## 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	0.029(0.016)*	0.091(0.049)*	0.151(0.082)*	0.031(0.014)**	0.098(0.044)**	0.167(0.072)**	0.007(0.004)	0.030(0.021)	0.052(0.038)	
Medium Grades Pass	-0.014(0.014)	-0.040(0.041)	-0.069(0.068)	-0.003(0.015)	-0.003(0.045)	-0.015(0.074)	0.006(0.004)	0.022(0.017)	0.038(0.031)	
Deep Grades Pass	-0.012(0.013)	-0.040(0.040)	-0.070(0.066)	-0.020(0.013)	-0.070(0.041)*	-0.113(0.068)*	0.006(0.004)	0.021(0.017)	0.046(0.030)	
Running Backs	()	( ,	( ,	( /	( )	()	( ,	( /	( )	
Grades Pass Block	-0.022(0.010)**	-0.066(0.031)**	-0.109(0.053)**	0.012(0.010)	0.033(0.030)	0.055(0.050)	-0.004(0.003)	-0.024(0.014)*	-0.041(0.024)*	
Grades Run	0.013(0.011)	0.040(0.033)	0.069(0.054)	-0.004(0.011)	-0.013(0.033)	-0.024(0.055)	-0.001(0.003)	-0.004(0.013)	-0.002(0.023)	
Short Grades Pass	0.004(0.011)	0.012(0.031)	0.017(0.052)	-0.004(0.010)	-0.011(0.031)	-0.019(0.051)	-0.000(0.003)	0.001(0.014)	0.001(0.024)	
Medium Grades Pass	-0.015(0.009)	-0.044(0.028)	-0.072(0.047)	-0.005(0.009)	-0.016(0.027)	-0.026(0.044)	-0.001(0.003)	-0.006(0.013)	-0.009(0.022)	
Deep Grades Pass	-0.004(0.010)	-0.013(0.029)	-0.022(0.048)	-0.002(0.009)	-0.007(0.027)	-0.012(0.044)	0.003(0.003)	0.008(0.012)	0.014(0.021)	
WR1	( ,	( ,	()	( ,	( )	( ,	( ,	( ,	( )	
Grades Run Block	0.005(0.015)	0.010(0.046)	0.023(0.077)	-0.012(0.019)	-0.042(0.058)	-0.060(0.097)	-0.006(0.004)	-0.024(0.019)	-0.046(0.034)	
Short Grades Pass	0.002(0.013)	0.003(0.041)	0.012(0.067)	0.001(0.016)	-0.004(0.046)	-0.010(0.076)	-0.000(0.004)	-0.001(0.017)	-0.007(0.030)	
Medium Grades Pass	0.016(0.013)	0.046(0.039)	0.079(0.065)	-0.001(0.014)	0.001(0.042)	0.001(0.070)	0.005(0.004)	0.015(0.018)	0.034(0.031)	
Deep Grades Pass	0.002(0.011)	0.005(0.034)	0.009(0.056)	0.004(0.012)	0.017(0.036)	0.028(0.059)	0.003(0.003)	0.016(0.014)	0.027(0.025)	
WR2	0.00=(0.011)	0.000(0.00-)	01000(01000)	0.00-(0.01-2)	0.021(0.000)	0.020(0.000)	***************************************	0.010(0.011)	0.021(0.020)	
Grades Run Block	-0.021(0.015)	-0.063(0.046)	-0.102(0.077)	0.028(0.036)	0.086(0.110)	0.150(0.179)	-0.001(0.004)	-0.003(0.020)	0.005(0.035)	
Short Grades Pass	-0.010(0.013)	-0.027(0.039)	-0.049(0.065)	0.013(0.024)	0.035(0.071)	0.060(0.119)	0.008(0.004)**	0.036(0.016)**	0.059(0.029)**	
Medium Grades Pass	0.015(0.012)	0.043(0.035)	0.075(0.058)	-0.004(0.020)	-0.019(0.060)	-0.028(0.101)	0.001(0.004)	-0.000(0.016)	-0.001(0.027)	
Deep Grades Pass	0.004(0.011)	0.015(0.033)	0.022(0.054)	0.011(0.016)	0.043(0.049)	0.066(0.082)	0.000(0.003)	0.002(0.013)	0.003(0.024)	
WR3	0.001(0.011)	0.010(0.000)	0.022(0.001)	0.011(0.010)	0.010(0.010)	0.000(0.002)	0.000(0.000)	0.002(0.010)	0.000(0.021)	
Grades Run Block	-0.007(0.014)	-0.021(0.042)	-0.041(0.068)	0.021(0.027)	0.068(0.082)	0.107(0.137)	-0.001(0.004)	-0.002(0.017)	-0.004(0.031)	
Short Grades Pass	-0.015(0.011)	-0.050(0.033)	-0.079(0.055)	-0.002(0.020)	-0.002(0.061)	0.007(0.102)	-0.003(0.003)	-0.014(0.014)	-0.021(0.025)	
Medium Grades Pass	0.009(0.010)	0.024(0.031)	0.041(0.051)	0.009(0.019)	0.009(0.057)	0.017(0.094)	0.006(0.003)*	0.021(0.014)	0.039(0.024)	
Deep Grades Pass	0.003(0.010)	0.013(0.030)	0.018(0.049)	0.014(0.015)	0.052(0.046)	0.082(0.076)	0.001(0.003)	0.009(0.013)	0.014(0.022)	
TE1	0.000(0.010)	0.010(0.000)	0.010(0.043)	0.014(0.010)	0.002(0.040)	0.002(0.010)	0.001(0.003)	0.005(0.010)	0.014(0.022)	
Grades Pass Block	0.026(0.012)**	0.078(0.035)**	0.133(0.058)**	0.024(0.011)**	0.079(0.035)**	0.130(0.058)**	-0.002(0.003)	-0.012(0.014)	-0.016(0.026)	
Grades Run Block	-0.015(0.015)	-0.043(0.044)	-0.078(0.074)	-0.012(0.013)	-0.039(0.038)	-0.066(0.064)	-0.000(0.004)	0.007(0.019)	0.007(0.034)	
Short Grades Pass	0.006(0.013)	0.012(0.038)	0.020(0.063)	0.001(0.013)	-0.001(0.038)	-0.002(0.063)	0.003(0.004)	0.010(0.018)	0.021(0.030)	
Medium Grades Pass	-0.016(0.011)	-0.049(0.032)	-0.081(0.053)	0.016(0.011)	0.048(0.032)	0.083(0.052)	0.002(0.003)	0.008(0.014)	0.008(0.024)	
Deep Grades Pass	-0.004(0.010)	-0.011(0.029)	-0.015(0.048)	-0.015(0.009)	-0.045(0.028)	-0.074(0.047)	0.002(0.003)	0.009(0.012)	0.018(0.022)	
OL1	-0.001(0.010)	-0.011(0.023)	-0.010(0.040)	-0.010(0.003)	-0.040(0.020)	-0.014(0.041)	0.002(0.003)	0.005(0.012)	0.010(0.022)	
Grades Pass Block	0.015(0.012)	0.048(0.036)	0.082(0.059)	-0.011(0.010)	-0.034(0.029)	-0.055(0.048)	-0.004(0.003)	-0.017(0.015)	-0.027(0.027)	
Grades Run Block	0.004(0.014)	0.015(0.042)	0.018(0.069)	0.006(0.010)	0.018(0.030)	0.034(0.050)	0.001(0.004)	0.000(0.017)	0.002(0.031)	
OL2	0.001(0.011)	0.010(0.012)	0.010(0.000)	0.000(0.010)	0.010(0.000)	0.001(0.000)	0.001(0.001)	0.000(0.011)	0.002(0.001)	
Grades Pass Block	-0.008(0.012)	-0.023(0.035)	-0.038(0.058)	-0.005(0.010)	-0.014(0.029)	-0.025(0.048)	-0.000(0.003)	-0.006(0.015)	-0.015(0.026)	
Grades Run Block	-0.004(0.014)	-0.014(0.042)	-0.021(0.070)	-0.013(0.010)	-0.041(0.030)	-0.073(0.050)	0.003(0.004)	0.020(0.017)	0.037(0.031)	
OL3	0.001(0.011)	0.011(0.012)	0.021(0.010)	0.010(0.010)	0.011(0.000)	0.010(0.000)	0.000(0.001)	0.020(0.011)	0.001(0.001)	
Grades Pass Block	0.009(0.012)	0.023(0.035)	0.044(0.058)	0.007(0.009)	0.024(0.029)	0.040(0.048)	0.001(0.003)	0.006(0.015)	0.006(0.027)	
Grades Run Block	-0.014(0.014)	-0.044(0.042)	-0.075(0.070)	0.004(0.009)	0.018(0.029)	0.027(0.048)	-0.004(0.004)	-0.019(0.018)	-0.038(0.032)	
OL4	-0.014(0.014)	-0.011(0.012)	-0.010(0.010)	0.004(0.005)	0.010(0.023)	0.021(0.040)	-0.004(0.004)	-0.013(0.010)	-0.000(0.002)	
Grades Pass Block	0.022(0.012)*	0.064(0.036)*	0.109(0.060)*	0.007(0.010)	0.018(0.029)	0.031(0.049)	-0.003(0.003)	-0.016(0.015)	-0.023(0.026)	
Grades Run Block	-0.008(0.013)	-0.024(0.039)	-0.044(0.065)	-0.014(0.010)	-0.038(0.029)	-0.066(0.047)	0.000(0.004)	0.005(0.017)	0.007(0.030)	
OL5	0.000(0.010)	3.021(0.000)	3.011(0.000)	3.011(0.010)	0.000(0.020)	3.000(0.011)	(0.001)	3.000(0.017)	3.001(0.000)	
Grades Pass Block	0.032(0.012)***	0.091(0.037)**	0.154(0.062)**	-0.012(0.010)	-0.040(0.031)	-0.068(0.051)	0.001(0.003)	0.015(0.015)	0.020(0.027)	
Grades Run Block	-0.031(0.013)**	-0.093(0.040)**	-0.152(0.066)**	0.011(0.010)	0.029(0.030)	0.049(0.050)	-0.002(0.004)	-0.010(0.017)	-0.020(0.021)	
Perf. Measures	-0.001(0.010)	-0.033(0.040)	-0.102(0.000)	0.011(0.010)	0.025(0.000)	0.043(0.000)	-0.002(0.004)	-0.010(0.011)	-0.020(0.000)	
GIMR	-0.002(0.008)	-0.007(0.023)	-0.014(0.038)	-0.002(0.008)	-0.007(0.023)	-0.012(0.038)				
Control Variables	0.002(0.000)	0.001 (0.020)	0.011(0.000)	0.002(0.000)	0.001(0.020)	0.012(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 Def. Players	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Control Off. Players	No	No	No	No	No	No	No	No	No	
Control Oll. Flayers	INO	INO	INO	140	INO	INO	INO	NO	100	

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)	0.093(0.069)	0.002(0.004)	0.004(0.017)	0.015(0.030)
Medium Yards	0.029(0.013)**	0.096(0.040)**	0.156(0.068)**	0.004(0.014)	0.015(0.042)	0.023(0.069)	0.006(0.004)	0.022(0.018)	0.032(0.032)
Deep Yards	-0.035(0.012)***	-0.111(0.036)***	-0.182(0.060)***	-0.017(0.012)	-0.053(0.035)	-0.086(0.058)	0.007(0.004)*	0.025(0.017)	0.044(0.029)
Running Backs		` ′			` ′	` ′			
Grades Pass Block	-0.016(0.010)	-0.046(0.030)	-0.079(0.049)	0.009(0.009)	0.025(0.027)	0.039(0.046)	-0.005(0.003)	-0.025(0.013)*	-0.041(0.022)*
Yards	0.003(0.010)	0.014(0.029)	0.019(0.049)	0.016(0.009)*	0.046(0.027)*	0.074(0.045)*	0.005(0.003)*	0.024(0.013)*	0.043(0.023)*
Short Yards	-0.008(0.010)	-0.024(0.030)	-0.037(0.050)	-0.016(0.010)*	-0.048(0.029)*	-0.075(0.048)	0.001(0.003)	0.008(0.013)	0.015(0.023)
Medium Yards	-0.020(0.009)**	-0.061(0.026)**	-0.102(0.043)**	-0.007(0.008)	-0.022(0.024)	-0.039(0.041)	-0.003(0.002)	-0.025(0.012)**	-0.041(0.022)*
Deep Yards	0.003(0.009)	0.013(0.030)	0.019(0.051)	-0.001(0.009)	-0.006(0.027)	-0.010(0.044)	-0.004(0.003)	-0.016(0.011)	-0.024(0.020)
WR1									
Grades Run Block	0.009(0.015)	0.021(0.045)	0.041(0.074)	-0.010(0.019)	-0.036(0.056)	-0.053(0.094)	-0.003(0.004)	-0.011(0.018)	-0.021(0.032)
Short Yards	-0.006(0.010)	-0.019(0.031)	-0.029(0.052)	-0.001(0.011)	-0.006(0.031)	-0.009(0.052)	-0.003(0.003)	-0.017(0.013)	-0.030(0.024)
Medium Yards	-0.001(0.011)	-0.003(0.033)	-0.005(0.054)	-0.005(0.011)	-0.009(0.033)	-0.019(0.054)	0.001(0.003)	0.001(0.014)	0.005(0.026)
Deep Yards	0.028(0.010)***	0.084(0.030)***	0.140(0.049)***	0.018(0.010)*	0.055(0.029)*	0.091(0.048)*	0.001(0.003)	0.007(0.013)	0.008(0.023)
WR2									
Grades Run Block	-0.022(0.015)	-0.064(0.046)	-0.107(0.076)	0.042(0.035)	0.125(0.106)	0.219(0.174)	0.002(0.004)	0.010(0.019)	0.027(0.034)
Short Yards	-0.008(0.010)	-0.021(0.031)	-0.038(0.051)	0.001(0.011)	0.004(0.034)	0.004(0.056)	0.004(0.003)	0.014(0.013)	0.026(0.023)
Medium Yards	-0.008(0.011)	-0.028(0.033)	-0.046(0.054)	-0.017(0.012)	-0.045(0.036)	-0.079(0.060)	-0.003(0.003)	-0.013(0.014)	-0.023(0.025)
Deep Yards	0.015(0.010)	0.048(0.030)	0.080(0.050)	0.008(0.010)	0.023(0.031)	0.041(0.051)	0.002(0.003)	0.010(0.013)	0.016(0.023)
WR3	( /	( ,	( ,	( )	( ,	( ,	( )	()	()
Grades Run Block	-0.008(0.013)	-0.023(0.041)	-0.043(0.067)	0.026(0.024)	0.082(0.075)	0.132(0.126)	0.001(0.004)	0.004(0.017)	0.009(0.030)
Short Yards	-0.011(0.011)	-0.035(0.031)	-0.052(0.052)	0.010(0.012)	0.023(0.035)	0.043(0.057)	-0.002(0.003)	-0.011(0.013)	-0.017(0.024)
Medium Yards	-0.018(0.011)*	-0.056(0.033)*	-0.095(0.055)*	0.001(0.011)	0.003(0.033)	0.003(0.054)	0.003(0.003)	0.012(0.014)	0.023(0.025)
Deep Yards	0.014(0.010)	0.046(0.029)	0.075(0.048)	0.002(0.010)	0.007(0.030)	0.011(0.049)	0.000(0.003)	0.006(0.013)	0.006(0.022)
TE1	()	( )	( )	( ,	( )	( ,	( )	( )	,
Grades Pass Block	0.026(0.011)**	0.081(0.035)**	0.135(0.058)**	0.024(0.011)**	0.080(0.033)**	0.131(0.056)**	-0.001(0.003)	-0.009(0.014)	-0.011(0.025)
Grades Run Block	-0.017(0.014)	-0.056(0.041)	-0.095(0.069)	-0.009(0.011)	-0.029(0.034)	-0.049(0.057)	0.003(0.004)	0.016(0.018)	0.024(0.031)
Short Yards	0.004(0.011)	0.011(0.034)	0.018(0.056)	-0.007(0.011)	-0.022(0.032)	-0.037(0.053)	0.002(0.003)	0.012(0.016)	0.010(0.028)
Medium Yards	-0.013(0.011)	-0.043(0.033)	-0.071(0.054)	0.008(0.010)	0.019(0.031)	0.034(0.051)	-0.000(0.003)	-0.007(0.015)	-0.010(0.027)
Deep Yards	-0.011(0.010)	-0.034(0.030)	-0.056(0.049)	-0.005(0.009)	-0.016(0.027)	-0.026(0.045)	-0.001(0.003)	-0.005(0.013)	-0.006(0.023)
OL1	()	( ,	,		( ,	( ,	( ,	,	( /
Grades Pass Block	0.013(0.012)	0.038(0.035)	0.067(0.059)	-0.012(0.010)	-0.037(0.029)	-0.060(0.048)	-0.004(0.003)	-0.018(0.015)	-0.030(0.027)
Grades Run Block	0.006(0.014)	0.020(0.041)	0.030(0.069)	0.005(0.010)	0.015(0.030)	0.030(0.050)	0.001(0.004)	0.001(0.017)	0.004(0.031)
OL2									
Grades Pass Block	-0.008(0.012)	-0.025(0.035)	-0.041(0.058)	-0.004(0.010)	-0.011(0.029)	-0.019(0.048)	-0.001(0.003)	-0.008(0.015)	-0.019(0.026)
Grades Run Block	-0.006(0.014)	-0.017(0.041)	-0.027(0.069)	-0.014(0.010)	-0.045(0.030)	-0.078(0.050)	0.004(0.004)	0.025(0.017)	0.048(0.030)
OL3									
Grades Pass Block	0.009(0.012)	0.026(0.035)	0.047(0.059)	0.008(0.009)	0.025(0.029)	0.041(0.048)	0.001(0.003)	0.006(0.015)	0.006(0.027)
Grades Run Block	-0.013(0.014)	-0.041(0.042)	-0.070(0.071)	0.003(0.009)	0.016(0.029)	0.023(0.048)	-0.004(0.004)	-0.017(0.018)	-0.035(0.032)
OL4									
Grades Pass Block	0.019(0.012)	0.055(0.036)	0.097(0.061)	0.005(0.010)	0.014(0.030)	0.025(0.049)	-0.002(0.003)	-0.013(0.015)	-0.017(0.026)
Grades Run Block	-0.006(0.013)	-0.020(0.039)	-0.037(0.065)	-0.012(0.010)	-0.035(0.029)	-0.062(0.047)	0.000(0.004)	0.006(0.017)	0.010(0.030)
OL5									
Grades Pass Block	0.024(0.012)*	0.066(0.037)*	0.112(0.061)*	-0.013(0.010)	-0.040(0.031)	-0.067(0.052)	0.001(0.003)	0.013(0.015)	0.018(0.027)
Grades Run Block	-0.024(0.013)*	-0.073(0.039)*	-0.119(0.065)*	0.010(0.010)	0.027(0.030)	0.044(0.051)	-0.001(0.004)	-0.007(0.017)	-0.014(0.030)
Perf. Measures									
GIMR	0.003(0.008)	0.007(0.023)	0.009(0.039)	0.002(0.008)	0.006(0.023)	0.009(0.039)			
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
Control Off. Players	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	0.025(0.014)*	0.072(0.041)*	0.113(0.069)*	0.030(0.014)**	0.088(0.043)**	0.141(0.072)*	-0.001(0.004)	-0.004(0.018)	0.002(0.031)	
Medium Completions	0.024(0.014)*	0.084(0.042)**	0.134(0.070)*	0.001(0.015)	0.005(0.044)	0.006(0.073)	0.008(0.004)*	0.026(0.018)	0.040(0.033)	
Deep Completions	-0.032(0.012)**	-0.099(0.037)***	-0.161(0.062)**	-0.026(0.012)**	-0.078(0.036)**	-0.125(0.060)**	0.005(0.004)	0.017(0.017)	0.030(0.029)	
Running Backs	( )	( ,	( ,	( ,	( )	( /	( )	( /	( )	
Grades Pass Block	-0.017(0.010)*	-0.051(0.030)*	-0.084(0.049)*	0.010(0.009)	0.029(0.027)	0.046(0.046)	-0.004(0.003)	-0.024(0.013)*	-0.039(0.022)*	
Attempts	0.003(0.010)	0.013(0.030)	0.017(0.049)	0.013(0.009)	0.039(0.027)	0.063(0.045)	0.003(0.003)	0.012(0.013)	0.023(0.024)	
Short Receptions	-0.004(0.010)	-0.015(0.031)	-0.022(0.052)	-0.018(0.010)*	-0.054(0.029)*	-0.083(0.047)*	0.002(0.003)	0.014(0.014)	0.023(0.025)	
Medium Receptions	-0.016(0.009)*	-0.047(0.026)*	-0.080(0.043)*	-0.007(0.008)	-0.022(0.024)	-0.039(0.040)	-0.004(0.002)	-0.021(0.011)*	-0.036(0.020)*	
Deep Receptions	-0.001(0.009)	0.001(0.030)	-0.003(0.051)	-0.004(0.009)	-0.014(0.026)	-0.024(0.043)	-0.001(0.002)	-0.006(0.012)	-0.007(0.021)	
WR1	0.001(0.000)	0.001(0.000)	0.000(0.001)	0.002(0.000)	0.011(0.020)	0.021(0.010)	0.001(0.000)	0.000(0.012)	0.001(0.021)	
Grades Run Block	0.008(0.015)	0.016(0.045)	0.034(0.075)	-0.010(0.019)	-0.036(0.056)	-0.054(0.094)	-0.003(0.004)	-0.011(0.018)	-0.021(0.032)	
Short Receptions	-0.008(0.011)	-0.024(0.031)	-0.038(0.052)	-0.004(0.011)	-0.014(0.032)	-0.023(0.053)	-0.002(0.003)	-0.011(0.013)	-0.018(0.024)	
Medium Receptions	0.005(0.011)	0.017(0.034)	0.028(0.056)	-0.004(0.011)	-0.014(0.032)	-0.023(0.055)	-0.002(0.003)	-0.010(0.014)	-0.018(0.024)	
	0.023(0.011)	0.070(0.030)**		0.015(0.011)						
Deep Receptions WR2	0.023(0.010)	0.070(0.030)	0.116(0.050)**	0.013(0.010)	0.046(0.030)	0.077(0.050)	0.001(0.003)	0.005(0.013)	0.006(0.023)	
	0.000(0.015)	0.000(0.040)	0.107(0.070)	0.044(0.004)	0.100(0.105)	0.000(0.170)	0.000(0.004)	0.011(0.010)	0.000(0.004)	
Grades Run Block Short Receptions	-0.022(0.015) -0.010(0.010)	-0.063(0.046) -0.027(0.031)	-0.107(0.076) -0.048(0.052)	0.044(0.034) -0.004(0.012)	0.132(0.105) -0.011(0.035)	0.226(0.172) -0.020(0.058)	0.002(0.004) 0.005(0.003)*	0.011(0.019) 0.017(0.013)	0.029(0.034) 0.030(0.023)	
Medium Receptions	-0.004(0.011)	-0.014(0.033)	-0.021(0.056)	-0.012(0.013)	-0.030(0.038)	-0.052(0.063)	-0.003(0.003)	-0.016(0.014)	-0.025(0.025)	
Deep Receptions	0.011(0.010)	0.034(0.030)	0.055(0.050)	0.008(0.010)	0.025(0.031)	0.042(0.052)	0.002(0.003)	0.011(0.013)	0.015(0.023)	
WR3	0.000(0.010)	0.004(0.041)	0.040(0.00=)	0.001(0.005)	0.000(0.000)	0.100(0.100)	0.000(0.004)	0.000(0.01=)	0.000(0.000)	
Grades Run Block	-0.008(0.013)	-0.024(0.041)	-0.046(0.067)	0.021(0.025)	0.068(0.076)	0.109(0.127)	0.000(0.004)	0.003(0.017)	0.006(0.030)	
Short Receptions	-0.011(0.011)	-0.035(0.032)	-0.054(0.054)	0.013(0.012)	0.033(0.037)	0.063(0.061)	-0.000(0.003)	-0.004(0.014)	-0.005(0.024)	
Medium Receptions	-0.014(0.012)	-0.048(0.035)	-0.080(0.058)	0.001(0.012)	0.002(0.035)	-0.000(0.058)	0.002(0.003)	0.006(0.015)	0.011(0.026)	
Deep Receptions	0.009(0.010)	0.030(0.030)	0.048(0.050)	0.006(0.010)	0.019(0.030)	0.032(0.050)	0.000(0.003)	0.004(0.013)	0.004(0.022)	
TE1										
Grades Pass Block	0.027(0.011)**	0.084(0.035)**	0.141(0.058)**	0.026(0.011)**	0.085(0.033)**	0.138(0.056)**	-0.002(0.003)	-0.010(0.014)	-0.014(0.025)	
Grades Run Block	-0.018(0.014)	-0.056(0.042)	-0.095(0.070)	-0.008(0.011)	-0.027(0.034)	-0.045(0.057)	0.003(0.004)	0.017(0.018)	0.025(0.031)	
Short Receptions	0.003(0.012)	0.008(0.035)	0.013(0.058)	-0.015(0.011)	-0.045(0.033)	-0.076(0.054)	0.003(0.004)	0.015(0.016)	0.017(0.028)	
Medium Receptions	-0.017(0.011)	-0.055(0.034)	-0.090(0.056)	0.007(0.011)	0.018(0.032)	0.033(0.053)	-0.000(0.004)	-0.006(0.016)	-0.011(0.028)	
Deep Receptions	-0.007(0.010)	-0.023(0.030)	-0.038(0.050)	0.000(0.009)	-0.002(0.028)	-0.002(0.047)	-0.003(0.003)	-0.011(0.013)	-0.017(0.023)	
OL1										
Grades Pass Block	0.013(0.012)	0.040(0.035)	0.069(0.059)	-0.011(0.010)	-0.034(0.029)	-0.056(0.049)	-0.004(0.003)	-0.018(0.015)	-0.029(0.026)	
Grades Run Block	0.006(0.014)	0.021(0.041)	0.032(0.069)	0.006(0.010)	0.018(0.030)	0.035(0.050)	0.002(0.004)	0.002(0.017)	0.006(0.031)	
OL2										
Grades Pass Block	-0.008(0.012)	-0.024(0.035)	-0.040(0.058)	-0.002(0.010)	-0.007(0.029)	-0.013(0.048)	-0.000(0.003)	-0.007(0.015)	-0.016(0.026)	
Grades Run Block	-0.005(0.014)	-0.014(0.041)	-0.021(0.069)	-0.014(0.010)	-0.043(0.030)	-0.075(0.050)	0.004(0.004)	0.026(0.017)	0.050(0.030)	
OL3										
Grades Pass Block	0.011(0.012)	0.029(0.035)	0.053(0.059)	0.008(0.009)	0.024(0.029)	0.040(0.048)	0.001(0.003)	0.005(0.015)	0.005(0.027)	
Grades Run Block	-0.014(0.014)	-0.042(0.042)	-0.074(0.071)	0.004(0.009)	0.019(0.029)	0.028(0.048)	-0.003(0.004)	-0.016(0.018)	-0.034(0.032)	
OL4										
Grades Pass Block	0.021(0.012)*	0.060(0.036)	0.104(0.061)*	0.006(0.010)	0.016(0.029)	0.028(0.049)	-0.002(0.003)	-0.013(0.015)	-0.017(0.026)	
Grades Run Block	-0.008(0.013)	-0.024(0.039)	-0.044(0.065)	-0.012(0.010)	-0.035(0.029)	-0.063(0.047)	0.001(0.004)	0.007(0.017)	0.011(0.030)	
OL5	( ,	( )	(	( ,	( )	( /	( ,	( /	( )	
Grades Pass Block	0.025(0.012)**	0.071(0.037)*	0.119(0.061)*	-0.012(0.010)	-0.038(0.031)	-0.064(0.051)	0.001(0.003)	0.013(0.015)	0.018(0.027)	
Grades Run Block	-0.024(0.013)*	-0.073(0.039)*	-0.119(0.065)*	0.009(0.010)	0.025(0.030)	0.041(0.051)	-0.001(0.004)	-0.007(0.017)	-0.014(0.030)	
Perf. Measures	= -(0)	()		()	, <u>-</u> -(,,)	()	()	()	()	
GIMR	0.007(0.008)	0.020(0.023)	0.031(0.038)	0.007(0.008)	0.020(0.023)	0.031(0.038)				
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	
	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Control Def. Players									Yes No	
Control Off. Players	No	No	No	No	No	No	No	No	INO	

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

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	-0.002(0.009)	-0.007(0.027)	-0.010(0.045)	-0.008(0.009)	-0.026(0.027)	-0.043(0.044)	0.002(0.003)	0.009(0.012)	0.020(0.020)
Productivity Stops	0.015(0.009)*	0.046(0.027)*	0.077(0.045)*	-0.004(0.009)	-0.007(0.026)	-0.014(0.044)	-0.001(0.003)	-0.003(0.011)	-0.008(0.020)
DL2	` ′			` ′	` ′	` '		` ′	
Grades Stops	0.008(0.009)	0.023(0.026)	0.034(0.044)	0.010(0.009)	0.032(0.028)	0.049(0.046)	0.002(0.003)	0.009(0.012)	0.010(0.021)
Productivity Stops	-0.001(0.009)	-0.001(0.026)	-0.003(0.043)	-0.016(0.009)*	-0.045(0.027)*	-0.073(0.045)	-0.006(0.003)**	-0.023(0.012)*	-0.038(0.021)*
DL3	` ′	` ′	` ′	` ′	` ′	` ′		` ′	` ′
Grades Stops	-0.004(0.009)	-0.013(0.027)	-0.023(0.045)	0.006(0.011)	0.014(0.034)	0.022(0.056)	-0.001(0.003)	-0.009(0.011)	-0.014(0.020)
Productivity Stops	0.000(0.009)	-0.001(0.027)	0.002(0.044)	-0.009(0.010)	-0.022(0.030)	-0.039(0.050)	-0.001(0.003)	0.002(0.011)	0.001(0.020)
DL4									
Grades Stops	-0.007(0.009)	-0.025(0.029)	-0.038(0.048)	-0.001(0.011)	-0.002(0.034)	-0.004(0.056)	-0.000(0.003)	-0.007(0.012)	-0.008(0.021)
Productivity Stops	-0.002(0.009)	-0.009(0.026)	-0.014(0.044)	-0.022(0.010)**	-0.064(0.031)**	-0.108(0.051)**	-0.005(0.003)**	-0.019(0.011)*	-0.031(0.020)
LB1									
Grades Stops	0.034(0.010)***	0.103(0.028)***	0.168(0.047)***	-0.001(0.010)	-0.003(0.029)	-0.006(0.049)	0.003(0.003)	0.014(0.013)	0.026(0.023)
Zone Stops	-0.010(0.010)	-0.027(0.029)	-0.043(0.048)	-0.002(0.010)	-0.007(0.031)	-0.015(0.051)	0.000(0.003)	0.005(0.013)	0.007(0.022)
Man Stops	0.008(0.009)	0.021(0.028)	0.037(0.047)	-0.001(0.009)	-0.000(0.028)	0.001(0.046)	-0.003(0.003)	-0.012(0.011)	-0.019(0.020)
LB2					` '				
Grades Stops	0.012(0.010)	0.038(0.030)	0.060(0.050)	-0.019(0.010)*	-0.054(0.031)*	-0.092(0.051)*	0.002(0.003)	0.016(0.013)	0.024(0.023)
Zone Stops	-0.008(0.010)	-0.028(0.029)	-0.044(0.048)	0.012(0.010)	0.030(0.031)	0.053(0.051)	-0.002(0.003)	-0.011(0.013)	-0.022(0.023)
Man Stops	0.017(0.009)*	0.055(0.028)**	0.093(0.046)**	-0.013(0.010)	-0.037(0.028)	-0.063(0.047)	0.001(0.003)	-0.002(0.011)	0.002(0.020)
LB3	0.011(0.000)	0.000(0.020)	0.000(0.010)	0.010(0.010)	0.001(0.020)	0.000(0.011)	0.001(0.000)	0.002(0.011)	0.002(0.020)
Grades Stops	0.019(0.010)*	0.055(0.031)*	0.093(0.052)*	-0.009(0.013)	-0.029(0.038)	-0.050(0.063)	0.001(0.003)	0.008(0.014)	0.018(0.024)
Zone Stops	-0.004(0.010)	-0.006(0.031)	-0.014(0.050)	0.009(0.011)	0.026(0.032)	0.042(0.054)	-0.002(0.003)	-0.007(0.013)	-0.020(0.023)
Man Stops	-0.004(0.010)	-0.010(0.028)	-0.014(0.036)	-0.002(0.009)	-0.002(0.032)	-0.005(0.046)	-0.002(0.003)	-0.002(0.013)	0.004(0.021)
LB4	-0.004(0.003)	-0.010(0.020)	-0.010(0.040)	-0.002(0.003)	-0.002(0.020)	-0.000(0.040)	-0.000(0.000)	-0.002(0.012)	0.004(0.021)
Grades Stops	0.005(0.011)	0.020(0.033)	0.026(0.054)	-0.001(0.013)	-0.007(0.038)	-0.016(0.063)	-0.001(0.003)	0.001(0.014)	-0.007(0.025)
	-0.011(0.010)	-0.036(0.031)	-0.054(0.052)	-0.001(0.013)	0.002(0.033)	0.009(0.057)	0.002(0.003)	0.005(0.014)	0.013(0.023)
Zone Stops	0.009(0.009)	0.027(0.028)	0.047(0.047)	0.001(0.009)	0.002(0.033)				-0.016(0.022)
Man Stops	0.009(0.009)	0.027(0.028)	0.047(0.047)	0.001(0.009)	0.002(0.027)	0.005(0.045)	-0.003(0.003)	-0.010(0.012)	-0.016(0.022)
CB1	0.000(0.000)	0.000(0.000)	0.000(0.044)	0.010(0.000)*	0.047(0.029)*	0.000(0.045)*	0.000(0.000)	0.011(0.010)	0.023(0.021)
Grades Stops	-0.008(0.009)	-0.022(0.026)	-0.039(0.044)	0.016(0.009)*		0.080(0.047)*	0.002(0.003)	0.011(0.012)	
Zone Stops	-0.019(0.009)**	-0.056(0.028)**	-0.094(0.046)**	0.011(0.009)	0.032(0.028)	0.056(0.046)	0.003(0.003)	0.013(0.012)	0.020(0.020)
Man Stops	0.005(0.009)	0.014(0.026)	0.023(0.043)	0.011(0.009)	0.031(0.027)	0.053(0.045)	-0.004(0.003)	-0.018(0.011)	-0.033(0.020)
CB2				/\		/			
Grades Stops	0.004(0.009)	0.012(0.026)	0.019(0.043)	-0.000(0.009)	0.001(0.028)	0.003(0.047)	-0.004(0.003)	-0.017(0.012)	-0.031(0.021)
Zone Stops	-0.001(0.009)	-0.005(0.027)	-0.007(0.044)	0.001(0.009)	0.006(0.028)	0.004(0.046)	0.003(0.003)	0.013(0.012)	0.027(0.021)
Man Stops	-0.014(0.009)	-0.040(0.026)	-0.066(0.043)	0.001(0.009)	0.002(0.027)	-0.001(0.046)	0.004(0.003)	0.016(0.011)	0.029(0.020)
CB3									
Grades Stops	-0.021(0.009)**	-0.059(0.027)**	-0.099(0.045)**	0.001(0.009)	-0.000(0.028)	-0.000(0.047)	-0.001(0.003)	-0.002(0.011)	-0.001(0.020)
Zone Stops	0.001(0.009)	0.004(0.028)	0.008(0.046)	0.003(0.010)	0.011(0.031)	0.021(0.052)	0.002(0.003)	0.008(0.012)	0.010(0.021)
Man Stops	-0.009(0.009)	-0.028(0.027)	-0.047(0.045)	0.010(0.009)	0.025(0.027)	0.046(0.045)	0.006(0.003)**	0.027(0.012)**	0.049(0.020)**
S1									
Grades Stops	-0.001(0.010)	0.003(0.029)	0.005(0.049)	-0.004(0.010)	-0.011(0.030)	-0.023(0.049)	0.005(0.003)*	0.026(0.013)**	0.040(0.023)*
Zone Stops	-0.004(0.009)	-0.013(0.028)	-0.024(0.046)	-0.002(0.009)	-0.005(0.028)	-0.012(0.046)	0.002(0.003)	0.005(0.012)	0.006(0.022)
Man Stops	0.001(0.009)	0.005(0.028)	0.006(0.046)	0.009(0.010)	0.027(0.029)	0.047(0.048)	-0.006(0.003)**	-0.027(0.012)**	-0.045(0.021)**
S2									
Grades Stops	0.008(0.010)	0.027(0.030)	0.041(0.050)	0.019(0.010)*	0.057(0.031)*	0.094(0.051)*	0.002(0.003)	0.006(0.013)	0.012(0.023)
Zone Stops	0.001(0.009)	-0.001(0.028)	0.004(0.047)	-0.006(0.010)	-0.014(0.031)	-0.026(0.051)	0.003(0.003)	0.015(0.012)	0.027(0.021)
Man Stops	-0.003(0.009)	-0.008(0.027)	-0.013(0.046)	-0.004(0.009)	-0.016(0.028)	-0.029(0.046)	-0.000(0.003)	-0.004(0.012)	-0.006(0.021)
S3					` ′	` ′			
Grades Stops	0.017(0.010)*	0.051(0.029)*	0.088(0.048)*	-0.005(0.011)	-0.017(0.034)	-0.027(0.057)	-0.002(0.003)	-0.007(0.012)	-0.008(0.022)
Zone Stops	-0.011(0.010)	-0.031(0.029)	-0.057(0.048)	0.002(0.011)	0.004(0.033)	0.005(0.055)	0.001(0.003)	0.002(0.012)	0.004(0.022)
Man Stops	-0.007(0.009)	-0.024(0.028)	-0.036(0.047)	0.012(0.010)	0.038(0.030)	0.064(0.050)	0.001(0.003)	0.009(0.012)	0.011(0.022)
Perf. Measures	()	,()	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	()	,,,,,,	()	()	()	(22)
GIMR.	0.011(0.008)	0.031(0.023)	0.053(0.038)	0.010(0.008)	0.031(0.023)	0.053(0.038)			
Control Variables	0.011(0.000)	3.001(0.020)	3.000(0.000)	3.010(0.000)	3.001(0.020)	3.000(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
	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Season/Team FE									
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

 $\ensuremath{\textit{Note:}}$  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			
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	0.001(0.015)	0.002(0.046)	-0.001(0.077)	-0.004(0.011)	-0.013(0.034)	-0.018(0.056)	-0.006(0.004)	-0.023(0.019)	-0.035(0.034)	
Grds Pass Rush Def	0.008(0.015)	0.026(0.045)	0.048(0.074)	-0.016(0.011)	-0.048(0.033)	-0.083(0.056)	0.008(0.004)*	0.036(0.019)*	0.068(0.033)**	
DL2	0.000(0.000)	0.020(0.0.20)	010 20 (0101 2)	()	0.0.20(0.000)	0.000(0.000)	0.000(0.002)	0.000(0.020)	0.000(0.000)	
Grades Run Defense	0.026(0.015)*	0.080(0.044)*	0.129(0.073)*	0.004(0.024)	0.019(0.071)	0.026(0.119)	-0.002(0.004)	-0.009(0.019)	-0.010(0.034)	
Grds Pass Rush Def	-0.018(0.014)	-0.053(0.042)	-0.091(0.070)	-0.021(0.023)	-0.068(0.070)	-0.108(0.116)	-0.003(0.004)	-0.012(0.019)	-0.032(0.033)	
DL3	( ,	,	( )	()		,	,	( /	( ,	
Grades Run Defense	-0.003(0.015)	-0.013(0.045)	-0.021(0.075)	-0.018(0.042)	-0.063(0.123)	-0.098(0.203)	-0.004(0.004)	-0.028(0.020)	-0.048(0.035)	
Grds Pass Rush Def	-0.000(0.015)	0.007(0.044)	0.006(0.073)	0.002(0.045)	0.021(0.133)	0.013(0.219)	0.001(0.004)	0.016(0.019)	0.024(0.033)	
DL4	( ,	( ,	( )	()	( )	( )	( )	()	(* (* * * * * * * * * * * * * * * * * *	
Grades Run Defense	0.012(0.015)	0.032(0.043)	0.058(0.072)	-0.045(0.051)	-0.142(0.151)	-0.243(0.251)	0.000(0.004)	-0.010(0.020)	-0.007(0.035)	
Grds Pass Rush Def	-0.003(0.015)	-0.007(0.044)	-0.016(0.073)	-0.016(0.053)	-0.038(0.157)	-0.075(0.260)	-0.002(0.004)	0.001(0.021)	-0.007(0.035)	
LB1	( ,	,	( )	( ,		( ,	( )	( )	( )	
Grades Run Defense	0.028(0.013)**	0.086(0.039)**	0.141(0.065)**	0.005(0.010)	0.013(0.030)	0.021(0.050)	0.001(0.004)	0.001(0.017)	-0.003(0.030)	
Man Grades Cov Def	-0.021(0.009)**	-0.067(0.029)**	-0.107(0.048)**	0.005(0.008)	0.018(0.025)	0.030(0.042)	0.002(0.003)	0.013(0.013)	0.028(0.023)	
Zone Grades Cov Def	-0.007(0.012)	-0.020(0.037)	-0.028(0.061)	-0.002(0.010)	-0.010(0.030)	-0.013(0.049)	-0.005(0.004)	-0.018(0.015)	-0.039(0.027)	
LB2	( /	( ,	( )	( ,	( )	( /	,	( /	,	
Grades Run Defense	0.026(0.013)*	0.082(0.040)**	0.135(0.067)**	-0.012(0.017)	-0.034(0.052)	-0.057(0.086)	0.002(0.004)	0.018(0.017)	0.030(0.031)	
Man Grades Cov Def	-0.011(0.010)	-0.034(0.030)	-0.057(0.051)	0.003(0.013)	0.013(0.040)	0.017(0.067)	-0.001(0.003)	-0.007(0.013)	-0.009(0.023)	
Zone Grades Cov Def	-0.013(0.012)	-0.041(0.035)	-0.066(0.059)	0.012(0.017)	0.029(0.051)	0.050(0.085)	0.002(0.003)	0.013(0.015)	0.021(0.026)	
LB3	( ,	( ,	( )	()	( ,	( )	( )	()	()	
Grades Run Defense	-0.004(0.013)	-0.013(0.040)	-0.024(0.067)	-0.034(0.036)	-0.096(0.108)	-0.169(0.178)	-0.002(0.004)	-0.011(0.016)	-0.023(0.029)	
Man Grades Cov Def	0.019(0.011)*	0.055(0.033)*	0.093(0.055)*	0.018(0.019)	0.052(0.055)	0.088(0.092)	0.005(0.003)*	0.018(0.014)	0.038(0.024)	
Zone Grades Cov Def	-0.001(0.012)	-0.007(0.038)	-0.008(0.064)	-0.041(0.028)	-0.121(0.084)	-0.208(0.140)	0.005(0.004)	0.027(0.016)*	0.046(0.028)*	
LB4	( ,	( )	( )	()	. ( ,	( ,	( )	()	( ,	
Grades Run Defense	-0.029(0.012)**	-0.084(0.035)**	-0.146(0.058)**	0.029(0.039)	0.076(0.118)	0.130(0.198)	0.002(0.003)	0.010(0.016)	0.017(0.027)	
Man Grades Cov Def	0.025(0.012)**	0.075(0.035)**	0.127(0.057)**	-0.003(0.018)	-0.015(0.054)	-0.023(0.090)	-0.000(0.003)	-0.004(0.015)	-0.001(0.026)	
Zone Grades Cov Def	0.003(0.013)	0.010(0.040)	0.019(0.065)	-0.003(0.030)	-0.002(0.091)	-0.011(0.152)	-0.001(0.004)	-0.007(0.016)	-0.017(0.029)	
CB1	( )	( ,	( ,		( ,	( ,	( )	,	( )	
Grades Run Defense	-0.011(0.015)	-0.034(0.045)	-0.051(0.075)	0.010(0.016)	0.032(0.048)	0.049(0.081)	-0.002(0.004)	-0.009(0.019)	-0.018(0.034)	
Man Grades Cov Def	-0.008(0.013)	-0.028(0.038)	-0.040(0.064)	-0.030(0.014)**	-0.087(0.041)**	-0.149(0.069)**	0.000(0.004)	0.002(0.017)	0.011(0.029)	
Zone Grades Cov Def	0.006(0.015)	0.024(0.044)	0.034(0.073)	-0.011(0.015)	-0.033(0.046)	-0.051(0.076)	0.000(0.004)	-0.003(0.018)	-0.012(0.032)	
CB2										
Grades Run Defense	0.032(0.014)**	0.100(0.042)**	0.170(0.070)**	-0.018(0.020)	-0.052(0.059)	-0.089(0.098)	-0.008(0.004)*	-0.023(0.018)	-0.048(0.032)	
Man Grades Cov Def	-0.014(0.012)	-0.048(0.036)	-0.076(0.061)	0.006(0.018)	0.019(0.054)	0.029(0.090)	-0.004(0.004)	-0.016(0.016)	-0.024(0.027)	
Zone Grades Cov Def	-0.012(0.014)	-0.039(0.042)	-0.066(0.070)	-0.008(0.021)	-0.023(0.064)	-0.035(0.105)	0.002(0.004)	0.002(0.018)	0.008(0.031)	
CB3										
Grades Run Defense	-0.021(0.012)*	-0.067(0.036)*	-0.108(0.061)*	0.032(0.033)	0.098(0.099)	0.160(0.164)	-0.005(0.004)	-0.027(0.016)*	-0.050(0.029)*	
Man Grades Cov Def	0.020(0.012)	0.066(0.038)*	0.108(0.063)*	-0.001(0.030)	0.008(0.087)	0.014(0.144)	0.011(0.004)***	0.043(0.016)***	0.077(0.029)***	
Zone Grades Cov Def	-0.009(0.014)	-0.023(0.041)	-0.043(0.069)	0.029(0.034)	0.081(0.100)	0.135(0.167)	0.002(0.004)	0.016(0.018)	0.031(0.031)	
S1										
Grades Run Defense	0.004(0.016)	0.015(0.049)	0.029(0.081)	-0.019(0.014)	-0.057(0.040)	-0.096(0.067)	-0.003(0.005)	-0.016(0.023)	-0.021(0.039)	
Man Grades Cov Def	-0.007(0.014)	-0.015(0.043)	-0.031(0.072)	0.001(0.013)	-0.000(0.039)	-0.001(0.066)	-0.003(0.004)	-0.020(0.019)	-0.040(0.033)	
Zone Grades Cov Def	-0.005(0.014)	-0.019(0.043)	-0.029(0.073)	0.012(0.012)	0.043(0.037)	0.068(0.062)	0.006(0.004)	0.027(0.019)	0.048(0.033)	
S2										
Grades Run Defense	-0.009(0.015)	-0.030(0.047)	-0.051(0.079)	-0.002(0.027)	-0.009(0.079)	-0.023(0.130)	-0.002(0.005)	-0.017(0.020)	-0.023(0.036)	
Man Grades Cov Def	-0.008(0.014)	-0.023(0.040)	-0.037(0.067)	-0.009(0.026)	-0.029(0.080)	-0.046(0.132)	0.003(0.004)	0.014(0.018)	0.015(0.033)	
Zone Grades Cov Def	-0.003(0.014)	-0.012(0.041)	-0.019(0.068)	0.006(0.026)	0.024(0.080)	0.044(0.134)	0.002(0.005)	0.010(0.020)	0.024(0.036)	
S3										
Grades Run Defense	-0.006(0.013)	-0.017(0.040)	-0.026(0.066)	0.010(0.044)	0.029(0.136)	0.038(0.233)	-0.002(0.004)	-0.005(0.016)	-0.001(0.028)	
Man Grades Cov Def	-0.004(0.013)	-0.012(0.040)	-0.023(0.066)	-0.013(0.042)	-0.031(0.126)	-0.051(0.212)	0.004(0.004)	0.012(0.016)	0.026(0.029)	
Zone Grades Cov Def	0.019(0.015)	0.058(0.045)	0.095(0.075)	0.013(0.047)	0.027(0.144)	0.057(0.244)	-0.005(0.004)	-0.018(0.018)	-0.039(0.032)	
Perf. Measures	(	( )	()	( /)	()	()	( )	()	( )	
GIMR	-0.003(0.008)	-0.009(0.023)	-0.013(0.039)	-0.004(0.008)	-0.010(0.023)	-0.018(0.039)				
Control Variables	()	()	()	()	(/	()				
Game Situation	Yes									
Coach Variables	Yes									
Team Stats	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									
Control Def. Players	No									
Control Del. 1 layers	110	110	110	110	110	110	110	110	110	

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	-0.004(0.009)	-0.013(0.027)	-0.019(0.045)	-0.009(0.009)	-0.028(0.026)	-0.047(0.044)	0.001(0.003)	0.003(0.012)	0.008(0.021)
Productivity Sacks	0.010(0.009)	0.033(0.026)	0.052(0.044)	-0.007(0.009)	-0.020(0.026)	-0.036(0.044)	0.000(0.003)	0.001(0.011)	-0.002(0.021)
DL2	0.010(0.003)	0.000(0.020)	0.002(0.011)	-0.007 (0.003)	-0.020(0.020)	-0.030(0.044)	0.000(0.000)	0.001(0.011)	-0.002(0.020)
Grades Tackles	0.010(0.009)	0.030(0.027)	0.049(0.044)	0.016(0.009)*	0.050(0.029)*	0.078(0.047)*	0.002(0.003)	0.007(0.012)	0.007(0.021)
Productivity Sacks	-0.001(0.008)	-0.002(0.026)	-0.008(0.044)	-0.011(0.009)	-0.031(0.026)	-0.048(0.044)	-0.006(0.003)**	-0.023(0.012)*	-0.041(0.021)*
DL3	-0.001(0.008)	-0.002(0.020)	-0.008(0.043)	-0.011(0.003)	-0.031(0.020)	=0.048(0.044)	-0.000(0.003)	-0.023(0.012)	-0.041(0.021)
Grades Tackles	-0.005(0.009)	-0.018(0.027)	-0.029(0.045)	0.001(0.012)	0.001(0.035)	-0.002(0.058)	0.002(0.003)	0.006(0.012)	0.011(0.021)
Productivity Sacks	-0.003(0.009)	-0.007(0.027)	-0.012(0.044)	-0.002(0.012)	-0.003(0.030)	-0.002(0.038)	-0.002(0.003)	-0.003(0.011)	-0.008(0.020)
DL4	-0.003(0.003)	-0.007(0.020)	-0.012(0.044)	-0.002(0.010)	-0.003(0.030)	=0.003(0.043)	-0.002(0.003)	-0.003(0.011)	-0.008(0.020)
Grades Tackles	-0.008(0.010)	-0.027(0.029)	-0.042(0.048)	0.007(0.012)	0.023(0.037)	0.034(0.061)	-0.000(0.003)	-0.007(0.012)	-0.008(0.021)
Productivity Sacks	-0.002(0.009)	-0.009(0.027)	-0.015(0.045)	-0.017(0.012)	-0.048(0.030)	-0.080(0.049)	-0.006(0.003)**	-0.019(0.011)*	-0.033(0.021)
LB1	-0.002(0.003)	-0.009(0.021)	-0.013(0.043)	-0.017(0.010)	-0.048(0.030)	=0.080(0.043)	-0.000(0.003)	-0.019(0.011)	-0.033(0.020)
Grades Tackles	0.021(0.012)*	0.063(0.035)*	0.105(0.059)*	0.011(0.011)	0.033(0.034)	0.052(0.057)	0.004(0.003)	0.018(0.015)	0.034(0.027)
Man Tackles	0.005(0.011)	0.017(0.033)	0.030(0.054)	-0.003(0.011)	-0.008(0.032)	-0.013(0.054)	-0.004(0.003)	-0.017(0.014)	-0.032(0.024)
Zone Tackles	-0.008(0.011)	-0.024(0.037)	-0.042(0.062)	-0.012(0.013)	-0.008(0.032)	-0.015(0.054)	0.000(0.004)	0.007(0.014)	0.012(0.024)
LB2	-0.008(0.012)	-0.024(0.031)	=0.042(0.002)	-0.012(0.013)	-0.033(0.033)	-0.033(0.004)	0.000(0.004)	0.007(0.010)	0.012(0.028)
Grades Tackles	-0.002(0.012)	-0.005(0.035)	-0.008(0.058)	-0.025(0.012)**	-0.074(0.037)**	-0.123(0.062)**	0.007(0.003)*	0.037(0.015)**	0.065(0.027)**
Man Tackles	0.007(0.011)	0.026(0.033)	0.041(0.054)	0.003(0.011)	0.011(0.032)	0.016(0.053)	-0.006(0.003)*	-0.030(0.014)**	-0.047(0.024)*
Zone Tackles									-0.021(0.024)
LB3	-0.000(0.012)	-0.006(0.037)	-0.009(0.062)	0.013(0.012)	0.034(0.037)	0.056(0.062)	-0.001(0.004)	-0.007(0.016)	-0.021(0.028)
	0.024(0.012)**	0.072(0.036)**	0.118(0.059)**	0.010(0.010)	-0.056(0.046)	0.000(0.077)	0.002(0.004)	0.011(0.010)	0.020(0.028)
Grades Tackles				-0.018(0.016)		-0.092(0.077)		0.011(0.016)	
Man Tackles	0.000(0.010)	0.001(0.032)	0.003(0.053)	0.006(0.011)	0.021(0.033)	0.033(0.055)	-0.001(0.003)	-0.003(0.014)	0.002(0.025)
Zone Tackles	-0.017(0.013)	-0.047(0.038)	-0.078(0.063)	0.008(0.014)	0.026(0.041)	0.041(0.068)	-0.000(0.004)	-0.004(0.016)	-0.012(0.029)
LB4	0.010(0.010)	0.040(0.000)	0.050(0.000)	0.000(0.015)	0.010(0.045)	0.001(0.000)	0.001(0.004)	0.000(0.014)	0.010(0.000)
Grades Tackles	-0.016(0.012)	-0.042(0.036)	-0.076(0.060)	-0.002(0.015)	-0.013(0.045)	-0.021(0.075)	-0.001(0.004)	-0.002(0.016)	-0.010(0.028)
Man Tackles	0.007(0.011)	0.020(0.031)	0.034(0.052)	-0.015(0.011)	-0.047(0.033)	-0.074(0.054)	-0.004(0.003)	-0.020(0.014)	-0.031(0.025)
Zone Tackles	0.009(0.011)	0.027(0.033)	0.050(0.055)	0.016(0.013)	0.048(0.041)	0.081(0.068)	0.004(0.003)	0.014(0.015)	0.027(0.026)
CB1	/\		/>				/ \	/	/>
Grades Tackles	-0.013(0.009)	-0.034(0.027)	-0.060(0.046)	0.005(0.009)	0.015(0.028)	0.024(0.046)	0.002(0.003)	0.009(0.012)	0.018(0.020)
Man Tackles	-0.006(0.010)	-0.018(0.031)	-0.031(0.051)	0.023(0.010)**	0.066(0.031)**	0.110(0.051)**	-0.001(0.003)	0.000(0.013)	-0.001(0.023)
Zone Tackles	-0.014(0.010)	-0.041(0.028)	-0.068(0.047)	0.005(0.010)	0.018(0.030)	0.031(0.050)	0.003(0.003)	0.013(0.012)	0.026(0.022)
CB2	0.001(0.000)**	0.050(0.005)**	0.000(0.045)**	0.000(0.010)	0.000(0.000)	0.010(0.050)	0.005(0.000)**	0.010(0.010)	0.000(0.001)
Grades Tackles	0.021(0.009)**	0.059(0.027)**	0.098(0.045)**	0.002(0.010)	0.009(0.030)	0.016(0.050)	-0.005(0.003)**	-0.019(0.012)	-0.032(0.021)
Man Tackles	-0.009(0.010)	-0.027(0.029)	-0.042(0.049)	0.008(0.010)	0.024(0.031)	0.037(0.052)	-0.002(0.003)	-0.008(0.013)	-0.015(0.023)
Zone Tackles	-0.015(0.010)	-0.042(0.029)	-0.070(0.048)	-0.005(0.010)	-0.013(0.031)	-0.027(0.052)	0.002(0.003)	0.009(0.013)	0.022(0.023)
CB3	0.011(0.000)	0.001(0.000)	0.054(0.045)	0.000(0.011)	0.004(0.004)	0.000(0.050)	0.001/0.000)	0.000(0.010)	0.015(0.000)
Grades Tackles	-0.011(0.009)	-0.031(0.028)	-0.054(0.047)	0.002(0.011)	0.004(0.034)	0.008(0.056)	0.001(0.003)	0.008(0.012)	0.015(0.022)
Man Tackles	-0.011(0.010)	-0.035(0.031)	-0.051(0.051)	-0.006(0.011)	-0.018(0.034)	-0.028(0.056)	0.004(0.003)	0.012(0.013)	0.024(0.023)
Zone Tackles	-0.009(0.010)	-0.025(0.031)	-0.042(0.051)	0.001(0.013)	0.004(0.037)	0.007(0.062)	-0.001(0.003)	0.001(0.013)	-0.001(0.023)
S1	0.000(0.010)	0.000(0.000)	0.040(0.040)	0.005(0.010)	0.014(0.000)	0.000(0.040)	0.004(0.000)	0.001(0.010)*	0.000(0.000)
Grades Tackles	0.009(0.010)	0.029(0.029)	0.049(0.048)	0.005(0.010)	0.014(0.029)	0.022(0.048)	0.004(0.003)	0.021(0.012)*	0.033(0.022)
Man Tackles	0.007(0.010)	0.024(0.030)	0.038(0.050)	0.004(0.010)	0.007(0.030)	0.017(0.051)	0.004(0.003)	0.018(0.013)	0.030(0.023)
Zone Tackles	-0.017(0.009)*	-0.051(0.028)*	-0.085(0.047)*	-0.001(0.010)	-0.004(0.029)	-0.010(0.048)	-0.003(0.003)	-0.015(0.012)	-0.028(0.021)
S2	/			/\			/\	/	/>
Grades Tackles	0.000(0.010)	0.003(0.030)	0.002(0.050)	0.009(0.012)	0.029(0.035)	0.047(0.058)	0.002(0.003)	0.006(0.013)	0.012(0.023)
Man Tackles	0.006(0.010)	0.017(0.031)	0.032(0.052)	-0.001(0.011)	0.001(0.033)	-0.003(0.055)	-0.002(0.003)	-0.011(0.013)	-0.012(0.024)
Zone Tackles	-0.005(0.010)	-0.015(0.029)	-0.025(0.049)	-0.003(0.012)	-0.012(0.036)	-0.022(0.060)	-0.003(0.003)	-0.013(0.013)	-0.023(0.023)
S3									
Grades Tackles	0.010(0.011)	0.028(0.031)	0.047(0.052)	0.014(0.013)	0.045(0.040)	0.078(0.067)	-0.000(0.003)	-0.004(0.014)	-0.001(0.024)
Man Tackles	-0.013(0.010)	-0.040(0.030)	-0.065(0.051)	-0.004(0.013)	-0.013(0.039)	-0.019(0.065)	0.003(0.003)	0.015(0.014)	0.024(0.024)
Zone Tackles	-0.004(0.011)	-0.012(0.033)	-0.024(0.054)	-0.008(0.014)	-0.026(0.042)	-0.048(0.070)	-0.001(0.003)	0.000(0.015)	-0.004(0.026)
Perf. Measures									
GIMR	-0.009(0.008)	-0.026(0.023)	-0.042(0.038)	-0.011(0.008)	-0.032(0.023)	-0.053(0.038)			
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