0.015) |
| WR2 | | | | | | | | | |
| Grades Run Block | -0.050(0.039) | -0.020(0.016) | 0.029(0.036) | -0.061(0.046) | -0.024(0.018) | 0.037(0.042) | -0.064(0.047) | -0.026(0.019) | 0.038(0.044) |
| Short Grades Pass | -0.024(0.027) | -0.019(0.013) | 0.005(0.024) | -0.020(0.031) | -0.021(0.015) | 0.008(0.027) | -0.011(0.032) | -0.021(0.016) | 0.010(0.029) |
| Medium Grades Pass | 0.020(0.023) | 0.014(0.012) | -0.006(0.020) | 0.027(0.027) | 0.017(0.014) | -0.009(0.023) | 0.027(0.028) | 0.019(0.014) | -0.008(0.024) |
| Deep Grades Pass | -0.008(0.020) | 0.003(0.012) | 0.011(0.016) | -0.012(0.022) | 0.005(0.013) | 0.017(0.019) | -0.011(0.023) | 0.004(0.013) | 0.016(0.020) |
| WR3 | | | | | | | | | |
| Grades Run Block | -0.024(0.030) | -0.006(0.014) | 0.018(0.027) | -0.032(0.035) | -0.008(0.016) | 0.025(0.031) | -0.033(0.036) | -0.010(0.017) | 0.024(0.033) |
| Short Grades Pass | -0.012(0.023) | -0.012(0.012) | 0.001(0.020) | -0.018(0.030) | -0.015(0.013) | 0.000(0.023) | -0.021(0.028) | -0.010(0.013) | 0.005(0.024) |
| Medium Grades Pass | -0.003(0.022) | 0.006(0.011) | 0.006(0.019) | 0.001(0.025) | 0.003(0.012) | 0.002(0.022) | 0.002(0.026) | 0.005(0.012) | 0.003(0.023) |
| Deep Grades Pass | -0.013(0.018) | 0.002(0.010) | 0.015(0.016) | -0.018(0.021) | 0.003(0.012) | 0.021(0.018) | -0.018(0.022) | 0.003(0.012) | 0.021(0.018) |
| TE1 | | | | | | | | | |
| Grades Pass Block | 0.002(0.016) | 0.027(0.012)** | 0.026(0.012)** | 0.033(0.014)** | -0.001(0.019) | 0.035(0.014)** | -0.000(0.019) | 0.035(0.014)** | 0.035(0.014)** |
| Grades Run Block | -0.002(0.019) | -0.015(0.016) | -0.013(0.013) | -0.002(0.022) | -0.020(0.018) | -0.018(0.015) | -0.000(0.023) | -0.021(0.018) | -0.018(0.016) |
| Short Grades Pass | 0.004(0.018) | 0.002(0.013) | -0.002(0.013) | 0.005(0.020) | 0.001(0.015) | -0.004(0.015) | 0.005(0.021) | 0.001(0.015) | -0.004(0.015) |
| Medium Grades Pass | -0.023(0.015)** | -0.019(0.011)** | 0.015(0.011) | -0.040(0.017)** | -0.021(0.013)* | 0.018(0.012) | -0.042(0.015)** | -0.021(0.013)* | 0.021(0.013) |
| Deep Grades Pass | 0.011(0.013) | -0.005(0.010) | -0.016(0.010)* | 0.013(0.015) | -0.006(0.012) | -0.020(0.011)* | 0.015(0.016) | -0.006(0.012) | -0.021(0.013)* |
| OL1 | | | | | | | | | |
| Grades Pass Block | 0.026(0.017)* | 0.020(0.012) | -0.007(0.010) | 0.034(0.015)* | 0.025(0.014)* | -0.009(0.012) | 0.030(0.016)* | 0.026(0.012)* | -0.010(0.012) |
| Grades Run Block | -0.002(0.017) | 0.003(0.015) | 0.005(0.011) | -0.001(0.020) | 0.006(0.016) | 0.007(0.012) | -0.004(0.020) | 0.004(0.017) | 0.008(0.012) |
| OL2 | | | | | | | | | |
| Grades Pass Block | -0.003(0.015) | -0.008(0.012) | -0.005(0.010) | -0.004(0.017) | -0.008(0.014) | -0.004(0.012) | -0.004(0.018) | -0.008(0.014) | -0.004(0.012) |
| Grades Run Block | 0.009(0.017) | -0.006(0.015) | -0.015(0.010) | 0.012(0.020) | -0.008(0.017) | -0.019(0.012) | 0.014(0.020) | -0.007(0.017) | -0.021(0.012)* |
| OL3 | | | | | | | | | |
| Grades Pass Block | 0.003(0.015) | 0.008(0.012) | 0.006(0.010) | 0.001(0.017) | 0.009(0.014) | 0.008(0.012) | 0.003(0.018) | 0.012(0.014) | 0.009(0.012) |
| Grades Run Block | -0.019(0.017) | -0.011(0.015) | 0.008(0.010) | -0.025(0.019) | -0.014(0.017) | 0.011(0.012) | -0.025(0.020) | -0.015(0.017) | 0.010(0.012) |
| OL4 | | | | | | | | | |
| Grades Pass Block | 0.016(0.015) | 0.025(0.012)** | 0.009(0.010) | 0.019(0.018) | 0.030(0.014)** | 0.011(0.012) | 0.020(0.019) | 0.031(0.015)** | 0.011(0.012) |
| Grades Run Block | 0.007(0.016) | -0.006(0.013) | -0.013(0.010) | 0.007(0.018) | -0.008(0.015) | -0.015(0.012) | 0.007(0.019) | -0.010(0.016) | -0.016(0.012) |
| OL5 | | | | | | | | | |
| Grades Pass Block | 0.042(0.016)** | 0.029(0.013)** | -0.013(0.011) | 0.040(0.018)** | 0.031(0.015)** | -0.018(0.012) | 0.051(0.019)** | 0.034(0.015)** | -0.018(0.013) |
| Grades Run Block | -0.040(0.017)** | -0.020(0.014)** | 0.011(0.011) | -0.047(0.019)** | -0.034(0.016)** | 0.013(0.012) | -0.040(0.020)** | -0.025(0.016)** | 0.013(0.013) |

Note:
Differences shown with standard errors in parentheses. Positive values indicate the first definition has a larger effect than the second.
* p < 0.10, ** p < 0.05, *** p < 0.01

Table 2: Offense Yards - Model Comparison of Player Type Differences

| Variable | LPM | | | Probit | | | Logit | | |
|----------------------|---------------------------|--------------------------|---------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|----------------------------|-----------------------------|
| | Starter vs On-Field (LPM) | Starter vs Attempt (LPM) | On-Field vs Attempt (LPM) | Starter vs On-Field (Probit) | Starter vs Attempt (Probit) | On-Field vs Attempt (Probit) | Starter vs On-Field (Logit) | Starter vs Attempt (Logit) | On-Field vs Attempt (Logit) |
| Quarterbacks | | | | | | | | | |
| Short Yards | -0.002(0.019) | 0.016(0.014) | 0.018(0.014) | -0.002(0.022) | 0.020(0.016) | 0.022(0.016) | -0.002(0.023) | 0.019(0.016) | 0.021(0.017) |
| Medium Yards | 0.025(0.019) | 0.022(0.014) | -0.002(0.014) | 0.032(0.022) | 0.033(0.016)** | 0.001(0.016) | 0.033(0.023) | 0.035(0.017)** | 0.002(0.017) |
| Deep Yards | -0.019(0.017) | -0.044(0.013)*** | -0.024(0.012)** | -0.024(0.019) | -0.002(0.014)*** | -0.027(0.014)** | -0.025(0.020) | -0.052(0.015)*** | -0.027(0.014)* |
| Running Backs | | | | | | | | | |
| Grades Pass Block | -0.025(0.013)* | -0.011(0.010) | 0.014(0.010) | -0.029(0.015)* | -0.013(0.012) | 0.016(0.011) | -0.030(0.016)* | -0.015(0.012) | 0.015(0.011) |
| Yards | -0.015(0.013) | -0.004(0.010) | 0.011(0.009) | -0.016(0.015) | -0.002(0.012) | 0.014(0.011) | -0.017(0.016) | -0.002(0.012) | 0.015(0.011) |
| Short Yards | 0.008(0.014) | -0.009(0.010) | -0.017(0.010) | 0.009(0.016) | -0.011(0.012) | -0.010(0.011)* | 0.008(0.016) | -0.010(0.012) | -0.010(0.012) |
| Medium Yards | -0.013(0.012) | -0.018(0.009)* | -0.004(0.008) | -0.013(0.013) | -0.018(0.010)* | -0.003(0.010) | -0.016(0.014) | -0.020(0.011)* | -0.005(0.010) |
| Deep Yards | 0.004(0.013) | 0.000(0.010) | 0.002(0.009) | 0.000(0.015) | 0.006(0.012) | 0.001(0.011) | 0.008(0.016) | 0.007(0.012) | -0.001(0.011) |
| WR1 | | | | | | | | | |
| Grades Run Block | 0.019(0.023) | 0.013(0.015) | -0.006(0.019) | 0.023(0.028) | 0.013(0.018) | -0.010(0.022) | 0.023(0.029) | 0.014(0.018) | -0.009(0.023) |
| Short Yards | -0.004(0.015) | -0.002(0.011) | 0.002(0.011) | -0.004(0.017) | -0.002(0.012) | -0.002(0.012) | -0.004(0.018) | -0.000(0.013) | 0.001(0.013) |
| Medium Yards | 0.003(0.016) | -0.002(0.011) | -0.005(0.012) | 0.002(0.018) | -0.001(0.013) | -0.003(0.013) | 0.003(0.018) | -0.002(0.013) | -0.005(0.013) |
| Deep Yards | 0.013(0.014) | 0.026(0.010)** | 0.016(0.010) | 0.012(0.016) | 0.013(0.012)*** | 0.013(0.012)** | 0.013(0.016) | 0.013(0.012)*** | 0.023(0.012)* |
| WR2 | | | | | | | | | |
| Grades Run Block | -0.004(0.038)* | -0.024(0.016) | 0.040(0.035) | -0.077(0.041)* | -0.028(0.018) | 0.040(0.041) | -0.083(0.046)* | -0.031(0.018)* | 0.023(0.042) |
| Short Yards | -0.009(0.015) | -0.013(0.011) | -0.004(0.012) | -0.009(0.017) | -0.013(0.012) | -0.003(0.013) | -0.010(0.018) | -0.013(0.013) | -0.003(0.014) |
| Medium Yards | 0.008(0.016) | -0.006(0.011) | -0.013(0.012) | 0.005(0.019) | -0.008(0.013) | -0.011(0.014) | 0.007(0.019) | -0.009(0.013) | -0.016(0.015) |
| Deep Yards | 0.007(0.014) | 0.013(0.010) | 0.006(0.011) | 0.010(0.017) | 0.017(0.012) | 0.007(0.012) | 0.010(0.017) | 0.010(0.012) | 0.009(0.013) |
| WR3 | | | | | | | | | |
| Grades Run Block | -0.011(0.028) | -0.009(0.014) | 0.022(0.025) | -0.040(0.032) | -0.011(0.016) | 0.030(0.029) | -0.042(0.034) | -0.012(0.016) | 0.030(0.030) |
| Short Yards | -0.023(0.016) | -0.011(0.011) | 0.012(0.012) | -0.026(0.018) | -0.013(0.012) | 0.013(0.014) | -0.027(0.018) | -0.013(0.013) | 0.014(0.014) |
| Medium Yards | -0.022(0.015) | -0.021(0.011)* | 0.000(0.011) | -0.020(0.018) | -0.025(0.013)* | 0.001(0.013) | -0.027(0.018) | -0.026(0.013)* | 0.001(0.013) |
| Deep Yards | 0.013(0.014) | 0.003(0.010) | 0.001(0.010) | 0.017(0.016) | 0.018(0.011) | 0.017(0.012) | 0.017(0.016) | -0.010(0.012) | 0.002(0.012) |
| TE1 | | | | | | | | | |
| Grades Pass Block | 0.001(0.010) | 0.026(0.012)** | 0.020(0.011)** | -0.001(0.018) | 0.034(0.014)** | 0.035(0.013)*** | -0.009(0.019) | 0.025(0.014)** | 0.015(0.014)** |
| Grades Run Block | -0.009(0.015) | -0.021(0.015) | -0.012(0.012) | -0.011(0.021) | -0.028(0.016)* | -0.017(0.014) | -0.012(0.021) | -0.028(0.017)* | -0.016(0.014) |
| Short Yards | 0.010(0.015) | 0.001(0.012) | -0.009(0.011) | 0.012(0.018) | 0.000(0.013) | -0.012(0.013) | 0.013(0.018) | 0.002(0.014) | -0.011(0.013) |
| Medium Yards | -0.022(0.013) | -0.010(0.011) | 0.000(0.011) | -0.020(0.017) | -0.010(0.012) | -0.007(0.012) | -0.007(0.018) | -0.017(0.013) | -0.005(0.012) |
| Deep Yards | -0.006(0.013) | -0.009(0.010) | -0.002(0.009) | -0.008(0.015) | -0.012(0.012) | -0.004(0.011) | -0.008(0.016) | -0.012(0.012) | -0.004(0.011) |
| OL1 | | | | | | | | | |
| Grades Pass Block | 0.025(0.015)* | 0.018(0.012) | -0.007(0.010) | 0.011(0.017)* | 0.022(0.014) | -0.009(0.012) | 0.033(0.018)* | 0.022(0.014) | -0.011(0.012) |
| Grades Run Block | 0.001(0.017) | 0.005(0.015) | 0.004(0.011) | 0.002(0.020) | 0.008(0.016) | 0.006(0.012) | -0.000(0.020) | 0.007(0.017) | 0.007(0.012) |
| OL2 | | | | | | | | | |
| Grades Pass Block | -0.004(0.015) | -0.007(0.012) | -0.003(0.010) | -0.005(0.017) | -0.007(0.014) | -0.002(0.012) | -0.006(0.018) | -0.008(0.014) | -0.002(0.012) |
| Grades Run Block | -0.009(0.017) | -0.008(0.014) | -0.017(0.010)* | -0.012(0.019) | -0.011(0.016) | -0.023(0.012)* | -0.013(0.020) | -0.011(0.017) | -0.024(0.012)* |
| OL3 | | | | | | | | | |
| Grades Pass Block | 0.003(0.015) | 0.009(0.012) | 0.006(0.010) | 0.003(0.017) | 0.011(0.014) | 0.008(0.011) | 0.004(0.018) | 0.013(0.014) | 0.009(0.012) |
| Grades Run Block | -0.017(0.017) | -0.011(0.013) | 0.006(0.010) | -0.024(0.019) | -0.014(0.017) | 0.010(0.012) | -0.024(0.020) | -0.010(0.017) | 0.009(0.012) |
| OL4 | | | | | | | | | |
| Grades Pass Block | 0.015(0.013) | 0.022(0.012)* | 0.017(0.018) | 0.016(0.014) | 0.026(0.014)* | 0.009(0.012) | 0.016(0.019) | 0.027(0.013)* | 0.009(0.012) |
| Grades Run Block | 0.007(0.016) | -0.005(0.013) | -0.012(0.010) | 0.007(0.018) | -0.008(0.015) | -0.015(0.012) | 0.007(0.019) | -0.009(0.016) | -0.016(0.012) |
| OL5 | | | | | | | | | |
| Grades Pass Block | 0.034(0.016)** | 0.021(0.013)* | -0.013(0.011) | 0.040(0.018)** | 0.022(0.015) | -0.018(0.012) | 0.042(0.019)** | 0.024(0.015) | -0.018(0.013) |
| Grades Run Block | -0.013(0.017)** | -0.020(0.014)* | 0.010(0.011) | -0.039(0.019)** | -0.027(0.016)* | 0.012(0.012) | -0.039(0.020)** | -0.027(0.016)* | 0.012(0.013) |

Note:

Differences shown with standard errors in parentheses. Positive values indicate the first definition has a larger effect than the second.

* * p < 0.10, ** p < 0.05, *** p < 0.01

Table 3: Offense Completions - Model Comparison of Player Type Differences

| Variable | LPM | | | Probit | | | Logit | | |
|----------------------|---------------------------|--------------------------|---------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|----------------------------|-----------------------------|
| | Starter vs On-Field (LPM) | Starter vs Attempt (LPM) | On-Field vs Attempt (LPM) | Starter vs On-Field (Probit) | Starter vs Attempt (Probit) | On-Field vs Attempt (Probit) | Starter vs On-Field (Logit) | Starter vs Attempt (Logit) | On-Field vs Attempt (Logit) |
| Quarterbacks | | | | | | | | | |
| Short Completions | -0.006(0.020) | 0.023(0.014)* | 0.030(0.015)** | -0.008(0.023) | 0.028(0.018)* | 0.035(0.017)** | -0.008(0.024) | 0.026(0.017) | 0.034(0.018)* |
| Medium Completions | 0.023(0.020) | 0.017(0.014) | -0.007(0.015) | 0.031(0.023) | 0.027(0.017)* | -0.004(0.017) | 0.032(0.024) | 0.029(0.017)* | -0.003(0.018) |
| Deep Completions | -0.007(0.017) | -0.030(0.013)*** | -0.011(0.012)** | -0.009(0.020) | -0.045(0.015)*** | -0.009(0.014)** | -0.010(0.021) | -0.045(0.015)*** | -0.015(0.015)** |
| Running Backs | | | | | | | | | |
| Grades Pass Block | -0.028(0.013)** | -0.013(0.010) | 0.015(0.010) | -0.032(0.015)** | -0.015(0.012) | 0.017(0.011) | -0.033(0.016)** | -0.017(0.012) | 0.016(0.011) |
| Attempts | -0.013(0.013) | -0.002(0.010) | 0.012(0.009) | -0.014(0.015) | 0.000(0.012) | 0.014(0.011) | -0.015(0.016) | -0.006(0.012) | 0.014(0.011) |
| Short Receptions | 0.014(0.014) | -0.005(0.011) | -0.019(0.010)* | 0.012(0.016) | -0.007(0.012) | -0.023(0.011)** | 0.015(0.017) | -0.007(0.013) | -0.022(0.012)* |
| Medium Receptions | -0.009(0.012) | -0.012(0.009) | -0.004(0.008) | -0.010(0.013) | -0.014(0.010) | -0.004(0.010) | -0.010(0.014) | -0.016(0.010) | -0.006(0.010) |
| Deep Receptions | 0.003(0.013) | -0.003(0.010) | 0.000(0.009) | 0.003(0.015) | 0.001(0.012) | -0.005(0.010) | 0.006(0.016) | -0.000(0.012) | -0.006(0.011) |
| WR1 | | | | | | | | | |
| Grades Run Block | 0.018(0.024) | 0.012(0.015) | -0.006(0.019) | 0.020(0.028) | 0.010(0.018) | -0.010(0.022) | 0.021(0.029) | 0.012(0.018) | -0.009(0.023) |
| Short Receptions | -0.003(0.015) | -0.002(0.011) | -0.003(0.011) | -0.003(0.017) | -0.003(0.013) | -0.003(0.013) | -0.003(0.018) | -0.007(0.013) | -0.004(0.013) |
| Medium Receptions | 0.007(0.016) | 0.006(0.012) | -0.001(0.012) | 0.000(0.018) | 0.000(0.013) | 0.001(0.012) | 0.000(0.019) | 0.000(0.014) | -0.000(0.014) |
| Deep Receptions | 0.009(0.014) | 0.022(0.010)** | 0.014(0.010) | 0.010(0.016) | 0.026(0.012)** | 0.016(0.012) | 0.011(0.017) | 0.028(0.012)** | 0.017(0.012) |
| WR2 | | | | | | | | | |
| Grades Run Block | -0.066(0.038)* | -0.022(0.016) | -0.042(0.035) | -0.080(0.041)* | -0.029(0.018) | 0.051(0.041) | -0.085(0.045)* | -0.031(0.018)* | 0.04(0.042) |
| Short Receptions | -0.007(0.016) | -0.016(0.011) | -0.008(0.012) | -0.007(0.018) | -0.016(0.012) | -0.009(0.014) | -0.008(0.019) | -0.017(0.013) | -0.009(0.014) |
| Medium Receptions | 0.007(0.017) | -0.000(0.011) | -0.007(0.011) | 0.000(0.019) | -0.002(0.013) | -0.007(0.011) | 0.007(0.020) | -0.002(0.014) | -0.009(0.015) |
| Deep Receptions | 0.003(0.014) | 0.006(0.011) | 0.004(0.011) | 0.004(0.017) | 0.007(0.012) | 0.004(0.012) | 0.004(0.017) | 0.013(0.012) | 0.009(0.013) |
| WR3 | | | | | | | | | |
| Grades Run Block | -0.028(0.028) | -0.009(0.014) | 0.019(0.025) | -0.037(0.032) | -0.011(0.016) | 0.026(0.029) | -0.038(0.034) | -0.012(0.016) | 0.025(0.030) |
| Short Receptions | -0.027(0.016) | -0.013(0.011) | -0.010(0.013) | -0.030(0.019) | -0.015(0.013) | 0.013(0.014) | -0.032(0.019)* | -0.015(0.013) | 0.017(0.015) |
| Medium Receptions | -0.017(0.016) | -0.010(0.012) | 0.001(0.012) | -0.022(0.019) | -0.020(0.014) | 0.002(0.014) | -0.022(0.020) | -0.021(0.014) | 0.002(0.014) |
| Deep Receptions | 0.004(0.014) | 0.009(0.010) | 0.005(0.011) | 0.006(0.016) | 0.012(0.012) | 0.006(0.012) | 0.005(0.017) | 0.012(0.012) | 0.007(0.012) |
| TE1 | | | | | | | | | |
| Grades Pass Block | 0.001(0.016) | 0.028(0.012)** | 0.027(0.012)** | -0.001(0.018) | 0.035(0.014)** | 0.036(0.013)*** | -0.000(0.019) | 0.036(0.014)** | 0.036(0.014)*** |
| Grades Run Block | -0.010(0.018) | -0.021(0.015) | -0.011(0.012) | -0.012(0.021) | -0.027(0.016)* | -0.015(0.014) | -0.013(0.022) | -0.028(0.017) | -0.014(0.014) |
| Short Receptions | 0.017(0.016) | -0.001(0.012) | -0.016(0.011) | 0.021(0.018) | -0.001(0.014) | -0.022(0.013)** | 0.022(0.019) | 0.000(0.014) | -0.021(0.015) |
| Medium Receptions | -0.025(0.016) | -0.018(0.012) | -0.008(0.011) | -0.031(0.018)* | -0.021(0.013) | 0.009(0.013) | -0.032(0.018)* | -0.022(0.014) | 0.010(0.013) |
| Deep Receptions | -0.008(0.013) | -0.003(0.010) | 0.004(0.010) | -0.009(0.016) | 0.003(0.011) | 0.003(0.011) | -0.010(0.016) | -0.007(0.012) | 0.003(0.011) |
| OL1 | | | | | | | | | |
| Grades Pass Block | 0.025(0.015)* | 0.019(0.012) | -0.000(0.010) | 0.011(0.017)* | 0.023(0.014) | -0.008(0.012) | 0.033(0.018)* | 0.023(0.014) | -0.010(0.012) |
| Grades Run Block | -0.003(0.017) | 0.000(0.014) | 0.000(0.011) | -0.004(0.019) | -0.003(0.016) | 0.007(0.012) | -0.003(0.017) | -0.001(0.020) | 0.008(0.012) |
| OL2 | | | | | | | | | |
| Grades Pass Block | -0.005(0.015) | -0.008(0.012) | -0.002(0.010) | -0.006(0.017) | -0.008(0.014) | -0.002(0.012) | -0.007(0.018) | -0.008(0.014) | -0.003(0.012) |
| Grades Run Block | -0.010(0.017) | -0.007(0.014) | -0.017(0.010) | -0.012(0.019) | -0.010(0.016) | -0.022(0.012)* | -0.014(0.020) | -0.009(0.017) | -0.023(0.012)* |
| OL3 | | | | | | | | | |
| Grades Pass Block | 0.004(0.015) | 0.010(0.012) | 0.006(0.010) | 0.003(0.017) | 0.012(0.014) | 0.009(0.012) | 0.005(0.018) | 0.014(0.014) | 0.010(0.012) |
| Grades Run Block | -0.018(0.017) | -0.011(0.013) | -0.007(0.010) | -0.025(0.019) | -0.011(0.012) | -0.026(0.012) | -0.01 | | |

Table 4: Defense Stops - Model Comparison of Player Type Differences

| Variable | LPM | | | Probit | | | Logit | | |
|--------------------|---------------------------|--------------------------|---------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|----------------------------|-----------------------------|
| | Starter vs On-Field (LPM) | Starter vs Attempt (LPM) | On-Field vs Attempt (LPM) | Starter vs On-Field (Probit) | Starter vs Attempt (Probit) | On-Field vs Attempt (Probit) | Starter vs On-Field (Logit) | Starter vs Attempt (Logit) | On-Field vs Attempt (Logit) |
| D1.1 | | | | | | | | | |
| Grades Stops | 0.005(0.013) | -0.004(0.009) | -0.006(0.009) | 0.006(0.015) | -0.005(0.011) | -0.011(0.011) | 0.007(0.015) | -0.004(0.011) | -0.011(0.011) |
| Productivity Stops | 0.010(0.012) | 0.016(0.009)* | -0.002(0.009) | 0.022(0.014) | 0.020(0.01)* | -0.000(0.010) | 0.020(0.015) | 0.021(0.01)* | -0.002(0.015) |
| D1.2 | | | | | | | | | |
| Grades Stops | -0.002(0.013) | 0.006(0.009) | 0.008(0.010) | -0.004(0.015) | 0.008(0.010) | 0.011(0.011) | -0.004(0.015) | 0.008(0.011) | 0.012(0.011) |
| Productivity Stops | 0.014(0.013) | 0.006(0.009) | -0.008(0.009) | 0.016(0.014) | 0.005(0.010) | -0.011(0.011) | 0.016(0.015) | 0.004(0.011) | -0.012(0.011) |
| D1.3 | | | | | | | | | |
| Grades Stops | -0.011(0.014) | -0.004(0.009) | 0.008(0.011) | -0.012(0.016) | -0.004(0.011) | 0.008(0.013) | -0.013(0.017) | -0.005(0.011) | 0.008(0.014) |
| Productivity Stops | 0.009(0.013) | 0.002(0.009) | -0.008(0.010) | 0.009(0.015) | -0.000(0.011) | -0.000(0.012) | 0.011(0.016) | 0.001(0.011) | -0.010(0.012) |
| D1.4 | | | | | | | | | |
| Grades Stops | -0.009(0.015) | -0.008(0.010) | 0.000(0.012) | -0.012(0.017) | -0.010(0.011) | 0.002(0.013) | -0.012(0.018) | -0.011(0.012) | 0.001(0.014) |
| Productivity Stops | 0.010(0.014) | 0.003(0.009) | -0.016(0.011) | 0.022(0.015) | 0.001(0.010) | -0.021(0.012)* | 0.024(0.016) | 0.001(0.011) | -0.023(0.012)* |
| LB1 | | | | | | | | | |
| Grades Stops | 0.035(0.014)** | 0.031(0.010)** | -0.004(0.010) | 0.042(0.016)** | 0.007(0.011)** | -0.005(0.011) | 0.043(0.016)** | 0.030(0.012)** | -0.005(0.012) |
| Zone Stops | -0.007(0.014) | -0.010(0.010) | -0.003(0.011) | -0.006(0.016) | -0.012(0.011) | -0.006(0.012) | -0.006(0.017) | -0.011(0.012) | -0.006(0.012) |
| Man Stops | 0.008(0.013) | 0.010(0.010) | 0.002(0.010) | 0.008(0.015) | 0.010(0.011) | 0.005(0.011) | 0.009(0.016) | 0.011(0.011) | 0.002(0.013) |
| LB2 | | | | | | | | | |
| Grades Stops | 0.029(0.014)** | 0.019(0.010) | -0.019(0.011)* | 0.035(0.016)** | 0.011(0.012) | -0.024(0.012)* | 0.030(0.017)** | 0.012(0.012) | -0.024(0.013)* |
| Zone Stops | -0.019(0.014) | -0.006(0.010) | 0.013(0.011) | -0.023(0.016) | -0.008(0.011) | 0.014(0.012) | -0.024(0.017) | -0.008(0.012) | 0.016(0.013) |
| Man Stops | 0.031(0.015)** | 0.016(0.009)* | -0.015(0.010) | 0.039(0.015)** | 0.024(0.011)** | -0.015(0.011) | 0.041(0.016)** | 0.024(0.011)** | -0.017(0.011) |
| LB3 | | | | | | | | | |
| Grades Stops | 0.029(0.017)* | 0.018(0.011)* | -0.011(0.013) | 0.034(0.019)* | 0.021(0.012)* | -0.014(0.015) | 0.037(0.019)* | 0.021(0.013)* | -0.015(0.015) |
| Zone Stops | -0.013(0.015) | -0.002(0.010) | 0.011(0.012) | -0.014(0.017) | -0.001(0.012) | 0.013(0.015) | -0.015(0.018) | -0.001(0.012) | 0.014(0.013) |
| Man Stops | -0.002(0.013) | -0.004(0.010) | -0.002(0.010) | -0.003(0.015) | -0.004(0.011) | -0.001(0.011) | -0.003(0.016) | -0.005(0.011) | -0.002(0.011) |
| LB4 | | | | | | | | | |
| Grades Stops | 0.003(0.017) | 0.002(0.011) | -0.001(0.013) | 0.007(0.019) | 0.004(0.013) | -0.003(0.015) | 0.006(0.020) | 0.003(0.013) | -0.003(0.015) |
| Zone Stops | -0.010(0.015) | -0.012(0.011) | -0.002(0.011) | -0.011(0.017) | -0.010(0.012) | -0.001(0.015) | -0.015(0.018) | -0.014(0.013) | 0.000(0.014) |
| Man Stops | 0.010(0.013) | 0.013(0.010) | 0.003(0.010) | 0.011(0.015) | 0.010(0.011) | 0.003(0.011) | 0.012(0.015) | 0.015(0.011) | 0.003(0.013) |
| CB1 | | | | | | | | | |
| Grades Stops | -0.025(0.013)* | -0.010(0.009) | 0.014(0.010) | -0.020(0.013)* | -0.012(0.009) | 0.017(0.011) | -0.013(0.015)** | -0.013(0.011) | 0.018(0.012) |
| Zone Stops | -0.025(0.013)** | -0.021(0.010)** | 0.008(0.010) | -0.035(0.015)** | -0.025(0.011)** | 0.009(0.011) | -0.037(0.016)** | -0.026(0.011)** | 0.012(0.011) |
| Man Stops | -0.007(0.013) | 0.009(0.009) | 0.016(0.010)* | -0.008(0.014) | 0.010(0.010) | 0.018(0.011)* | -0.009(0.015) | 0.010(0.011) | 0.018(0.011) |
| CB2 | | | | | | | | | |
| Grades Stops | 0.004(0.013) | 0.009(0.009) | 0.005(0.010) | 0.003(0.015) | 0.009(0.010) | 0.005(0.011) | 0.003(0.015) | 0.009(0.010) | 0.005(0.011) |
| Zone Stops | -0.001(0.013) | -0.004(0.009) | -0.004(0.010) | -0.006(0.015) | -0.004(0.011) | -0.004(0.011) | -0.004(0.015) | -0.004(0.011) | 0.000(0.013) |
| Man Stops | -0.014(0.013) | -0.017(0.009)* | -0.003(0.010) | -0.016(0.014) | -0.020(0.010)** | -0.005(0.011) | -0.020(0.015) | -0.004(0.011) | -0.004(0.011) |
| CB3 | | | | | | | | | |
| Grades Stops | -0.021(0.013) | -0.019(0.009)** | 0.002(0.010) | -0.023(0.015) | -0.023(0.011)** | -0.000(0.011) | -0.023(0.015) | -0.024(0.011)** | -0.000(0.011) |
| Zone Stops | -0.004(0.014) | -0.001(0.009) | 0.003(0.011) | -0.005(0.016) | -0.000(0.011) | 0.005(0.012) | -0.000(0.017) | 0.000(0.011) | 0.006(0.013) |
| Man Stops | -0.018(0.013) | -0.015(0.009) | 0.004(0.010) | -0.021(0.015) | -0.017(0.011) | 0.004(0.011) | -0.023(0.015) | -0.016(0.011) | 0.006(0.011) |
| S1 | | | | | | | | | |
| Grades Stops | 0.002(0.014) | -0.006(0.010) | -0.006(0.010) | 0.004(0.016) | -0.006(0.011) | -0.010(0.012) | 0.006(0.016) | -0.004(0.012) | -0.010(0.012) |
| Zone Stops | -0.003(0.013) | -0.007(0.010) | -0.003(0.010) | -0.007(0.016) | -0.007(0.011) | -0.005(0.011) | -0.005(0.016) | -0.006(0.011) | -0.003(0.011) |
| Man Stops | -0.006(0.013) | 0.007(0.009) | 0.014(0.010) | -0.007(0.015) | 0.008(0.011) | 0.015(0.011) | -0.008(0.016) | 0.007(0.011) | -0.015(0.012) |
| S2 | | | | | | | | | |
| Grades Stops | -0.010(0.014) | 0.006(0.010) | 0.016(0.011) | -0.011(0.016) | 0.010(0.012) | 0.021(0.012)* | -0.012(0.017) | 0.010(0.012) | 0.022(0.012)* |
| Zone Stops | 0.005(0.014) | -0.002(0.010) | -0.005(0.011) | 0.003(0.016) | -0.005(0.011) | -0.009(0.012) | 0.006(0.016) | -0.003(0.011) | -0.009(0.012) |
| Man Stops | 0.001(0.013) | -0.003(0.009) | -0.004(0.010) | -0.003(0.015) | -0.002(0.011) | -0.005(0.011) | -0.005(0.016) | -0.005(0.011) | -0.005(0.011) |
| S3 | | | | | | | | | |
| Grades Stops | 0.022(0.015) | 0.018(0.009)* | -0.004(0.012) | 0.020(0.017) | 0.021(0.013)* | -0.005(0.013) | 0.027(0.016) | 0.021(0.012)* | -0.006(0.014) |
| Zone Stops | -0.011(0.014) | -0.010(0.010) | 0.001(0.011) | -0.011(0.017) | -0.011(0.011) | 0.000(0.013) | -0.015(0.017) | -0.013(0.012) | 0.001(0.013) |
| Man Stops | -0.021(0.013) | -0.008(0.010) | 0.012(0.010) | -0.020(0.015)* | -0.011(0.011) | 0.015(0.012) | -0.026(0.016) | -0.010(0.011) | 0.016(0.012) |

Note:
Differences shown with standard errors in parentheses. Positive values indicate the first definition has a larger effect than the second.
* p < 0.10, ** p < 0.05, *** p < 0.01

Table 5: Defense Grades - Model Comparison of Player Type Differences

| Variable | LPM | | | Probit | | | Logit | | |
|---------------------|---------------------------|--------------------------|---------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|----------------------------|-----------------------------|
| | Starter vs On-Field (LPM) | Starter vs Attempt (LPM) | On-Field vs Attempt (LPM) | Starter vs On-Field (Probit) | Starter vs Attempt (Probit) | On-Field vs Attempt (Probit) | Starter vs On-Field (Logit) | Starter vs Attempt (Logit) | On-Field vs Attempt (Logit) |
| D1.1 | | | | | | | | | |
| Grades Run Defense | 0.006(0.019) | 0.008(0.016) | 0.001(0.012) | 0.008(0.022) | 0.008(0.018) | 0.000(0.014) | 0.006(0.023) | 0.006(0.019) | -0.001(0.014) |
| Catch Pass Rush Def | 0.024(0.019) | -0.023(0.012)* | 0.000(0.021) | 0.004(0.018) | 0.004(0.018) | -0.027(0.013)** | 0.033(0.022) | 0.006(0.018) | -0.027(0.014)** |
| D1.2 | | | | | | | | | |
| Grades Run Defense | 0.021(0.028) | 0.028(0.015)* | 0.007(0.024) | 0.023(0.032) | 0.033(0.017)* | 0.010(0.028) | 0.024(0.031) | 0.033(0.018)* | 0.008(0.029) |
| Catch Pass Rush Def | 0.001(0.027) | -0.015(0.015) | 0.003(0.011) | -0.017(0.024) | -0.017(0.017) | -0.020(0.027) | -0.018(0.017) | -0.019(0.028) | -0.019(0.028) |
| D1.3 | | | | | | | | | |
| Grades Run Defense | 0.010(0.045) | -0.000(0.016) | -0.011(0.042) | 0.014(0.050) | 0.000(0.038) | -0.014(0.047) | 0.013(0.051) | -0.001(0.038) | -0.014(0.048) |
| Catch Pass Rush Def | 0.000(0.047) | 0.001(0.015) | 0.000(0.045) | -0.002(0.054) | 0.002(0.017) | 0.003(0.051) | 0.005(0.055) | 0.002(0.048) | -0.003(0.053) |
| D1.4 | | | | | | | | | |
| Grades Run Defense | 0.055(0.053) | 0.012(0.015) | -0.044(0.051) | 0.066(0.060) | 0.014(0.017) | -0.051(0.058) | 0.070(0.062) | 0.015(0.038) | -0.055(0.060) |
| Catch Pass Rush Def | 0.013(0.055) | -0.002(0.015) | -0.015(0.055) | 0.015(0.062) | -0.000(0.017) | -0.010(0.060) | 0.010(0.065) | -0.000(0.038) | -0.021(0.062) |
| LB1 | | | | | | | | | |
| Grades Run Defense | 0.022(0.016) | 0.026(0.014)* | 0.004(0.011) | 0.028(0.019) | 0.034(0.015)** | 0.005(0.012) | 0.029(0.020) | 0.035(0.016)** | 0.006(0.012) |
| Man Grades Cov Def | 0.027(0.015)** | -0.024(0.010)** | 0.001(0.009) | -0.034(0.015)** | -0.030(0.011)** | 0.004(0.010) | -0.035(0.015)** | -0.013(0.012)** | -0.004(0.010) |
| Zone Grades Cov Def | -0.002(0.016) | -0.002(0.013) | 0.003(0.010) | -0.004(0.018) | -0.004(0.014) | 0.000(0.012) | -0.003(0.019) | -0.003(0.015) | 0.002(0.012) |
| LB2 | | | | | | | | | |
| Grades Run Defense | 0.041(0.022)* | 0.024(0.014)* | -0.016(0.018) | 0.049(0.025)** | 0.029(0.016)* | -0.020(0.020) | 0.051(0.026)** | 0.031(0.016)* | -0.020(0.021) |
| Man Grades Cov Def | -0.015(0.017) | -0.010(0.010) | -0.010(0.010) | -0.015(0.019) | -0.012(0.012) | 0.008(0.015) | -0.019(0.020) | -0.013(0.012) | 0.006(0.016) |
| Zone Grades Cov Def | -0.020(0.021) | -0.016(0.012) | 0.010(0.017) | -0.000(0.024) | -0.020(0.014) | 0.010(0.020) | -0.001(0.024) | -0.020(0.014) | 0.011(0.020) |
| LB3 | | | | | | | | | |
| Grades Run Defense | 0.032(0.030) | -0.001(0.014) | -0.034(0.030) | 0.030(0.044) | -0.002(0.016) | -0.030(0.042) | 0.030(0.046) | -0.002(0.016) | -0.041(0.043) |
| Man Grades Cov Def | -0.000(0.022) | 0.013(0.012) | -0.010(0.019) | -0.000(0.025) | 0.017(0.013) | 0.018(0.021) | -0.001(0.026) | 0.018(0.014) | 0.019(0.022) |
| Zone Grades Cov Def | 0.040(0.030) | -0.006(0.013) | -0.047(0.028)* | 0.047(0.035) | -0.009(0.015) | -0.056(0.032)* | 0.051(0.037) | -0.007(0.015) | -0.038(0.034)* |
| LB4 | | | | | | | | | |
| Grades Run Defense | -0.009(0.041) | -0.011(0.012)** | 0.020(0.040) | -0.006(0.047) | -0.036(0.014)** | 0.030(0.045) | -0.009(0.044)** | -0.009(0.014)** | 0.033(0.048) |
| Man Grades Cov Def | 0.077(0.022) | 0.024(0.012)** | -0.000(0.018) | 0.030(0.025) | 0.030(0.011)** | -0.006(0.021) | 0.030(0.026) | 0.030(0.014)** | -0.006(0.022) |
| Zone Grades Cov Def | 0.007(0.032) | 0.005(0.014) | -0.002(0.030) | 0.007(0.038) | 0.006(0.016) | -0.001(0.035) | 0.008(0.039) | 0.007(0.016) | -0.001(0.036) |
| CB1 | | | | | | | | | |
| Grades Run Defense | -0.021(0.022) | -0.011(0.016) | -0.010(0.016) | -0.027(0.025) | -0.013(0.018) | 0.014(0.019) | -0.026(0.026) | -0.013(0.018) | 0.013(0.020) |
| Man Grades Cov Def | 0.010(0.019) | -0.010(0.014) | -0.029(0.014)** | 0.020(0.022) | -0.014(0.015) | -0.034(0.016)** | 0.022(0.022) | -0.014(0.016) | -0.037(0.017)** |
| Zone Grades Cov Def | 0.010(0.021) | 0.007(0.015) | -0.012(0.016) | 0.024(0.016) | 0.011(0.017) | -0.013(0.018) | 0.020(0.018) | 0.011(0.015) | -0.012(0.019) |
| CB2 | | | | | | | | | |
| Grades Run Defense | 0.052(0.025)** | 0.041(0.015)** | -0.012(0.020) | 0.063(0.028)** | 0.046(0.017)** | -0.017(0.023) | 0.067(0.029)** | 0.040(0.017)** | -0.018(0.024) |
| Man Grades Cov Def | -0.012(0.022) | -0.010(0.013) | 0.011(0.018) | -0.020(0.025) | -0.017(0.014) | 0.013(0.021) | -0.027(0.026) | -0.015(0.015) | 0.012(0.022) |
| Zone Grades Cov Def | -0.004(0.025) | -0.000(0.014) | -0.000(0.022) | -0.006(0.029) | -0.015(0.016) | -0.000(0.025) | -0.006(0.030) | -0.017(0.017) | -0.009(0.025) |
| CB3 | | | | | | | | | |
| Grades Run Defense | -0.011(0.035) | -0.010(0.012) | 0.037(0.033) | -0.005(0.040) | -0.010(0.014) | 0.030(0.038) | -0.005(0.042) | -0.010(0.035) | 0.045(0.039) |
| Man Grades Cov Def | 0.070(0.022) | 0.000(0.013) | -0.011(0.030) | 0.021(0.036) | 0.005(0.015) | -0.005(0.053) | 0.021(0.037) | 0.017(0.035) | -0.004(0.035) |
| Zone Grades Cov Def | -0.039(0.036) | -0.012(0.014) | -0.027(0.034) | -0.044(0.041) | -0.015(0.016) | 0.029(0.038) | -0.046(0.047) | -0.016(0.017) | 0.031(0.040) |
| S1 | | | | | | | | | |
| Grades Run Defense | 0.022(0.021) | 0.006(0.017) | -0.016(0.014) | 0.026(0.024) | 0.007(0.019) | -0.010(0.016) | 0.029(0.025) | 0.007(0.020) | -0.022(0.017) |
| Man Grades Cov Def | -0.006(0.019) | -0.003(0.015) | 0.003(0.013) | -0.004(0.022) | -0.001(0.017) | 0.003(0.015) | -0.006(0.023) | -0.003(0.017) | 0.008(0.016) |
| Zone Grades Cov Def | -0.018(0.019) | -0.011(0.015) | -0.007(0.013) | -0.020(0.017) | -0.014(0.013) | -0.012(0.016) | -0.013(0.018) | -0.012(0.015) | -0.012(0.015) |
| S2 | | | | | | | | | |
| Grades Run Defense | -0.006(0.011) | -0.008(0.016) | -0.000(0.017) | -0.006(0.015) | -0.007(0.019) | -0.000(0.030) | -0.005(0.036) | -0.008(0.019) | -0.003(0.013) |
| Man Grades Cov Def | -0.000(0.029) | -0.012(0.014) | 0.001(0.026) | 0.002(0.034) | -0.012(0.016) | -0.014(0.030) | 0.001(0.035) | -0.011(0.016) | -0.012(0.032) |
| Zone Grades Cov Def | -0.009(0.029) | -0.004(0.015) | -0.004(0.025) | -0.006(0.015) | -0.008(0.016) | 0.007(0.031) | -0.017(0.036) | -0.009(0.012) | 0.008(0.012) |
| S3 | | | | | | | | | |
| Grades Run Defense | -0.017(0.046) | -0.004(0.014) | 0.012(0.044) | -0.010(0.055) | -0.006(0.016) | 0.012(0.053) | -0.034(0.048) | -0.007(0.046) | 0.009(0.056) |
| Man Grades Cov Def | 0.013(0.045) | 0.000(0.014) | -0.008(0.041) | 0.000(0.051) | -0.014(0.043) | -0.010(0.049) | -0.006(0.045) | -0.010(0.041) | -0.010(0.051) |
| Zone Grades Cov Def | 0.004(0.049) | 0.022(0.025) | 0.021(0.047) | 0.018(0.058) | 0.028(0.018) | 0.018(0.056) | 0.007(0.061) | 0.029(0.035) | 0.022(0.055) |

Table 6: Defense Tackles - Linear Comparison of Player Type Differences

| Variable | LPM | | | Probit | | | Logit | | |
|--------------------|---------------------------|--------------------------|---------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|----------------------------|-----------------------------|
| | Starter vs On-Field (LPM) | Starter vs Attempt (LPM) | On-Field vs Attempt (LPM) | Starter vs On-Field (Probit) | Starter vs Attempt (Probit) | On-Field vs Attempt (Probit) | Starter vs On-Field (Logit) | Starter vs Attempt (Logit) | On-Field vs Attempt (Logit) |
| D11 | | | | | | | | | |
| Grades Tackles | 0.005(0.013) | -0.004(0.009) | -0.009(0.009) | 0.005(0.014) | -0.006(0.011) | -0.011(0.010) | 0.006(0.015) | -0.005(0.011) | -0.011(0.011) |
| Productivity Sacks | 0.017(0.012) | 0.010(0.009) | -0.007(0.009) | 0.022(0.014) | 0.014(0.010) | -0.008(0.010) | 0.022(0.015) | 0.015(0.011) | -0.008(0.011) |
| D12 | | | | | | | | | |
| Grades Tackles | -0.007(0.013) | 0.008(0.009) | 0.014(0.010) | -0.009(0.015) | 0.010(0.011) | 0.013(0.011)* | -0.008(0.016) | 0.011(0.011) | 0.019(0.012) |
| Productivity Sacks | 0.008(0.012) | -0.002(0.009) | 0.010(0.014) | 0.006(0.010) | -0.004(0.010) | -0.004(0.010) | 0.009(0.015) | 0.005(0.011) | -0.004(0.011) |
| D13 | | | | | | | | | |
| Grades Tackles | -0.007(0.015) | -0.008(0.009) | -0.001(0.012) | -0.007(0.017) | -0.009(0.011) | -0.002(0.014) | -0.007(0.017) | -0.009(0.011) | -0.002(0.014) |
| Productivity Sacks | -0.001(0.013) | 0.000(0.009) | 0.001(0.010) | -0.001(0.015) | -0.001(0.010) | 0.000(0.012) | -0.001(0.016) | -0.000(0.011) | 0.000(0.012) |
| D14 | | | | | | | | | |
| Grades Tackles | -0.018(0.016) | -0.009(0.010) | 0.009(0.013) | -0.023(0.018) | -0.011(0.011) | 0.012(0.014) | -0.023(0.018) | -0.012(0.012) | 0.011(0.015) |
| Productivity Sacks | 0.015(0.014) | 0.004(0.010) | -0.011(0.010) | 0.017(0.015) | -0.002(0.011) | -0.015(0.012) | 0.018(0.016) | 0.001(0.011) | -0.016(0.012) |
| L11 | | | | | | | | | |
| Grades Tackles | 0.009(0.016) | 0.017(0.012) | 0.007(0.012) | 0.011(0.019) | 0.021(0.014) | 0.010(0.014) | 0.012(0.020) | 0.023(0.014) | 0.010(0.014) |
| Man Tackles | 0.009(0.015) | 0.009(0.011) | -0.000(0.011) | 0.011(0.017) | 0.010(0.013) | -0.000(0.013) | 0.012(0.018) | 0.011(0.013) | -0.001(0.013) |
| Zone Tackles | 0.004(0.018) | -0.008(0.013) | -0.012(0.013) | 0.006(0.020) | -0.011(0.015) | -0.017(0.015) | 0.005(0.021) | -0.011(0.015) | -0.016(0.016) |
| L12 | | | | | | | | | |
| Grades Tackles | 0.021(0.017) | -0.009(0.012) | -0.030(0.013)** | 0.020(0.019) | -0.011(0.014) | -0.030(0.015)** | 0.027(0.020) | -0.010(0.014) | -0.030(0.015)** |
| Man Tackles | 0.004(0.015) | 0.013(0.011) | 0.009(0.011) | 0.007(0.017) | 0.016(0.013) | 0.010(0.013) | 0.008(0.018) | 0.016(0.013) | 0.009(0.013) |
| Zone Tackles | -0.013(0.017) | 0.001(0.013) | 0.013(0.013) | -0.017(0.020) | -0.001(0.015) | 0.016(0.015) | -0.017(0.021) | -0.000(0.015) | 0.017(0.015) |
| L13 | | | | | | | | | |
| Grades Tackles | 0.043(0.020)** | 0.024(0.012)* | -0.019(0.016) | 0.051(0.022)** | 0.027(0.014)* | -0.024(0.018) | 0.053(0.023)** | 0.028(0.015)* | -0.025(0.019) |
| Man Tackles | -0.008(0.015) | -0.009(0.011) | 0.007(0.011) | -0.010(0.017) | -0.001(0.012) | 0.009(0.013) | -0.010(0.018) | -0.001(0.013) | 0.008(0.013) |
| Zone Tackles | -0.020(0.019) | -0.017(0.013) | 0.009(0.014) | -0.020(0.021) | -0.017(0.015) | 0.011(0.016) | -0.010(0.022) | -0.010(0.015) | 0.012(0.017) |
| L14 | | | | | | | | | |
| Grades Tackles | -0.016(0.020) | -0.016(0.013) | -0.000(0.016) | -0.015(0.022) | -0.010(0.014) | -0.004(0.018) | -0.017(0.023) | -0.020(0.015) | -0.003(0.018) |
| Man Tackles | 0.024(0.015) | 0.013(0.011) | -0.011(0.011) | 0.028(0.017)* | 0.014(0.012) | -0.015(0.013) | 0.029(0.018) | 0.013(0.013) | -0.016(0.013) |
| Zone Tackles | -0.006(0.017) | 0.004(0.012) | 0.011(0.014) | -0.008(0.020) | 0.006(0.013) | 0.015(0.016) | -0.008(0.021) | 0.008(0.013) | 0.016(0.017) |
| C11 | | | | | | | | | |
| Grades Tackles | -0.018(0.013) | -0.015(0.009) | 0.003(0.010) | -0.020(0.015) | -0.016(0.011) | 0.004(0.011) | -0.021(0.015) | -0.018(0.011) | 0.004(0.011) |
| Man Tackles | -0.009(0.012)** | -0.006(0.011) | 0.024(0.011)** | -0.003(0.017)** | -0.008(0.012) | 0.020(0.012)** | -0.003(0.017)** | -0.008(0.013) | 0.020(0.012)** |
| Zone Tackles | -0.019(0.014) | -0.018(0.010)* | 0.002(0.010) | -0.024(0.016) | -0.020(0.011)* | 0.004(0.012) | -0.022(0.016) | -0.021(0.012)* | 0.005(0.012) |
| C12 | | | | | | | | | |
| Grades Tackles | 0.020(0.014) | 0.027(0.009)*** | 0.007(0.010) | 0.022(0.015) | 0.029(0.011)*** | 0.007(0.012) | 0.022(0.016) | 0.029(0.011)*** | 0.007(0.012) |
| Man Tackles | -0.016(0.014) | -0.006(0.010) | 0.009(0.011) | -0.018(0.016) | -0.007(0.012) | 0.011(0.012) | -0.018(0.017) | -0.007(0.012) | 0.010(0.013) |
| Zone Tackles | -0.014(0.014) | -0.017(0.010)* | -0.004(0.011) | -0.016(0.016) | -0.020(0.011)* | -0.004(0.012) | -0.015(0.017) | -0.021(0.012)* | -0.006(0.013) |
| C13 | | | | | | | | | |
| Grades Tackles | -0.013(0.015) | -0.012(0.010) | 0.001(0.012) | -0.014(0.017) | -0.013(0.011) | -0.001(0.013) | -0.016(0.017) | -0.016(0.011) | -0.000(0.014) |
| Man Tackles | -0.005(0.015) | -0.010(0.011) | -0.001(0.012) | -0.007(0.017) | -0.017(0.012) | -0.010(0.013) | -0.006(0.018) | -0.016(0.012) | -0.010(0.014) |
| Zone Tackles | -0.010(0.016) | -0.008(0.010) | 0.003(0.013) | -0.012(0.018) | -0.009(0.012) | 0.003(0.015) | -0.013(0.019) | -0.009(0.012) | 0.004(0.015) |
| S1 | | | | | | | | | |
| Grades Tackles | 0.004(0.014) | 0.004(0.010) | -0.000(0.010) | 0.006(0.016) | 0.006(0.011) | -0.000(0.011) | 0.007(0.016) | 0.008(0.012) | 0.001(0.012) |
| Man Tackles | 0.003(0.014) | 0.003(0.010) | -0.001(0.011) | 0.007(0.016) | 0.005(0.012) | -0.002(0.012) | 0.005(0.017) | 0.005(0.012) | 0.000(0.012) |
| Zone Tackles | -0.017(0.013) | -0.014(0.010) | 0.002(0.010) | -0.010(0.015) | -0.017(0.011) | 0.002(0.011) | -0.010(0.016) | -0.016(0.011) | 0.001(0.012) |
| S2 | | | | | | | | | |
| Grades Tackles | -0.007(0.015) | -0.001(0.010) | 0.006(0.012) | -0.007(0.018) | 0.001(0.012) | 0.009(0.014) | -0.008(0.018) | 0.001(0.012) | 0.009(0.014) |
| Man Tackles | 0.006(0.015) | 0.007(0.011) | 0.001(0.011) | 0.006(0.017) | 0.009(0.012) | 0.003(0.013) | 0.008(0.018) | 0.008(0.013) | 0.000(0.013) |
| Zone Tackles | -0.005(0.015) | -0.003(0.010) | 0.001(0.012) | -0.005(0.018) | -0.005(0.012) | 0.000(0.014) | -0.005(0.018) | -0.000(0.012) | -0.001(0.014) |
| S3 | | | | | | | | | |
| Grades Tackles | -0.006(0.017) | 0.008(0.011) | 0.015(0.014) | -0.009(0.019) | 0.010(0.012) | 0.019(0.016) | -0.010(0.020) | 0.010(0.013) | 0.020(0.016) |
| Man Tackles | -0.007(0.016) | -0.014(0.011) | -0.007(0.013) | -0.009(0.019) | -0.017(0.012) | -0.008(0.015) | -0.010(0.020) | -0.017(0.013) | -0.007(0.016) |
| Zone Tackles | 0.005(0.018) | -0.003(0.011) | -0.008(0.014) | 0.007(0.020) | -0.004(0.013) | -0.011(0.016) | 0.008(0.021) | -0.004(0.013) | -0.012(0.017) |

Notes:
Differences shown with standard errors in parentheses. Positive values indicate the first definition has a larger effect than the second.
* p < 0.10, ** p < 0.05, *** p < 0.01