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)*	0.090(0.049)*	0.149(0.082)*	0.031(0.014)**	0.099(0.044)**	0.168(0.072)**	0.007(0.004)	0.030(0.021)	0.052(0.038)	
Medium Grades Pass	-0.015(0.014)	-0.041(0.041)	-0.072(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)	-0.041(0.040)	-0.071(0.066)	-0.020(0.013)	-0.071(0.041)*	-0.114(0.068)*	0.006(0.004)	0.021(0.017)	0.046(0.030)	
Running Backs		01011(01010)	0.01-(0.000)	0.020(0.020)	0.01-(0.01-)	0.22 (0.000)	***************************************	0.022(0.021)	0.0.00(0.000)	
Grades Pass Block	-0.021(0.010)**	-0.064(0.032)**	-0.106(0.053)**	0.012(0.010)	0.034(0.030)	0.056(0.050)	-0.004(0.003)	-0.024(0.014)*	-0.041(0.024)*	
Grades Run	0.013(0.011)	0.041(0.033)	0.071(0.054)	-0.004(0.011)	-0.012(0.033)	-0.023(0.055)	-0.001(0.003)	-0.004(0.013)	-0.002(0.023)	
Short Grades Pass	0.004(0.011)	0.011(0.032)	0.015(0.053)	-0.004(0.010)	-0.010(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)	-0.043(0.028)	-0.071(0.047)	-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	-0.005(0.010)	-0.014(0.029)	-0.024(0.048)	-0.002(0.009)	-0.007(0.027)	-0.013(0.044)	0.003(0.003)	0.008(0.012)	0.014(0.021)	
WR1		(,	()	(,	()	(,		,	(,	
Grades Run Block	0.005(0.015)	0.011(0.046)	0.024(0.077)	-0.012(0.019)	-0.041(0.058)	-0.059(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)	-0.003(0.046)	-0.008(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)	-0.002(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)	0.004(0.034)	0.007(0.056)	0.004(0.012)	0.018(0.036)	0.029(0.059)	0.003(0.003)	0.016(0.014)	0.027(0.025)	
WR2	()	()	()	()	(,	(,	(,	(,	()	
Grades Run Block	-0.021(0.016)	-0.063(0.046)	-0.103(0.077)	0.029(0.036)	0.087(0.110)	0.152(0.180)	-0.001(0.004)	-0.003(0.020)	0.005(0.035)	
Short Grades Pass	-0.010(0.013)	-0.029(0.039)	-0.052(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)	0.045(0.035)	0.078(0.058)	-0.003(0.020)	-0.017(0.060)	-0.025(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)	0.021(0.054)	0.011(0.016)	0.042(0.049)	0.064(0.082)	0.000(0.003)	0.002(0.013)	0.003(0.024)	
WR3	()	()	()	()	(/	()	(,	(/	,	
Grades Run Block	-0.007(0.014)	-0.021(0.042)	-0.042(0.068)	0.022(0.027)	0.073(0.082)	0.114(0.137)	-0.001(0.004)	-0.002(0.017)	-0.004(0.031)	
Short Grades Pass	-0.015(0.011)	-0.048(0.033)	-0.076(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	0.008(0.010)	0.023(0.031)	0.040(0.051)	0.009(0.019)	0.010(0.057)	0.018(0.095)	0.006(0.003)*	0.021(0.014)	0.039(0.024)	
Deep Grades Pass	0.002(0.010)	0.011(0.030)	0.015(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	0.002(0.010)	0.011(0.000)	0.010(0.010)	0.011(0.010)	0.002(0.010)	0.002(0.010)	0.001(0.000)	0.000(0.010)	0.011(0.022)	
Grades Pass Block	0.026(0.012)**	0.079(0.035)**	0.134(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)	-0.076(0.074)	-0.013(0.012)	-0.040(0.038)	-0.068(0.064)	-0.000(0.004)	0.007(0.019)	0.007(0.034)	
Short Grades Pass	0.005(0.013)	0.012(0.038)	0.019(0.063)	0.001(0.013)	0.000(0.038)	-0.000(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)	-0.082(0.053)	0.016(0.011)	0.047(0.032)	0.081(0.052)	0.002(0.003)	0.008(0.014)	0.008(0.024)	
Deep Grades Pass	-0.004(0.010)	-0.010(0.029)	-0.014(0.048)	-0.015(0.009)	-0.044(0.028)	-0.073(0.047)	0.002(0.003)	0.009(0.012)	0.018(0.022)	
OL1	0.001(0.010)	0.010(0.020)	0.011(0.010)	0.010(0.000)	0.011(0.020)	0.010(0.011)	0.002(0.000)	0.000(0.012)	0.010(0.022)	
Grades Pass Block	0.016(0.012)	0.050(0.036)	0.084(0.059)	-0.011(0.010)	-0.033(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)	0.035(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)	0.000(0.000)	0.001(0.001)	0.000(0.011)	0.002(0.001)	
Grades Pass Block	-0.008(0.012)	-0.022(0.035)	-0.037(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	-0.005(0.014)	-0.015(0.042)	-0.023(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	0.000(0.011)	0.010(0.012)	0.020(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)	0.045(0.058)	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	-0.014(0.014)	-0.044(0.042)	-0.075(0.070)	0.004(0.009)	0.017(0.029)	0.026(0.048)	-0.004(0.004)	-0.019(0.018)	-0.038(0.032)	
OL4	0.011(0.011)	0.011(0.012)	0.010(0.010)	0.001(0.000)	0.011(0.020)	0.020(0.010)	0.001(0.001)	0.010(0.010)	0.000(0.002)	
Grades Pass Block	0.022(0.012)*	0.065(0.036)*	0.111(0.060)*	0.006(0.010)	0.017(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)	-0.013(0.010)	-0.037(0.029)	-0.065(0.047)	0.000(0.004)	0.005(0.017)	0.007(0.030)	
OL5	0.000(0.010)	0.021(0.000)	0.011(0.000)	0.010(0.010)	0.001(0.020)	0.000(0.011)	0.000(0.001)	0.000(0.011)	0.001(0.000)	
Grades Pass Block	0.032(0.012)***	0.091(0.037)**	0.153(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)**	-0.094(0.040)**	-0.152(0.066)**	0.011(0.010)	0.029(0.030)	0.049(0.050)	-0.002(0.004)	-0.010(0.013)	-0.020(0.021)	
Perf. Measures	0.001(0.010)	0.004(0.040)	0.102(0.000)	5.011(0.010)	3.023(0.000)	0.040(0.000)	3.002(0.004)	0.010(0.011)	3.020(0.030)	
GIMR	0.004(0.003)	0.011(0.011)	0.019(0.020)	0.004(0.003)	0.011(0.011)	0.017(0.019)				
Control Variables	3.001(0.000)	3.011(0.011)	5.010(0.020)	3.001(0.000)	3.011(0.011)	3.011(0.010)				
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 OII. Flayers	NO	INO	INO	INO	INO	INO	INO	INO	INO	

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

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	0.018(0.013)	0.054(0.040)	0.085(0.067)	0.020(0.014)	0.058(0.042)	0.092(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)	0.016(0.042)	0.025(0.069)	0.006(0.004)	0.022(0.018)	0.032(0.032)
Deep Yards	-0.036(0.012)***	-0.112(0.036)***	-0.184(0.060)***	-0.017(0.012)	-0.054(0.035)	-0.087(0.058)	0.007(0.004)*	0.025(0.017)	0.044(0.029)
Running Backs		` ′			` ′	` ′			
Grades Pass Block	-0.015(0.010)	-0.045(0.030)	-0.076(0.050)	0.009(0.009)	0.026(0.027)	0.041(0.046)	-0.005(0.003)	-0.025(0.013)*	-0.041(0.022)*
Yards	0.004(0.010)	0.014(0.029)	0.020(0.049)	0.016(0.009)*	0.047(0.027)*	0.076(0.045)*	0.005(0.003)*	0.024(0.013)*	0.043(0.023)*
Short Yards	-0.008(0.010)	-0.025(0.030)	-0.040(0.050)	-0.016(0.010)	-0.047(0.029)	-0.073(0.048)	0.001(0.003)	0.008(0.013)	0.015(0.023)
Medium Yards	-0.020(0.009)**	-0.059(0.026)**	-0.099(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	0.003(0.009)	0.012(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	0.010(0.015)	0.023(0.045)	0.043(0.075)	-0.009(0.019)	-0.035(0.056)	-0.052(0.094)	-0.003(0.004)	-0.011(0.018)	-0.021(0.032)
Short Yards	-0.006(0.010)	-0.018(0.031)	-0.027(0.052)	-0.001(0.011)	-0.005(0.031)	-0.007(0.052)	-0.003(0.003)	-0.017(0.013)	-0.030(0.024)
Medium Yards	-0.002(0.011)	-0.004(0.033)	-0.007(0.054)	-0.005(0.011)	-0.010(0.033)	-0.020(0.054)	0.001(0.003)	0.001(0.014)	0.005(0.026)
Deep Yards	0.028(0.010)***	0.083(0.029)***	0.139(0.049)***	0.018(0.010)*	0.054(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)	-0.109(0.076)	0.043(0.035)	0.128(0.107)	0.225(0.174)	0.002(0.004)	0.010(0.019)	0.027(0.034)
Short Yards	-0.008(0.010)	-0.020(0.031)	-0.037(0.051)	0.002(0.011)	0.005(0.034)	0.006(0.056)	0.004(0.003)	0.014(0.013)	0.026(0.023)
Medium Yards	-0.008(0.011)	-0.029(0.032)	-0.047(0.054)	-0.017(0.012)	-0.045(0.036)	-0.080(0.060)	-0.003(0.003)	-0.013(0.014)	-0.023(0.025)
Deep Yards	0.015(0.010)	0.047(0.030)	0.079(0.050)	0.007(0.010)	0.022(0.031)	0.039(0.051)	0.002(0.003)	0.010(0.013)	0.016(0.023)
WR3	(,	()	(,	()	()	,	()	()	()
Grades Run Block	-0.008(0.013)	-0.024(0.041)	-0.046(0.067)	0.027(0.024)	0.088(0.076)	0.141(0.127)	0.001(0.004)	0.004(0.017)	0.009(0.030)
Short Yards	-0.010(0.011)	-0.033(0.031)	-0.050(0.052)	0.011(0.012)	0.025(0.035)	0.047(0.057)	-0.002(0.003)	-0.011(0.013)	-0.017(0.024)
Medium Yards	-0.019(0.011)*	-0.058(0.033)*	-0.097(0.054)*	0.001(0.011)	0.002(0.033)	0.002(0.054)	0.003(0.003)	0.012(0.014)	0.023(0.025)
Deep Yards	0.014(0.010)	0.046(0.029)	0.074(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)**	0.136(0.058)**	0.024(0.011)**	0.081(0.033)**	0.132(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)	-0.094(0.069)	-0.009(0.011)	-0.031(0.034)	-0.051(0.057)	0.003(0.004)	0.016(0.018)	0.024(0.031)
Short Yards	0.004(0.011)	0.010(0.034)	0.017(0.056)	-0.007(0.011)	-0.021(0.032)	-0.036(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)	0.007(0.010)	0.017(0.031)	0.031(0.051)	-0.000(0.003)	-0.007(0.015)	-0.010(0.027)
Deep Yards	-0.011(0.010)	-0.033(0.030)	-0.055(0.049)	-0.004(0.009)	-0.014(0.027)	-0.023(0.045)	-0.001(0.003)	-0.005(0.013)	-0.006(0.023)
OL1									
Grades Pass Block	0.013(0.012)	0.040(0.035)	0.069(0.059)	-0.012(0.010)	-0.036(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)	0.031(0.069)	0.006(0.010)	0.016(0.030)	0.032(0.050)	0.001(0.004)	0.001(0.017)	0.004(0.031)
OL2									
Grades Pass Block	-0.008(0.012)	-0.024(0.035)	-0.040(0.058)	-0.003(0.010)	-0.010(0.029)	-0.018(0.048)	-0.001(0.003)	-0.008(0.015)	-0.019(0.026)
Grades Run Block	-0.006(0.014)	-0.019(0.041)	-0.030(0.069)	-0.014(0.010)	-0.046(0.030)	-0.079(0.050)	0.004(0.004)	0.025(0.017)	0.048(0.030)
OL3									
Grades Pass Block	0.010(0.012)	0.026(0.035)	0.048(0.059)	0.008(0.009)	0.026(0.029)	0.043(0.048)	0.001(0.003)	0.006(0.015)	0.006(0.027)
Grades Run Block	-0.013(0.014)	-0.040(0.042)	-0.070(0.071)	0.003(0.009)	0.015(0.029)	0.022(0.048)	-0.004(0.004)	-0.017(0.018)	-0.035(0.032)
OL4									
Grades Pass Block	0.020(0.012)*	0.057(0.036)	0.099(0.061)	0.005(0.010)	0.013(0.030)	0.024(0.049)	-0.002(0.003)	-0.013(0.015)	-0.017(0.026)
Grades Run Block	-0.006(0.013)	-0.021(0.039)	-0.037(0.065)	-0.012(0.010)	-0.033(0.029)	-0.060(0.047)	0.000(0.004)	0.006(0.017)	0.010(0.030)
OL5									
Grades Pass Block	0.023(0.012)*	0.065(0.037)*	0.110(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)*	-0.074(0.039)*	-0.120(0.066)*	0.010(0.010)	0.026(0.030)	0.044(0.051)	-0.001(0.004)	-0.007(0.017)	-0.014(0.030)
Perf. Measures									
GIMR	0.005(0.004)	0.013(0.012)	0.023(0.021)	0.006(0.003)	0.015(0.012)	0.024(0.020)			
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 Logic	
Quarterbacks										
Short Completions	0.024(0.014)*	0.070(0.041)*	0.111(0.068)	0.030(0.014)**	0.088(0.043)**	0.140(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)**	-0.100(0.037)***	-0.162(0.062)***	-0.025(0.012)**	-0.077(0.036)**	-0.124(0.059)**	0.005(0.004)	0.017(0.017)	0.030(0.029)	
Running Backs	0.00=(0.01=)	0.200(0.001)	0.102(0.002)	*****(******)		0.12 (0.000)	0.000(0.002)	0.021(0.021)	***************************************	
Grades Pass Block	-0.016(0.010)*	-0.049(0.030)*	-0.082(0.049)*	0.011(0.009)	0.030(0.027)	0.048(0.046)	-0.004(0.003)	-0.024(0.013)*	-0.039(0.022)*	
Attempts	0.003(0.010)	0.013(0.030)	0.018(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	-0.005(0.010)	-0.016(0.031)	-0.024(0.052)	-0.018(0.010)*	-0.053(0.029)*	-0.082(0.047)*	0.002(0.003)	0.014(0.014)	0.023(0.025)	
Medium Receptions	-0.016(0.009)*	-0.046(0.026)*	-0.078(0.043)*	-0.007(0.008)	-0.021(0.024)	-0.038(0.040)	-0.004(0.002)	-0.021(0.011)*	-0.036(0.020)*	
Deep Receptions	-0.001(0.009)	0.000(0.030)	-0.003(0.051)	-0.004(0.009)	-0.021(0.024)	-0.024(0.043)	-0.001(0.002)	-0.006(0.012)	-0.007(0.021)	
WR1	-0.001(0.003)	0.000(0.000)	-0.000(0.001)	-0.004(0.000)	-0.014(0.020)	-0.024(0.040)	-0.001(0.000)	-0.000(0.012)	-0.001(0.021)	
Grades Run Block	0.008(0.015)	0.018(0.045)	0.037(0.075)	-0.010(0.019)	-0.035(0.056)	-0.051(0.094)	-0.003(0.004)	-0.011(0.018)	-0.021(0.032)	
Short Receptions	-0.008(0.013)	-0.024(0.031)	-0.039(0.052)	-0.003(0.011)	-0.013(0.032)	-0.022(0.053)	-0.002(0.003)	-0.011(0.013)	-0.021(0.032)	
Medium Receptions	0.005(0.011)	0.017(0.034)	0.027(0.056)	-0.003(0.011)	-0.013(0.032)	-0.009(0.056)	-0.002(0.003)	-0.010(0.014)	-0.013(0.024)	
Deep Receptions	0.023(0.011)	0.069(0.030)**	0.115(0.050)**	0.015(0.011)	0.045(0.030)	0.076(0.050)	0.001(0.003)	0.005(0.013)	0.006(0.023)	
WR2	0.023(0.010)	0.009(0.030)	0.113(0.030)	0.013(0.010)	0.045(0.050)	0.070(0.030)	0.001(0.003)	0.003(0.013)	0.000(0.023)	
	0.000(0.015)	0.000(0.040)	0.110(0.070)	0.044(0.005)	0.100(0.100)	0.007(0.170)	0.000(0.004)	0.011(0.010)	0.000(0.004)	
Grades Run Block	-0.022(0.015)	-0.066(0.046)	-0.110(0.076)	0.044(0.035)	0.132(0.106)	0.227(0.173)	0.002(0.004)	0.011(0.019)	0.029(0.034)	
Short Receptions	-0.009(0.010)	-0.026(0.031)	-0.046(0.052)	-0.003(0.012)	-0.009(0.035)	-0.017(0.058)	0.005(0.003)*	0.017(0.013)	0.030(0.023)	
Medium Receptions	-0.004(0.011)	-0.015(0.033)	-0.022(0.056)	-0.011(0.013)	-0.029(0.038)	-0.051(0.063)	-0.003(0.003)	-0.016(0.014)	-0.025(0.025)	
Deep Receptions	0.010(0.010)	0.033(0.030)	0.054(0.050)	0.007(0.010)	0.023(0.031)	0.039(0.052)	0.002(0.003)	0.011(0.013)	0.015(0.023)	
WR3										
Grades Run Block	-0.009(0.013)	-0.026(0.041)	-0.048(0.067)	0.024(0.025)	0.077(0.076)	0.123(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)	0.014(0.012)	0.035(0.037)	0.065(0.061)	-0.000(0.003)	-0.004(0.014)	-0.005(0.024)	
Medium Receptions	-0.015(0.012)	-0.049(0.035)	-0.082(0.058)	0.001(0.012)	0.001(0.035)	-0.001(0.058)	0.002(0.003)	0.006(0.015)	0.011(0.026)	
Deep Receptions	0.008(0.010)	0.029(0.030)	0.047(0.050)	0.006(0.010)	0.018(0.030)	0.029(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(0.059)**	0.026(0.011)**	0.085(0.033)**	0.139(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(0.069)	-0.008(0.011)	-0.028(0.034)	-0.046(0.057)	0.003(0.004)	0.017(0.018)	0.025(0.031)	
Short Receptions	0.002(0.012)	0.008(0.035)	0.013(0.058)	-0.014(0.011)	-0.044(0.033)	-0.074(0.054)	0.003(0.004)	0.015(0.016)	0.017(0.028)	
Medium Receptions	-0.017(0.011)	-0.056(0.034)*	-0.092(0.056)	0.006(0.011)	0.017(0.032)	0.030(0.053)	-0.000(0.004)	-0.006(0.016)	-0.011(0.028)	
Deep Receptions	-0.006(0.010)	-0.022(0.030)	-0.035(0.050)	0.001(0.009)	0.001(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)	0.041(0.035)	0.071(0.059)	-0.011(0.010)	-0.034(0.029)	-0.057(0.049)	-0.004(0.003)	-0.018(0.015)	-0.029(0.026)	
Grades Run Block	0.007(0.014)	0.021(0.041)	0.032(0.069)	0.007(0.010)	0.020(0.030)	0.037(0.050)	0.002(0.004)	0.002(0.017)	0.006(0.031)	
OL2	` ′			` ′					` ′	
Grades Pass Block	-0.007(0.012)	-0.023(0.035)	-0.038(0.058)	-0.003(0.010)	-0.008(0.029)	-0.014(0.048)	-0.000(0.003)	-0.007(0.015)	-0.016(0.026)	
Grades Run Block	-0.005(0.014)	-0.016(0.041)	-0.025(0.069)	-0.014(0.010)	-0.044(0.030)	-0.076(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)	0.054(0.059)	0.008(0.009)	0.026(0.029)	0.043(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)	-0.073(0.070)	0.004(0.009)	0.018(0.029)	0.026(0.048)	-0.003(0.004)	-0.016(0.018)	-0.034(0.032)	
OL4	0.011(0.011)	0.012(0.012)	0.010(0.010)	0.001(0.000)	0.010(0.020)	0.020(0.010)	0.000(0.001)	0.010(0.010)	0.001(0.002)	
Grades Pass Block	0.021(0.012)*	0.061(0.037)*	0.106(0.061)*	0.005(0.010)	0.015(0.030)	0.026(0.049)	-0.002(0.003)	-0.013(0.015)	-0.017(0.026)	
Grades Run Block	-0.007(0.013)	-0.024(0.039)	-0.044(0.065)	-0.012(0.010)	-0.035(0.029)	-0.062(0.047)	0.001(0.004)	0.007(0.017)	0.011(0.030)	
OL5	-0.001(0.013)	-0.024(0.000)	-0.011(0.000)	-0.012(0.010)	-0.030(0.023)	-0.002(0.041)	0.001(0.004)	0.001(0.011)	0.011(0.000)	
Grades Pass Block	0.025(0.012)**	0.071(0.037)*	0.119(0.061)*	-0.012(0.010)	-0.039(0.031)	-0.065(0.052)	0.001(0.003)	0.013(0.015)	0.018(0.027)	
Grades Run Block	-0.025(0.012)	-0.074(0.039)*	-0.121(0.065)*	0.010(0.010)	0.025(0.030)	0.041(0.051)	-0.001(0.004)	-0.007(0.017)	-0.014(0.030)	
Perf. Measures	-0.023(0.013)	-0.074(0.039)	-0.121(0.003)	0.010(0.010)	0.020(0.030)	0.041(0.031)	-0.001(0.004)	-0.007(0.017)	-0.014(0.050)	
GIMR	0.005(0.000)	0.010(0.010)	0.001(0.001)	0.005(0.000)	0.014(0.011)	0.000(0.000)				
	0.005(0.003)	0.012(0.012)	0.021(0.021)	0.005(0.003)	0.014(0.011)	0.022(0.020)				
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	

\$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)	-0.006(0.027)	-0.008(0.045)	-0.008(0.009)	-0.024(0.027)	-0.040(0.045)	0.002(0.003)	0.009(0.012)	0.020(0.020)	
Productivity Stops	0.015(0.009)*	0.046(0.027)*	0.076(0.045)*	-0.004(0.009)	-0.008(0.026)	-0.015(0.044)	-0.001(0.003)	-0.003(0.011)	-0.008(0.020)	
DL2	(,	()	(,	()	,	()	(,	,	(,	
Grades Stops	0.008(0.009)	0.024(0.026)	0.035(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)	-0.000(0.026)	-0.002(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)	-0.012(0.027)	-0.021(0.045)	0.006(0.011)	0.016(0.034)	0.024(0.056)	-0.001(0.003)	-0.009(0.011)	-0.014(0.020)	
Productivity Stops	0.001(0.009)	-0.000(0.027)	0.003(0.044)	-0.009(0.010)	-0.024(0.030)	-0.041(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)	-0.021(0.010)**	-0.062(0.031)**	-0.106(0.051)**	-0.005(0.003)**	-0.019(0.011)*	-0.031(0.020)	
LB1	` ′		` ` `							
Grades Stops	0.034(0.010)***	0.102(0.028)***	0.167(0.047)***	-0.001(0.010)	-0.002(0.029)	-0.004(0.049)	0.003(0.003)	0.014(0.013)	0.026(0.023)	
Zone Stops	-0.011(0.010)	-0.029(0.029)	-0.046(0.048)	-0.003(0.010)	-0.009(0.031)	-0.017(0.052)	0.000(0.003)	0.005(0.013)	0.007(0.022)	
Man Stops	0.008(0.009)	0.021(0.028)	0.038(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)	0.061(0.050)	-0.018(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)	-0.027(0.029)	-0.043(0.048)	0.012(0.010)	0.031(0.031)	0.054(0.051)	-0.002(0.003)	-0.011(0.013)	-0.022(0.023)	
Man Stops	0.017(0.009)*	0.056(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)	-0.030(0.038)	-0.051(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(0.049)	0.009(0.011)	0.027(0.032)	0.043(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(0.045)	-0.001(0.009)	-0.002(0.032)	-0.004(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)	-0.001(0.003)	-0.002(0.020)	-0.004(0.040)	-0.000(0.000)	-0.002(0.012)	0.004(0.021)	
Grades Stops	0.004(0.011)	0.018(0.033)	0.023(0.054)	-0.001(0.013)	-0.006(0.038)	-0.014(0.063)	-0.001(0.003)	0.001(0.014)	-0.007(0.025)	
Zone Stops	-0.011(0.010)	-0.036(0.031)	-0.054(0.052)	0.000(0.013)	0.002(0.033)	0.010(0.057)	0.002(0.003)	0.005(0.014)	0.013(0.023)	
Man Stops	0.010(0.009)	0.028(0.028)	0.049(0.047)	0.001(0.009)	0.002(0.033)	0.010(0.037)	-0.002(0.003)	-0.010(0.013)	-0.016(0.023)	
CB1	0.010(0.009)	0.028(0.028)	0.049(0.047)	0.001(0.009)	0.002(0.021)	0.003(0.043)	-0.003(0.003)	-0.010(0.012)	-0.010(0.022)	
	-0.008(0.009)	0.000(0.000)	-0.039(0.044)	0.016(0.009)*	0.047(0.029)	0.079(0.047)*	0.002(0.003)	0.011(0.012)	0.023(0.021)	
Grades Stops Zone Stops	-0.008(0.009)**	-0.022(0.026) -0.056(0.028)**	-0.094(0.044)	0.011(0.009)	0.031(0.028)	0.055(0.047)	0.002(0.003)	0.011(0.012)	0.020(0.021)	
Man Stops CB2	0.005(0.009)	0.014(0.026)	0.023(0.043)	0.011(0.009)	0.032(0.027)	0.053(0.045)	-0.004(0.003)	-0.018(0.011)	-0.033(0.020)	
	0.005(0.000)	0.019(0.000)	0.001(0.040)	0.000(0.000)	0.000(0.000)	0.000(0.045)	0.004(0.000)	0.017(0.010)	0.001(0.001)	
Grades Stops	0.005(0.009)	0.013(0.026)	0.021(0.043)	0.000(0.009)	0.002(0.028)	0.003(0.047)	-0.004(0.003)	-0.017(0.012)	-0.031(0.021)	
Zone Stops	-0.001(0.009)	-0.004(0.027)	-0.005(0.044)	0.001(0.009)	0.007(0.028)	0.006(0.047)	0.003(0.003)	0.013(0.012)	0.027(0.021)	
Man Stops	-0.014(0.009)	-0.041(0.026)	-0.067(0.043)	0.001(0.009)	0.001(0.027)	-0.002(0.046)	0.004(0.003)	0.016(0.011)	0.029(0.020)	
CB3										
Grades Stops	-0.021(0.009)**	-0.060(0.027)**	-0.100(0.045)**	0.001(0.009)	0.001(0.028)	0.002(0.047)	-0.001(0.003)	-0.002(0.011)	-0.001(0.020)	
Zone Stops	0.001(0.009)	0.005(0.028)	0.008(0.047)	0.004(0.010)	0.013(0.031)	0.023(0.052)	0.002(0.003)	0.008(0.012)	0.010(0.021)	
Man Stops	-0.009(0.009)	-0.029(0.027)	-0.047(0.045)	0.009(0.009)	0.024(0.027)	0.045(0.045)	0.006(0.003)**	0.027(0.012)**	0.049(0.020)**	
S1								/		
Grades Stops	-0.001(0.010)	0.002(0.029)	0.004(0.048)	-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)	-0.023(0.046)	-0.002(0.009)	-0.006(0.028)	-0.012(0.046)	0.002(0.003)	0.005(0.012)	0.006(0.022)	
Man Stops	0.002(0.009)	0.006(0.028)	0.008(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)*	0.058(0.031)*	0.095(0.051)*	0.002(0.003)	0.006(0.013)	0.012(0.023)	
Zone Stops	0.001(0.009)	-0.000(0.028)	0.004(0.047)	-0.005(0.010)	-0.013(0.031)	-0.025(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)	-0.015(0.028)	-0.028(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)	-0.016(0.034)	-0.025(0.056)	-0.002(0.003)	-0.007(0.012)	-0.008(0.022)	
Zone Stops	-0.011(0.010)	-0.031(0.029)	-0.058(0.048)	0.002(0.011)	0.003(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)	0.039(0.029)	0.066(0.050)	0.001(0.003)	0.009(0.012)	0.011(0.022)	
Perf. Measures										
GIMR	0.005(0.004)	0.013(0.014)	0.023(0.024)	0.004(0.004)	0.009(0.012)	0.013(0.021)				
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	
Control Del. 1 layers	110	110	110	110	110	110	110	110	110	

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)	0.003(0.046)	0.000(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	0.007(0.015)	0.024(0.045)	0.045(0.075)	-0.016(0.011)	-0.047(0.034)	-0.081(0.056)	0.008(0.004)*	0.036(0.019)*	0.068(0.033)**
DL2	0.001(0.020)	0.02-(0.0-0)	010 20 (01010)	()	0.001(0.0001)	0.002(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)*	0.003(0.024)	0.016(0.072)	0.022(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)	-0.066(0.070)	-0.105(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)	-0.020(0.075)	-0.018(0.042)	-0.064(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)	0.004(0.045)	0.025(0.133)	0.019(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)	-0.043(0.051)	-0.138(0.151)	-0.237(0.251)	0.000(0.004)	-0.010(0.020)	-0.007(0.035)
Grds Pass Rush Def	-0.004(0.015)	-0.008(0.044)	-0.017(0.073)	-0.016(0.053)	-0.038(0.157)	-0.076(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)	0.022(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)	0.017(0.025)	0.029(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)	-0.001(0.010)	-0.010(0.030)	-0.012(0.049)	-0.005(0.004)	-0.018(0.015)	-0.039(0.027)
LB2	·····(···- <u>-</u>)	0.020(0.001)	0.020(0.002)	***************************************	01020(01000)	0.01=(0.010)	0.000(0.001)	***************************************	0.000(0.0-1)
Grades Run Defense	0.026(0.013)*	0.082(0.040)**	0.135(0.067)**	-0.012(0.017)	-0.032(0.052)	-0.054(0.086)	0.002(0.004)	0.018(0.017)	0.030(0.031)
Man Grades Cov Def	-0.011(0.010)	-0.033(0.030)	-0.056(0.051)	0.003(0.013)	0.014(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)	-0.067(0.059)	0.012(0.017)	0.028(0.051)	0.048(0.085)	0.002(0.003)	0.013(0.015)	0.021(0.026)
LB3	-0.010(0.012)	-0.041(0.000)	-0.001 (0.003)	0.012(0.011)	0.020(0.001)	0.040(0.000)	0.002(0.000)	0.010(0.010)	0.021(0.020)
Grades Run Defense	-0.004(0.013)	-0.012(0.040)	-0.023(0.067)	-0.034(0.036)	-0.097(0.108)	-0.171(0.178)	-0.002(0.004)	-0.011(0.016)	-0.023(0.029)
Man Grades Cov Def	0.018(0.011)	0.055(0.033)	0.092(0.056)*	0.018(0.019)	0.052(0.055)	0.087(0.092)	0.005(0.003)*	0.018(0.014)	0.038(0.024)
Zone Grades Cov Def	-0.001(0.011)	-0.007(0.038)	-0.008(0.064)	-0.041(0.028)	-0.122(0.084)	-0.208(0.140)	0.005(0.003)	0.027(0.016)*	0.046(0.028)*
LB4	-0.001(0.012)	-0.007(0.038)	-0.000(0.004)	-0.041(0.028)	-0.122(0.004)	-0.200(0.140)	0.000(0.004)	0.027(0.010)	0.040(0.028)
Grades Run Defense	-0.029(0.012)**	-0.085(0.035)**	-0.147(0.058)**	0.029(0.039)	0.076(0.118)	0.129(0.198)	0.002(0.003)	0.010(0.016)	0.017(0.027)
Man Grades Cov Def	0.025(0.012)**	0.076(0.035)**	0.128(0.057)**	-0.004(0.018)	-0.016(0.054)	-0.024(0.090)	-0.000(0.003)	-0.004(0.015)	-0.001(0.026)
Zone Grades Cov Def	0.003(0.012)	0.010(0.039)	0.019(0.065)	-0.001(0.030)	0.003(0.092)	-0.003(0.153)	-0.001(0.004)	-0.007(0.016)	-0.017(0.029)
CB1	0.003(0.013)	0.010(0.039)	0.019(0.000)	-0.001(0.030)	0.003(0.032)	-0.003(0.133)	-0.001(0.004)	-0.007(0.010)	-0.017(0.029)
Grades Run Defense	-0.012(0.015)	-0.034(0.045)	-0.052(0.075)	0.009(0.016)	0.031(0.048)	0.047(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(0.043)	-0.149(0.069)**	0.002(0.004)	0.002(0.017)	0.011(0.029)
Zone Grades Cov Def	0.006(0.015)	0.025(0.044)	0.035(0.073)	-0.030(0.014)	-0.037(0.041)	-0.050(0.076)	0.000(0.004)	-0.003(0.018)	-0.012(0.032)
CB2	0.000(0.013)	0.023(0.044)	0.055(0.075)	-0.011(0.013)	-0.032(0.040)	-0.030(0.070)	0.000(0.004)	-0.003(0.018)	-0.012(0.032)
Grades Run Defense	0.032(0.014)**	0.099(0.042)**	0.169(0.070)**	-0.018(0.020)	-0.052(0.059)	-0.090(0.098)	-0.008(0.004)*	-0.023(0.018)	-0.048(0.032)
Man Grades Cov Def	-0.014(0.012)	-0.046(0.036)	-0.074(0.061)	0.006(0.018)	0.019(0.054)	0.030(0.090)	-0.004(0.004)	-0.025(0.016)	-0.024(0.027)
Zone Grades Cov Def	-0.012(0.014)	-0.039(0.042)	-0.065(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	-0.012(0.014)	-0.039(0.042)	-0.003(0.070)	-0.000(0.021)	-0.023(0.004)	-0.035(0.103)	0.002(0.004)	0.002(0.010)	0.000(0.031)
Grades Run Defense	-0.020(0.012)*	-0.066(0.036)*	-0.106(0.060)*	0.032(0.033)	0.099(0.100)	0.161(0.165)	-0.005(0.004)	-0.027(0.016)*	-0.050(0.029)*
Man Grades Cov Def	0.019(0.012)	0.065(0.038)*	0.106(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(0.012)	-0.023(0.041)	-0.043(0.069)	0.030(0.034)	0.008(0.087)	0.139(0.167)	0.002(0.004)	0.045(0.016)	0.077(0.029)
S1	-0.009(0.014)	-0.023(0.041)	-0.045(0.009)	0.030(0.034)	0.064(0.100)	0.139(0.107)	0.002(0.004)	0.010(0.018)	0.031(0.031)
Grades Run Defense	0.004(0.016)	0.014(0.049)	0.028(0.081)	-0.019(0.014)	-0.057(0.040)	-0.095(0.067)	-0.003(0.005)	-0.016(0.023)	-0.021(0.039)
Man Grades Cov Def		-0.014(0.043)		0.001(0.014)	-0.001(0.039)	-0.093(0.067)	-0.003(0.003)	-0.010(0.023)	-0.040(0.033)
	-0.006(0.014)		-0.030(0.072)						
Zone Grades Cov Def S2	-0.005(0.014)	-0.019(0.043)	-0.029(0.073)	0.013(0.012)	0.044(0.037)	0.070(0.062)	0.006(0.004)	0.027(0.019)	0.048(0.033)
	0.000(0.015)	0.000(0.047)	0.040(0.070)	0.000(0.007)	0.000(0.070)	0.001(0.100)	0.000(0.005)	0.017(0.000)	0.000(0.000)
Grades Run Defense	-0.009(0.015)	-0.028(0.047)	-0.048(0.079)	-0.002(0.027)	-0.008(0.079)	-0.021(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)	-0.045(0.132)	0.003(0.004)	0.014(0.018)	0.015(0.033)
Zone Grades Cov Def	-0.003(0.014)	-0.013(0.041)	-0.019(0.068)	0.007(0.026)	0.026(0.080)	0.048(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)	-0.027(0.066)	0.010(0.044)	0.028(0.137)	0.036(0.234)	-0.002(0.004)	-0.005(0.016)	-0.001(0.028)
Man Grades Cov Def	-0.004(0.013)	-0.012(0.040)	-0.022(0.066)	-0.013(0.043)	-0.030(0.127)	-0.050(0.213)	0.004(0.004)	0.012(0.016)	0.026(0.029)
Zone Grades Cov Def	0.019(0.015)	0.058(0.045)	0.094(0.075)	0.013(0.047)	0.028(0.144)	0.059(0.245)	-0.005(0.004)	-0.018(0.018)	-0.039(0.032)
Perf. Measures									
GIMR	0.003(0.003)	0.008(0.011)	0.012(0.020)	0.004(0.003)	0.009(0.011)	0.013(0.019)			
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

Table 6: Defense Tackles 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 Tackles	-0.004(0.009)	-0.012(0.027)	-0.018(0.045)	-0.009(0.009)	-0.027(0.026)	-0.046(0.044)	0.001(0.003)	0.003(0.012)	0.008(0.021)		
Productivity Sacks	0.010(0.009)	0.033(0.026)	0.053(0.044)	-0.007(0.009)	-0.018(0.026)	-0.032(0.044)	0.000(0.003)	0.001(0.011)	-0.002(0.021)		
DL2	0.010(0.003)	0.000(0.020)	0.000(0.011)	-0.007 (0.003)	-0.010(0.020)	-0.002(0.044)	0.000(0.003)	0.001(0.011)	-0.002(0.020)		
Grades Tackles	0.010(0.009)	0.031(0.027)	0.049(0.044)	0.017(0.009)*	0.051(0.028)*	0.079(0.047)*	0.002(0.003)	0.007(0.012)	0.007(0.021)		
Productivity Sacks	-0.001(0.009)	-0.001(0.021)	-0.006(0.044)	-0.011(0.009)	-0.028(0.026)	-0.045(0.044)	-0.006(0.003)**	-0.023(0.012)*	-0.041(0.021)*		
DL3	-0.001(0.009)	-0.001(0.020)	-0.000(0.043)	-0.011(0.003)	-0.028(0.020)	=0.043(0.044)	-0.000(0.003)	-0.023(0.012)	-0.041(0.021)		
Grades Tackles	-0.005(0.009)	-0.018(0.027)	-0.028(0.045)	0.001(0.012)	0.002(0.035)	-0.001(0.058)	0.002(0.003)	0.006(0.012)	0.011(0.021)		
Productivity Sacks	-0.003(0.009)	-0.007(0.027)	-0.011(0.044)	-0.002(0.012)	-0.003(0.030)	-0.001(0.038)	-0.002(0.003)	-0.003(0.011)	-0.008(0.020)		
DL4	-0.003(0.003)	-0.007(0.020)	=0.011(0.044)	-0.002(0.010)	-0.003(0.030)	-0.000(0.049)	-0.002(0.003)	-0.003(0.011)	-0.008(0.020)		
Grades Tackles	-0.008(0.010)	-0.027(0.029)	-0.041(0.048)	0.007(0.012)	0.023(0.037)	0.035(0.061)	-0.000(0.003)	-0.007(0.012)	-0.008(0.021)		
Productivity Sacks	-0.002(0.009)	-0.008(0.027)	-0.013(0.045)	-0.017(0.012)	-0.049(0.030)	-0.081(0.049)*	-0.006(0.003)**	-0.019(0.011)*	-0.033(0.021)*		
LB1	-0.002(0.009)	-0.008(0.021)	-0.013(0.043)	-0.017(0.010)	=0.045(0.030)	-0.001(0.049)	-0.000(0.003)	-0.019(0.011)	-0.033(0.020)		
Grades Tackles	0.021(0.012)*	0.064(0.035)*	0.107(0.059)*	0.012(0.011)	0.035(0.034)	0.055(0.058)	0.004(0.003)	0.018(0.015)	0.034(0.027)		
Man Tackles	0.006(0.011)	0.018(0.033)	0.033(0.054)	-0.003(0.011)	-0.008(0.032)	-0.014(0.054)	-0.004(0.003)	-0.017(0.014)	-0.032(0.024)		
Zone Tackles	-0.009(0.011)	-0.026(0.037)	-0.046(0.062)	-0.012(0.013)	-0.036(0.032)	-0.055(0.064)	0.000(0.004)	0.007(0.014)	0.012(0.024)		
LB2	-0.009(0.012)	-0.020(0.031)	=0.040(0.002)	-0.012(0.013)	-0.030(0.039)	-0.055(0.004)	0.000(0.004)	0.007(0.010)	0.012(0.028)		
Grades Tackles	-0.003(0.012)	-0.007(0.035)	-0.012(0.058)	-0.025(0.012)**	-0.074(0.037)**	-0.122(0.062)**	0.007(0.003)*	0.037(0.015)**	0.065(0.027)**		
Man Tackles	0.008(0.012)	0.028(0.033)	0.045(0.054)	0.003(0.011)	0.010(0.032)	0.016(0.053)	-0.006(0.003)*	-0.030(0.014)**	-0.047(0.024)*		
Zone Tackles	0.000(0.012)	-0.004(0.037)	-0.005(0.062)	0.013(0.012)	0.036(0.037)	0.059(0.062)	-0.001(0.004)	-0.007(0.016)	-0.021(0.028)		
LB3	0.025(0.012)**	0.073(0.036)**	0.120(0.059)**	-0.018(0.016)	0.055(0.046)	-0.090(0.077)	0.002(0.004)	0.011(0.010)	0.020(0.028)		
Grades Tackles					-0.055(0.046)			0.011(0.016)			
Man Tackles	-0.000(0.010)	-0.000(0.032)	0.002(0.053)	0.007(0.011)	0.021(0.033)	0.034(0.055)	-0.001(0.003)	-0.003(0.014)	0.002(0.025)		
Zone Tackles	-0.017(0.013)	-0.048(0.038)	-0.078(0.063)	0.009(0.014)	0.027(0.041)	0.043(0.068)	-0.000(0.004)	-0.004(0.016)	-0.012(0.029)		
LB4	/\			/	/		/				
Grades Tackles	-0.016(0.012)	-0.044(0.036)	-0.079(0.060)	-0.002(0.015)	-0.012(0.045)	-0.020(0.076)	-0.001(0.004)	-0.002(0.016)	-0.010(0.028)		
Man Tackles	0.008(0.011)	0.023(0.031)	0.038(0.052)	-0.015(0.011)	-0.046(0.033)	-0.073(0.054)	-0.004(0.003)	-0.020(0.014)	-0.031(0.025)		
Zone Tackles	0.009(0.011)	0.027(0.033)	0.051(0.055)	0.015(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)	-0.035(0.027)	-0.061(0.046)	0.005(0.009)	0.013(0.028)	0.020(0.046)	0.002(0.003)	0.009(0.012)	0.018(0.020)		
Man Tackles	-0.006(0.010)	-0.018(0.031)	-0.032(0.051)	0.023(0.010)**	0.067(0.031)**	0.112(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)	0.006(0.010)	0.020(0.030)	0.034(0.049)	0.003(0.003)	0.013(0.012)	0.026(0.022)		
CB2	/			/\			/\		/\		
Grades Tackles	0.021(0.009)**	0.061(0.027)**	0.100(0.045)**	0.002(0.010)	0.008(0.030)	0.014(0.050)	-0.005(0.003)**	-0.019(0.012)	-0.032(0.021)		
Man Tackles	-0.009(0.010)	-0.027(0.029)	-0.043(0.049)	0.008(0.010)	0.025(0.031)	0.038(0.052)	-0.002(0.003)	-0.008(0.013)	-0.015(0.023)		
Zone Tackles	-0.015(0.010)	-0.042(0.029)	-0.071(0.048)	-0.004(0.010)	-0.010(0.031)	-0.023(0.052)	0.002(0.003)	0.009(0.013)	0.022(0.023)		
CB3	0.011(0.010)	0.001(0.000)	0.055(0.045)	0.000(0.011)	0.005(0.004)	0.010(0.050)	0.001/0.000)	0.000(0.010)	0.015(0.000)		
Grades Tackles	-0.011(0.010)	-0.031(0.028)	-0.055(0.047)	0.003(0.011)	0.005(0.034)	0.010(0.056)	0.001(0.003)	0.008(0.012)	0.015(0.022)		
Man Tackles	-0.011(0.010)	-0.035(0.031)	-0.050(0.051)	-0.006(0.011)	-0.019(0.034)	-0.029(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)	0.023(0.030)	0.036(0.050)	0.004(0.010)	0.007(0.031)	0.018(0.051)	0.004(0.003)	0.018(0.013)	0.030(0.023)		
Zone Tackles	-0.017(0.009)*	-0.051(0.028)*	-0.086(0.047)*	-0.001(0.010)	-0.005(0.029)	-0.011(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)	0.003(0.050)	0.009(0.012)	0.029(0.035)	0.046(0.058)	0.002(0.003)	0.006(0.013)	0.012(0.023)		
Man Tackles	0.005(0.010)	0.016(0.031)	0.030(0.052)	-0.001(0.011)	0.000(0.033)	-0.004(0.055)	-0.002(0.003)	-0.011(0.013)	-0.012(0.024)		
Zone Tackles	-0.005(0.010)	-0.014(0.029)	-0.024(0.049)	-0.003(0.012)	-0.011(0.036)	-0.020(0.060)	-0.003(0.003)	-0.013(0.013)	-0.023(0.023)		
S3											
Grades Tackles	0.010(0.011)	0.029(0.031)	0.048(0.052)	0.014(0.013)	0.045(0.040)	0.077(0.067)	-0.000(0.003)	-0.004(0.014)	-0.001(0.024)		
Man Tackles	-0.013(0.010)	-0.040(0.030)	-0.066(0.051)	-0.004(0.013)	-0.012(0.039)	-0.018(0.065)	0.003(0.003)	0.015(0.014)	0.024(0.024)		
Zone Tackles	-0.004(0.011)	-0.013(0.033)	-0.025(0.055)	-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	0.005(0.004)	0.013(0.012)	0.021(0.021)	0.004(0.004)	0.010(0.012)	0.015(0.020)					
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 Off. Players	105	100	100	100	100	100	100	100	No		

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