Academic Tables for NFL Player Performance Models

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	0.020(0.016)	0.028(0.019)	0.029(0.020)	0.032(0.014)**	0.040(0.017)**	0.043(0.017)**	0.008(0.004)*	0.008(0.005)	0.007(0.004)	
Medium Grades Pass	-0.015(0.014)	-0.019(0.016)	-0.021(0.016)	-0.003(0.015)	-0.002(0.017)	-0.004(0.018)	0.007(0.004)*	0.006(0.004)	0.005(0.004)	
Deep Grades Pass	-0.011(0.013)	-0.014(0.016)	-0.016(0.016)	-0.022(0.013)*	-0.030(0.015)*	-0.031(0.016)*	0.007(0.004)*	0.006(0.004)	0.006(0.003)*	
Running Backs	0.011(0.010)	0.011(0.010)	0.010(0.010)	0.022(0.010)	0.000(0.010)	0.001(0.010)	0.001(0.001)	0.000(0.001)	0.000(0.000)	
Grades Pass Block	-0.019(0.010)*	-0.024(0.012)**	-0.024(0.013)*	0.012(0.010)	0.013(0.012)	0.014(0.012)	-0.005(0.003)	-0.006(0.003)*	-0.005(0.003)*	
Grades Run	0.011(0.011)	0.014(0.013)	0.015(0.013)	0.010(0.027)	0.011(0.031)	0.010(0.032)	0.023(0.011)**	0.022(0.012)*	0.019(0.010)*	
Short Grades Pass	0.004(0.011)	0.004(0.012)	0.003(0.013)	-0.002(0.010)	-0.001(0.012)	-0.001(0.012)	0.000(0.003)	0.000(0.003)	0.000(0.003)	
Medium Grades Pass	-0.013(0.009)	-0.015(0.011)	-0.016(0.011)	-0.002(0.010)	-0.008(0.012)	-0.008(0.011)	-0.001(0.003)	-0.001(0.003)	-0.001(0.003)	
Deep Grades Pass	-0.004(0.010)	-0.005(0.011)	-0.005(0.011)	-0.003(0.009)	-0.002(0.010)	-0.003(0.011)	0.002(0.003)	0.001(0.003)	0.001(0.002)	
WR1	-0.001(0.010)	-0.000(0.011)	-0.000(0.011)	-0.000(0.000)	-0.002(0.010)	-0.000(0.011)	0.002(0.000)	0.001(0.000)	0.001(0.002)	
Grades Run Block	0.007(0.015)	0.006(0.018)	0.008(0.019)	-0.005(0.021)	-0.008(0.024)	-0.006(0.025)	-0.004(0.004)	-0.004(0.005)	-0.004(0.004)	
Short Grades Pass	0.007(0.013)	0.007(0.015)	0.009(0.016)	0.004(0.017)	0.004(0.019)	0.003(0.020)	0.002(0.004)	0.001(0.004)	0.001(0.004)	
Medium Grades Pass	0.013(0.013)	0.007(0.013)	0.015(0.016)	0.002(0.014)	0.004(0.013)		0.002(0.004)*		0.006(0.004)*	
Deep Grades Pass	-0.003(0.013)	-0.004(0.013)	-0.004(0.013)	0.002(0.014)	0.005(0.014)	0.004(0.017) 0.006(0.015)	0.002(0.003)	0.006(0.004) 0.003(0.003)	0.003(0.003)	
WR2	-0.003(0.011)	-0.004(0.013)	-0.004(0.013)	0.002(0.012)	0.003(0.014)	0.000(0.013)	0.002(0.003)	0.003(0.003)	0.003(0.003)	
	0.010(0.010)	0.000(0.010)	0.001(0.000)	0.005(0.000)	0.004(0.044)	0.005(0.045)	0.001(0.005)	0.000(0.005)	0.000(0.005)	
Grades Run Block	-0.018(0.016)	-0.020(0.019)	-0.021(0.020)	0.025(0.038)	0.034(0.044)	0.035(0.045)	0.001(0.005)	0.000(0.005)	0.002(0.005)	
Short Grades Pass	-0.013(0.013)	-0.015(0.015)	-0.017(0.016)	0.013(0.026)	0.018(0.030)	0.017(0.031)	0.009(0.004)**	0.009(0.004)**	0.007(0.004)**	
Medium Grades Pass	0.018(0.012)	0.021(0.013)	0.023(0.014)	-0.007(0.020)	-0.011(0.023)	-0.010(0.025)	0.002(0.004)	0.001(0.004)	0.001(0.003)	
Deep Grades Pass	0.001(0.011)	0.002(0.012)	0.002(0.013)	0.011(0.016)	0.017(0.019)	0.016(0.020)	0.000(0.003)	0.000(0.003)	0.000(0.003)	
WR3	0.00=(0.04.4)	0.000(0.040)	0.040(0.045)	0.000(0.000)	0.000(0.00#)	0.00#(0.000)	0.000(0.004)	0.000(0.004)	0.000(0.004)	
Grades Run Block	-0.007(0.014)	-0.008(0.016)	-0.010(0.017)	0.022(0.030)	0.028(0.035)	0.027(0.036)	-0.000(0.004)	-0.000(0.004)	0.000(0.004)	
Short Grades Pass	-0.012(0.011)	-0.016(0.013)	-0.016(0.013)	0.004(0.024)	0.004(0.027)	0.008(0.028)	-0.002(0.003)	-0.003(0.004)	-0.002(0.003)	
Medium Grades Pass	0.003(0.010)	0.003(0.012)	0.003(0.012)	0.012(0.020)	0.008(0.022)	0.008(0.023)	0.006(0.003)*	0.005(0.003)	0.005(0.003)*	
Deep Grades Pass	0.001(0.010)	0.002(0.011)	0.002(0.012)	0.016(0.015)	0.023(0.018)	0.023(0.018)	0.001(0.003)	0.001(0.003)	0.001(0.003)	
TE1										
Grades Pass Block	0.023(0.011)**	0.027(0.013)**	0.029(0.014)**	0.025(0.012)**	0.033(0.013)**	0.034(0.014)**	-0.002(0.004)	-0.002(0.003)	-0.002(0.003)	
Grades Run Block	-0.019(0.015)	-0.022(0.018)	-0.025(0.018)	-0.006(0.016)	-0.009(0.019)	-0.009(0.020)	0.000(0.005)	0.001(0.005)	0.000(0.004)	
Short Grades Pass	0.003(0.013)	0.002(0.014)	0.002(0.015)	0.003(0.016)	0.002(0.018)	0.002(0.019)	0.003(0.004)	0.002(0.005)	0.001(0.004)	
Medium Grades Pass	-0.021(0.011)**	-0.024(0.012)**	-0.026(0.013)**	0.017(0.011)	0.020(0.012)	0.021(0.013)*	0.003(0.003)	0.002(0.003)	0.001(0.003)	
Deep Grades Pass	-0.003(0.010)	-0.003(0.011)	-0.003(0.012)	-0.014(0.009)	-0.017(0.011)	-0.017(0.011)	0.002(0.003)	0.002(0.003)	0.002(0.003)	
OL1										
Grades Pass Block	0.015(0.012)	0.019(0.014)	0.020(0.014)	-0.009(0.010)	-0.011(0.011)	-0.012(0.012)	-0.004(0.003)	-0.004(0.004)	-0.004(0.003)	
Grades Run Block	0.010(0.014)	0.013(0.016)	0.012(0.017)	0.006(0.010)	0.008(0.012)	0.010(0.012)	0.002(0.004)	0.001(0.004)	0.001(0.004)	
OL2										
Grades Pass Block	-0.012(0.012)	-0.014(0.013)	-0.015(0.014)	-0.005(0.010)	-0.005(0.011)	-0.006(0.012)	-0.000(0.003)	-0.001(0.003)	-0.002(0.003)	
Grades Run Block	-0.003(0.014)	-0.005(0.016)	-0.004(0.017)	-0.011(0.010)	-0.015(0.011)	-0.017(0.012)	0.004(0.004)	0.005(0.004)	0.005(0.004)	
OL3										
Grades Pass Block	0.009(0.012)	0.011(0.014)	0.012(0.014)	0.007(0.009)	0.010(0.011)	0.010(0.012)	0.003(0.003)	0.003(0.004)	0.002(0.003)	
Grades Run Block	-0.017(0.015)	-0.021(0.016)	-0.023(0.017)	0.004(0.009)	0.006(0.011)	0.006(0.011)	-0.004(0.004)	-0.004(0.004)	-0.004(0.004)	
OL4										
Grades Pass Block	0.022(0.012)*	0.026(0.014)*	0.028(0.014)*	0.007(0.010)	0.007(0.011)	0.008(0.012)	-0.002(0.003)	-0.003(0.003)	-0.002(0.003)	
Grades Run Block	-0.004(0.013)	-0.006(0.015)	-0.007(0.015)	-0.013(0.010)	-0.015(0.011)	-0.016(0.011)	-0.000(0.004)	0.001(0.004)	0.000(0.004)	
OL5	(,	(,	(,	(,	(,	()	()	(,	(,	
Grades Pass Block	0.031(0.012)**	0.036(0.014)**	0.037(0.015)**	-0.012(0.010)	-0.015(0.012)	-0.016(0.012)	0.001(0.003)	0.003(0.004)	0.002(0.003)	
Grades Run Block	-0.035(0.013)***	-0.043(0.015)***	-0.044(0.016)***	0.010(0.010)	0.011(0.012)	0.012(0.012)	-0.001(0.004)	-0.002(0.004)	-0.002(0.003)	
Perf. Measures	0.000(0.020)	0.010(0.010)	01011(01010)	0.020(0.020)	**************************************	***************************************	0.002(0.002)	***************************************	0.00=(0.000)	
GIMR	0.041(0.009)***	0.049(0.011)***	0.050(0.012)***	0.037(0.009)***	0.044(0.011)***	0.045(0.012)***				
Control Variables	0.011(0.000)	0.010(0.011)	0.000(0.012)	0.001 (0.000)	0.011(0.011)	0.010(0.012)				
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	Yes No	No No	
Season/Team FE Coach FE	Yes No	No No	No No	No	Yes No	No No	Yes	Yes	Yes	
							Yes No	Yes No	Yes No	
Player Presence	Yes	Yes	Yes	Yes	Yes	Yes				
Control Def. Players	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Control Off. Players	No	No	No	No	No	No	No	No	No	

Table 2: Offense Yards Model Results

		Starter Models			On-Field Models		Attempt Models		
Variable	Starter LPM	Starter Probit	Starter Logit	On-Field LPM	On-Field Probit	On-Field Logit	Attempt LPM	Attempt Probit	Attempt Logit
Quarterbacks									
Short Yards	0.016(0.013)	0.018(0.015)	0.018(0.016)	0.019(0.014)	0.023(0.016)	0.023(0.017)	0.002(0.004)	0.001(0.004)	0.002(0.004)
Medium Yards	0.025(0.013)*	0.034(0.015)**	0.034(0.016)**	0.002(0.014)	0.004(0.016)	0.004(0.017)	0.006(0.004)	0.006(0.004)	0.004(0.004)
Deep Yards	-0.036(0.012)***	-0.045(0.014)***	-0.047(0.014)***	-0.018(0.012)	-0.022(0.013)	-0.022(0.014)	0.007(0.004)**	0.006(0.004)*	0.005(0.003)
Running Backs									
Grades Pass Block	-0.014(0.010)	-0.017(0.011)	-0.018(0.012)	0.012(0.010)	0.013(0.011)	0.013(0.011)	-0.004(0.003)	-0.006(0.003)*	-0.005(0.003)*
Yards	0.001(0.010)	0.003(0.011)	0.002(0.012)	0.018(0.009)**	0.022(0.010)**	0.022(0.011)**	0.007(0.003)**	0.007(0.003)**	0.006(0.003)**
Short Yards	-0.005(0.010)	-0.005(0.011)	-0.005(0.012)	-0.014(0.010)	-0.016(0.011)	-0.015(0.011)	0.001(0.003)	0.002(0.003)	0.002(0.003)
Medium Yards	-0.020(0.009)**	-0.024(0.010)**	-0.025(0.010)**	-0.007(0.008)	-0.009(0.009)	-0.010(0.010)	-0.003(0.002)	-0.006(0.003)**	-0.005(0.003)*
Deep Yards	0.005(0.009)	0.007(0.012)	0.007(0.012)	-0.002(0.009)	-0.003(0.010)	-0.004(0.011)	-0.004(0.003)	-0.004(0.003)*	-0.004(0.002)
WR1									
Grades Run Block	0.009(0.015)	0.007(0.018)	0.009(0.018)	-0.001(0.021)	-0.003(0.024)	-0.002(0.025)	-0.003(0.004)	-0.002(0.004)	-0.002(0.004)
Short Yards	-0.008(0.010)	-0.010(0.012)	-0.009(0.012)	-0.002(0.011)	-0.003(0.012)	-0.003(0.013)	-0.003(0.003)	-0.004(0.003)	-0.004(0.003)
Medium Yards	0.001(0.011)	0.003(0.013)	0.002(0.013)	-0.004(0.011)	-0.003(0.013)	-0.004(0.013)	0.001(0.003)	0.001(0.003)	0.001(0.003)
Deep Yards	0.025(0.010)**	0.031(0.011)***	0.032(0.012)***	0.017(0.010)*	0.021(0.011)*	0.022(0.012)*	0.000(0.003)	0.001(0.003)	0.000(0.003)
WR2									
Grades Run Block	-0.021(0.016)	-0.023(0.019)	-0.025(0.020)	0.030(0.038)	0.040(0.044)	0.042(0.046)	-0.000(0.005)	-0.001(0.005)	0.000(0.005)
Short Yards	-0.013(0.010)	-0.015(0.012)	-0.017(0.012)	-0.001(0.011)	-0.001(0.013)	-0.002(0.014)	0.004(0.003)	0.003(0.003)	0.003(0.003)
Medium Yards	-0.005(0.011)	-0.008(0.013)	-0.008(0.013)	-0.015(0.012)	-0.016(0.014)	-0.018(0.014)	-0.002(0.003)	-0.003(0.003)	-0.003(0.003)
Deep Yards	0.013(0.010)	0.016(0.012)	0.017(0.012)	0.007(0.010)	0.008(0.012)	0.009(0.012)	0.002(0.003)	0.002(0.003)	0.002(0.003)
WR3									
Grades Run Block	-0.008(0.014)	-0.010(0.016)	-0.011(0.016)	0.022(0.030)	0.026(0.035)	0.025(0.037)	0.000(0.004)	0.000(0.004)	0.000(0.004)
Short Yards	-0.011(0.010)	-0.014(0.012)	-0.014(0.013)	0.010(0.012)	0.010(0.013)	0.012(0.014)	-0.003(0.003)	-0.004(0.003)	-0.003(0.003)
Medium Yards	-0.017(0.011)	-0.022(0.013)*	-0.022(0.013)*	0.003(0.011)	0.003(0.013)	0.003(0.013)	0.004(0.003)	0.003(0.003)	0.003(0.003)
Deep Yards	0.013(0.010)	0.017(0.011)	0.017(0.012)	0.002(0.010)	0.003(0.011)	0.002(0.012)	-0.001(0.003)	0.000(0.003)	-0.000(0.003)
TE1									
Grades Pass Block	0.022(0.011)**	0.028(0.013)**	0.029(0.014)**	0.024(0.012)**	0.032(0.013)**	0.033(0.014)**	-0.002(0.004)	-0.003(0.003)	-0.002(0.003)
Grades Run Block	-0.023(0.014)	-0.029(0.017)*	-0.031(0.018)*	-0.006(0.016)	-0.009(0.019)	-0.009(0.020)	0.001(0.005)	0.001(0.005)	0.000(0.004)
Short Yards	0.001(0.011)	0.001(0.013)	0.001(0.013)	-0.008(0.011)	-0.010(0.012)	-0.011(0.013)	0.002(0.004)	0.003(0.004)	0.001(0.003)
Medium Yards	-0.016(0.011)	-0.020(0.012)	-0.021(0.013)	0.009(0.011)	0.009(0.012)	0.010(0.012)	-0.001(0.003)	-0.002(0.004)	-0.001(0.003)
Deep Yards	-0.008(0.010)	-0.012(0.011)	-0.012(0.012)	-0.004(0.009)	-0.006(0.010)	-0.006(0.011)	-0.001(0.003)	-0.001(0.003)	-0.001(0.003)
OL1									
Grades Pass Block	0.013(0.012)	0.017(0.014)	0.018(0.014)	-0.011(0.010)	-0.013(0.011)	-0.013(0.012)	-0.004(0.003)	-0.004(0.004)	-0.004(0.003)
Grades Run Block	0.010(0.014)	0.014(0.016)	0.013(0.017)	0.006(0.010)	0.007(0.012)	0.009(0.012)	0.002(0.004)	0.000(0.004)	0.001(0.004)
OL2									
Grades Pass Block	-0.012(0.012)	-0.014(0.013)	-0.015(0.014)	-0.004(0.010)	-0.004(0.011)	-0.005(0.012)	-0.001(0.003)	-0.002(0.003)	-0.002(0.003)
Grades Run Block	-0.004(0.014)	-0.006(0.016)	-0.006(0.016)	-0.013(0.010)	-0.016(0.012)	-0.018(0.012)	0.004(0.004)	0.006(0.004)	0.006(0.004)
OL3									
Grades Pass Block	0.009(0.012)	0.011(0.014)	0.013(0.014)	0.008(0.009)	0.010(0.011)	0.011(0.011)	0.003(0.003)	0.003(0.004)	0.002(0.003)
Grades Run Block	-0.016(0.014)	-0.020(0.017)	-0.022(0.017)	0.002(0.009)	0.005(0.011)	0.005(0.011)	-0.004(0.004)	-0.005(0.004)	-0.005(0.004)
OL4	/			/	/		/\		/
Grades Pass Block	0.019(0.012)	0.023(0.014)	0.024(0.015)*	0.005(0.010)	0.005(0.011)	0.006(0.012)	-0.002(0.003)	-0.003(0.003)	-0.002(0.003)
Grades Run Block	-0.004(0.013)	-0.006(0.015)	-0.007(0.016)	-0.011(0.010)	-0.013(0.011)	-0.014(0.011)	-0.000(0.004)	0.001(0.004)	0.001(0.004)
OL5						/		/	
Grades Pass Block	0.022(0.012)*	0.025(0.014)*	0.027(0.014)*	-0.013(0.010)	-0.016(0.012)	-0.016(0.012)	0.001(0.003)	0.003(0.004)	0.001(0.003)
Grades Run Block	-0.027(0.013)**	-0.033(0.015)**	-0.034(0.016)**	0.010(0.010)	0.010(0.012)	0.010(0.012)	-0.001(0.004)	-0.002(0.004)	-0.002(0.003)
Perf. Measures	0.044(0.000)***	0.050/0.040***	0.050/0.040/999	0.000(0.000)***	0.045(0.044)***	0.048(0.040)***			
GIMR	0.041(0.009)***	0.052(0.012)***	0.053(0.012)***	0.036(0.009)***	0.045(0.011)***	0.047(0.012)***			
Control Variables	N/	37	37	V	V	v	V	V	V
Game Situation	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Coach Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Team Stats	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Season/Team FE	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Coach FE	No	No	No	No	No	No	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	0.021(0.013)	0.025(0.016)	0.025(0.016)	0.030(0.014)**	0.035(0.016)**	0.035(0.017)**	-0.001(0.004)	-0.002(0.004)	-0.000(0.004)
Medium Completions	0.019(0.014)	0.028(0.016)*	0.027(0.017)*	-0.001(0.015)	-0.001(0.017)	-0.001(0.017)	0.008(0.004)*	0.006(0.004)	0.005(0.004)
Deep Completions	-0.033(0.012)***	-0.041(0.014)***	-0.042(0.015)***	-0.026(0.012)**	-0.032(0.014)**	-0.032(0.014)**	0.006(0.004)	0.005(0.004)	0.004(0.003)
Running Backs	` ′								
Grades Pass Block	-0.015(0.010)	-0.019(0.011)	-0.019(0.012)	0.013(0.010)	0.014(0.011)	0.015(0.011)	-0.004(0.003)	-0.005(0.003)*	-0.005(0.003)*
Attempts	0.001(0.010)	0.003(0.011)	0.001(0.012)	0.016(0.009)*	0.019(0.010)*	0.019(0.011)*	0.005(0.003)	0.005(0.003)	0.004(0.003)
Short Receptions	-0.002(0.010)	-0.003(0.012)	-0.003(0.013)	-0.016(0.010)*	-0.018(0.011)*	-0.018(0.011)	0.002(0.003)	0.003(0.003)	0.002(0.003)
Medium Receptions	-0.015(0.009)*	-0.017(0.010)*	-0.019(0.010)*	-0.008(0.008)	-0.010(0.009)	-0.011(0.010)	-0.004(0.002)	-0.005(0.003)*	-0.004(0.002)*
Deep Receptions	0.000(0.009)	0.001(0.012)	0.001(0.012)	-0.006(0.009)	-0.007(0.010)	-0.008(0.011)	-0.002(0.003)	-0.002(0.003)	-0.002(0.002)
WR1									
Grades Run Block	0.007(0.015)	0.005(0.018)	0.007(0.018)	-0.002(0.021)	-0.004(0.024)	-0.002(0.025)	-0.002(0.004)	-0.002(0.004)	-0.002(0.004)
Short Receptions	-0.009(0.010)	-0.012(0.012)	-0.012(0.012)	-0.005(0.011)	-0.007(0.012)	-0.007(0.013)	-0.002(0.003)	-0.002(0.003)	-0.002(0.003)
Medium Receptions	0.008(0.011)	0.011(0.013)	0.011(0.014)	-0.001(0.011)	0.000(0.013)	-0.000(0.013)	-0.001(0.003)	-0.001(0.003)	-0.001(0.003)
Deep Receptions	0.020(0.010)**	0.025(0.012)**	0.026(0.012)**	0.014(0.010)	0.017(0.012)	0.018(0.012)	-0.000(0.003)	0.000(0.003)	0.000(0.003)
WR2	(,	()	(,	()	()	(,	()	()	
Grades Run Block	-0.021(0.016)	-0.024(0.019)	-0.026(0.019)	0.033(0.038)	0.043(0.044)	0.045(0.046)	0.000(0.005)	-0.001(0.005)	0.001(0.005)
Short Receptions	-0.015(0.010)	-0.017(0.012)	-0.019(0.012)	-0.005(0.012)	-0.006(0.013)	-0.007(0.014)	0.005(0.003)	0.004(0.003)	0.003(0.003)
Medium Receptions	-0.001(0.011)	-0.003(0.013)	-0.002(0.013)	-0.010(0.013)	-0.010(0.014)	-0.012(0.015)	-0.003(0.003)	-0.003(0.003)	-0.003(0.003)
Deep Receptions	0.008(0.010)	0.011(0.012)	0.011(0.012)	0.007(0.010)	0.008(0.012)	0.009(0.012)	0.001(0.003)	0.002(0.003)	0.001(0.003)
WR3	0.000(0.020)	***************************************	*****(*********************************	0.001(0.020)	**************************************	***************************************	0.002(0.000)	0.00=(0.000)	0.002(0.000)
Grades Run Block	-0.009(0.014)	-0.011(0.016)	-0.012(0.016)	0.021(0.030)	0.024(0.035)	0.024(0.037)	0.000(0.004)	0.000(0.004)	0.000(0.004)
Short Receptions	-0.013(0.011)	-0.017(0.012)	-0.017(0.013)	0.014(0.013)	0.014(0.014)	0.017(0.015)	-0.001(0.003)	-0.002(0.003)	-0.002(0.003)
Medium Receptions	-0.013(0.012)	-0.018(0.013)	-0.018(0.014)	0.004(0.012)	0.004(0.013)	0.004(0.014)	0.002(0.003)	0.002(0.003)	0.002(0.003)
Deep Receptions	0.007(0.010)	0.010(0.012)	0.010(0.012)	0.006(0.010)	0.007(0.012)	0.007(0.012)	-0.001(0.003)	-0.000(0.003)	-0.000(0.003)
TE1	0.001(0.010)	0.010(0.012)	0.010(0.012)	0.000(0.010)	0.001(0.012)	0.001(0.012)	0.001(0.000)	0.000(0.000)	0.000(0.000)
Grades Pass Block	0.024(0.011)**	0.029(0.013)**	0.031(0.014)**	0.025(0.012)**	0.034(0.013)**	0.035(0.014)**	-0.002(0.004)	-0.003(0.003)	-0.002(0.003)
Grades Run Block	-0.024(0.014)	-0.030(0.017)*	-0.032(0.018)*	-0.007(0.016)	-0.010(0.019)	-0.009(0.020)	0.001(0.005)	0.002(0.005)	0.000(0.004)
Short Receptions	0.001(0.011)	0.001(0.013)	0.001(0.014)	-0.016(0.011)	-0.019(0.013)	-0.020(0.013)	0.003(0.004)	0.004(0.004)	0.002(0.003)
Medium Receptions	-0.021(0.011)*	-0.026(0.013)**	-0.027(0.013)**	0.009(0.011)	0.009(0.012)	0.010(0.013)	-0.000(0.004)	-0.002(0.004)	-0.001(0.003)
Deep Receptions	-0.004(0.010)	-0.007(0.011)	-0.007(0.012)	0.001(0.009)	0.001(0.011)	0.001(0.011)	-0.003(0.003)	-0.003(0.003)	-0.002(0.003)
OL1	0.001(0.010)	0.001(0.011)	0.001(0.012)	0.001(0.000)	0.001(0.011)	0.001(0.011)	0.000(0.000)	0.000(0.000)	0.002(0.000)
Grades Pass Block	0.014(0.012)	0.017(0.013)	0.019(0.014)	-0.010(0.010)	-0.012(0.011)	-0.012(0.012)	-0.004(0.003)	-0.004(0.004)	-0.004(0.003)
Grades Run Block	0.011(0.014)	0.014(0.016)	0.014(0.017)	0.007(0.010)	0.009(0.012)	0.010(0.012)	0.002(0.004)	0.001(0.004)	0.001(0.004)
OL2	0.0(0.0)	0.011(0.010)	***************************************	0.001(0.020)	**************************************	*****(***********)	0.00=(0.00-)	0.00-(0.00-)	0.001(0.001)
Grades Pass Block	-0.012(0.012)	-0.014(0.013)	-0.015(0.014)	-0.003(0.010)	-0.004(0.011)	-0.004(0.012)	-0.001(0.003)	-0.002(0.003)	-0.002(0.003)
Grades Run Block	-0.003(0.014)	-0.004(0.016)	-0.005(0.016)	-0.012(0.010)	-0.015(0.012)	-0.017(0.012)	0.005(0.004)	0.006(0.004)	0.006(0.004)
OL3	01000(01011)	0.001(0.010)	0.000(0.000)	0.01=(0.010)	*****(***********)	0.017(0.012)	0.000(0.00-)	0.000(0.00-)	0.000(0.001)
Grades Pass Block	0.011(0.012)	0.013(0.014)	0.015(0.014)	0.008(0.009)	0.011(0.011)	0.011(0.012)	0.003(0.003)	0.003(0.004)	0.002(0.003)
Grades Run Block	-0.016(0.014)	-0.021(0.017)	-0.023(0.017)	0.003(0.009)	0.007(0.011)	0.006(0.011)	-0.004(0.004)	-0.005(0.004)	-0.004(0.004)
OL4	0.010(0.011)	0.021(0.011)	0.020(0.011)	0.000(0.000)	0.007(0.011)	0.000(0.011)	0.001(0.001)	0.000(0.001)	0.001(0.001)
Grades Pass Block	0.020(0.012)*	0.024(0.014)*	0.026(0.015)*	0.005(0.010)	0.006(0.011)	0.006(0.012)	-0.002(0.003)	-0.002(0.003)	-0.002(0.003)
Grades Run Block	-0.004(0.013)	-0.006(0.015)	-0.007(0.016)	-0.011(0.010)	-0.013(0.011)	-0.015(0.011)	-0.002(0.003)	0.001(0.004)	0.001(0.004)
OL5	0.001(0.010)	0.000(0.010)	0.001(0.010)	0.011(0.010)	0.010(0.011)	0.010(0.011)	0.000(0.001)	0.001(0.001)	0.001(0.001)
Grades Pass Block	0.024(0.012)**	0.027(0.014)**	0.029(0.015)**	-0.013(0.010)	-0.015(0.012)	-0.016(0.012)	0.000(0.003)	0.003(0.004)	0.001(0.003)
Grades Run Block	-0.028(0.013)**	-0.034(0.015)**	-0.035(0.016)**	0.009(0.010)	0.009(0.012)	0.010(0.012)	-0.001(0.004)	-0.002(0.004)	-0.002(0.003)
Perf. Measures	-0.020(0.010)	-0.004(0.010)	-0.030(0.010)	0.005(0.010)	0.005(0.012)	0.010(0.012)	-0.001(0.004)	-0.002(0.004)	-0.002(0.003)
GIMR	0.046(0.009)***	0.056(0.011)***	0.058(0.012)***	0.041(0.009)***	0.051(0.011)***	0.052(0.012)***			
Control Variables	0.040(0.000)	0.000(0.011)	0.000(0.012)	0.041(0.003)	0.001(0.011)	0.002(0.012)			
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	No	No	No	Yes	Yes	Yes
Player Presence	Yes	Yes	Yes	Yes	Yes	Yes	No No	Yes No	Yes No
	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Control Def. Players Control Off. Players	Yes No	Yes No	Yes No	Yes No	Yes No	No No	Yes No	Yes No	Yes No
Control Off. Players	No	INO	INO	INO	INO	INO	INO	INO	INO

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	0.010(0.009)	0.012(0.010)	0.013(0.011)	-0.007(0.009)	-0.009(0.010)	-0.009(0.011)	0.001(0.002)	-0.000(0.003)	0.000(0.002)
Productivity Stops	-0.017(0.009)*	-0.020(0.010)**	-0.021(0.011)**	-0.004(0.009)	-0.004(0.010)	-0.005(0.011)	-0.001(0.002)	-0.001(0.003)	-0.001(0.002)
DL2	0.017(0.000)	0.020(0.010)	0.021(0.011)	0.001(0.000)	0.001(0.010)	0.000(0.011)	0.001(0.002)	0.001(0.000)	0.001(0.002)
Grades Stops	-0.007(0.009)	-0.008(0.010)	-0.008(0.011)	0.013(0.009)	0.015(0.010)	0.015(0.011)	0.003(0.002)	0.002(0.003)	0.002(0.002)
Productivity Stops	-0.012(0.009)	-0.014(0.010)	-0.016(0.011)	-0.015(0.009)	-0.017(0.010)*	-0.018(0.011)	-0.005(0.002)*	-0.004(0.003)*	-0.003(0.002)
DL3	(,	(,	(,	(,	()	(,	(,	(,	(,
Grades Stops	-0.010(0.009)	-0.013(0.010)	-0.013(0.011)	0.008(0.010)	0.008(0.012)	0.008(0.012)	0.002(0.002)	0.002(0.003)	0.002(0.002)
Productivity Stops	-0.005(0.009)	-0.005(0.010)	-0.006(0.011)	-0.007(0.010)	-0.007(0.011)	-0.008(0.012)	-0.003(0.002)	-0.003(0.003)	-0.003(0.002)
DL4		(/	, , , ,	(,	,	,	()		,
Grades Stops	-0.002(0.009)	-0.003(0.010)	-0.005(0.011)	-0.004(0.010)	-0.005(0.012)	-0.005(0.012)	-0.001(0.003)	-0.002(0.003)	-0.001(0.002)
Productivity Stops	-0.011(0.009)	-0.012(0.011)	-0.013(0.011)	-0.023(0.010)**	-0.027(0.011)**	-0.029(0.012)**	-0.002(0.003)	-0.002(0.003)	-0.002(0.002)
LB1	(, , , , ,	(,	(,	(,	()	(,	()	(,	(,
Grades Stops	-0.007(0.009)	-0.008(0.011)	-0.008(0.011)	-0.002(0.010)	-0.001(0.011)	-0.002(0.012)	0.005(0.003)*	0.004(0.003)	0.004(0.002)
Zone Stops	-0.014(0.010)	-0.016(0.011)	-0.018(0.012)	-0.004(0.010)	-0.005(0.012)	-0.006(0.012)	-0.002(0.003)	-0.002(0.003)	-0.001(0.002)
Man Stops	-0.002(0.009)	-0.002(0.010)	-0.003(0.011)	-0.002(0.009)	-0.001(0.010)	-0.001(0.011)	-0.001(0.003)	0.000(0.003)	0.001(0.002)
LB2									
Grades Stops	-0.001(0.010)	-0.002(0.011)	-0.002(0.012)	-0.019(0.011)*	-0.023(0.012)*	-0.024(0.013)*	0.002(0.003)	0.002(0.003)	0.002(0.002)
Zone Stops	0.003(0.010)	0.004(0.012)	0.004(0.012)	0.010(0.011)	0.010(0.012)	0.012(0.013)	0.002(0.003)	0.002(0.003)	0.002(0.002)
Man Stops	-0.009(0.009)	-0.011(0.011)	-0.012(0.011)	-0.014(0.010)	-0.016(0.011)	-0.017(0.011)	-0.000(0.003)	-0.000(0.003)	0.000(0.002)
LB3									
Grades Stops	-0.003(0.010)	-0.002(0.012)	-0.003(0.012)	-0.008(0.013)	-0.011(0.015)	-0.011(0.015)	0.002(0.003)	0.002(0.003)	0.001(0.003)
Zone Stops	-0.006(0.010)	-0.007(0.011)	-0.007(0.012)	0.010(0.011)	0.012(0.012)	0.012(0.013)	-0.000(0.003)	-0.000(0.003)	0.000(0.002)
Man Stops	-0.027(0.009)***	-0.032(0.011)***	-0.034(0.011)***	-0.002(0.009)	-0.001(0.011)	-0.002(0.011)	0.003(0.003)	0.003(0.003)	0.003(0.002)
LB4	` '				. , ,				
Grades Stops	-0.002(0.010)	-0.001(0.012)	-0.001(0.013)	0.001(0.013)	0.000(0.015)	-0.001(0.016)	0.004(0.003)	0.004(0.003)	0.005(0.003)*
Zone Stops	0.001(0.010)	-0.001(0.012)	-0.000(0.012)	0.001(0.011)	0.002(0.013)	0.003(0.014)	0.000(0.003)	-0.000(0.003)	-0.001(0.003)
Man Stops	0.005(0.009)	0.007(0.011)	0.006(0.012)	0.001(0.009)	0.001(0.010)	0.001(0.011)	0.000(0.003)	0.000(0.003)	0.000(0.002)
CB1									
Grades Stops	0.017(0.009)*	0.021(0.010)**	0.022(0.011)**	0.018(0.009)*	0.020(0.011)*	0.022(0.011)*	0.000(0.002)	-0.000(0.003)	-0.000(0.002)
Zone Stops	0.002(0.009)	0.003(0.011)	0.003(0.011)	0.010(0.009)	0.012(0.011)	0.013(0.011)	0.004(0.003)	0.004(0.003)	0.004(0.002)
Man Stops	0.006(0.009)	0.005(0.011)	0.004(0.011)	0.012(0.009)	0.013(0.010)	0.014(0.011)	-0.002(0.003)	-0.002(0.003)	-0.001(0.002)
CB2									
Grades Stops	-0.003(0.009)	-0.002(0.010)	-0.003(0.011)	-0.001(0.009)	-0.001(0.011)	-0.001(0.011)	-0.001(0.003)	0.000(0.003)	0.000(0.002)
Zone Stops	0.001(0.009)	0.000(0.011)	-0.001(0.011)	0.002(0.009)	0.003(0.011)	0.003(0.011)	-0.001(0.003)	-0.001(0.003)	-0.001(0.002)
Man Stops	-0.016(0.009)*	-0.020(0.010)*	-0.021(0.011)*	0.002(0.009)	0.001(0.011)	0.000(0.011)	-0.001(0.003)	0.000(0.003)	-0.000(0.002)
CB3	` ′				` ′				
Grades Stops	-0.011(0.009)	-0.013(0.011)	-0.014(0.011)	-0.003(0.010)	-0.006(0.011)	-0.006(0.011)	0.005(0.003)**	0.006(0.003)**	0.005(0.002)**
Zone Stops	0.007(0.009)	0.009(0.011)	0.009(0.011)	0.001(0.011)	0.001(0.012)	0.002(0.013)	-0.003(0.003)	-0.004(0.003)	-0.004(0.002)
Man Stops	0.024(0.009)***	0.027(0.010)**	0.028(0.011)**	0.006(0.009)	0.006(0.010)	0.008(0.011)	-0.004(0.002)	-0.001(0.003)	-0.001(0.002)
S1									
Grades Stops	-0.002(0.010)	-0.003(0.011)	-0.004(0.011)	-0.004(0.010)	-0.004(0.011)	-0.006(0.012)	0.003(0.003)	0.003(0.003)	0.002(0.002)
Zone Stops	-0.006(0.010)	-0.006(0.011)	-0.006(0.011)	-0.001(0.009)	-0.001(0.011)	-0.002(0.011)	-0.001(0.003)	-0.001(0.003)	-0.001(0.002)
Man Stops	0.005(0.009)	0.004(0.011)	0.005(0.011)	0.008(0.010)	0.009(0.011)	0.010(0.011)	-0.003(0.003)	-0.003(0.003)	-0.003(0.002)
S2									
Grades Stops	0.003(0.010)	0.004(0.011)	0.004(0.012)	0.018(0.010)*	0.022(0.012)*	0.023(0.012)*	0.001(0.003)	0.001(0.003)	0.001(0.003)
Zone Stops	0.006(0.010)	0.008(0.011)	0.008(0.012)	-0.005(0.010)	-0.004(0.012)	-0.005(0.012)	0.001(0.003)	0.002(0.003)	0.002(0.002)
Man Stops	0.017(0.009)*	0.020(0.011)*	0.021(0.011)*	-0.003(0.009)	-0.004(0.011)	-0.005(0.011)	-0.000(0.003)	-0.001(0.003)	-0.000(0.002)
S3	` '/	` ′	` '		` /	` /	` -/	` -/	
Grades Stops	-0.012(0.010)	-0.014(0.011)	-0.015(0.012)	-0.003(0.011)	-0.005(0.013)	-0.005(0.014)	0.004(0.003)*	0.005(0.003)*	0.004(0.002)*
Zone Stops	-0.010(0.009)	-0.011(0.011)	-0.011(0.011)	0.000(0.011)	-0.001(0.012)	-0.001(0.013)	-0.002(0.003)	-0.001(0.003)	-0.001(0.002)
Man Stops	-0.003(0.009)	-0.003(0.010)	-0.002(0.011)	0.012(0.010)	0.014(0.011)	0.015(0.012)	-0.006(0.003)**	-0.006(0.003)**	-0.005(0.002)**
Perf. Measures	,,		` ′	` '/	` /	` /	` /		` /
GIMR	0.041(0.009)***	0.049(0.011)***	0.051(0.012)***	0.037(0.009)***	0.043(0.011)***	0.045(0.012)***			
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	No	No	No	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
Don 1 layers	110	.10	.10	.10	110	110	.10	.10	.10

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	0.033(0.013)**	0.040(0.015)***	0.042(0.016)***	-0.004(0.011)	-0.005(0.013)	-0.004(0.013)	-0.002(0.004)	-0.005(0.004)	-0.004(0.004)	
Grds Pass Rush Def	-0.017(0.012)	-0.020(0.014)	-0.022(0.015)	-0.015(0.011)	-0.017(0.013)	-0.019(0.013)	-0.006(0.004)	-0.004(0.004)	-0.004(0.003)	
DL2	0.011(0.012)	0.020(0.011)	0.022(0.010)	0.010(0.011)	0.011(0.010)	0.010(0.010)	0.000(0.001)	0.001(0.001)	0.001(0.000)	
Grades Run Defense	-0.001(0.014)	-0.004(0.015)	-0.002(0.016)	0.018(0.021)	0.024(0.024)	0.023(0.025)	0.003(0.004)	0.004(0.004)	0.004(0.004)	
Grds Pass Rush Def	0.005(0.013)	0.005(0.015)	0.003(0.015)	-0.014(0.021)	-0.020(0.024)	-0.019(0.025)	-0.000(0.004)	0.000(0.004)	-0.000(0.003)	
DL3	0.000(0.020)	0.000(0.020)	0.000(0.020)	0.00-2(0.00-2)	0.020(0.02-)	01010(01020)	01000(01002)	0.000(0.002)	0.000(0.000)	
Grades Run Defense	-0.023(0.013)*	-0.030(0.015)*	-0.030(0.016)*	-0.007(0.039)	-0.011(0.043)	-0.007(0.045)	-0.002(0.004)	-0.000(0.004)	-0.001(0.004)	
Grds Pass Rush Def	0.003(0.013)	0.006(0.015)	0.006(0.015)	0.014(0.039)	0.020(0.043)	0.016(0.045)	0.000(0.004)	-0.000(0.004)	-0.000(0.004)	
DL4	(,	()	(/	(,	(,	(,	(,	,	(,	
Grades Run Defense	-0.003(0.013)	-0.003(0.015)	-0.004(0.016)	-0.031(0.049)	-0.040(0.054)	-0.041(0.056)	0.002(0.004)	0.000(0.004)	0.000(0.004)	
Grds Pass Rush Def	-0.011(0.013)	-0.013(0.015)	-0.013(0.016)	0.000(0.050)	0.003(0.055)	0.002(0.057)	0.000(0.004)	0.003(0.004)	0.002(0.004)	
LB1	()	(,	()	()		(,	(,	()	(,	
Grades Run Defense	-0.006(0.012)	-0.005(0.014)	-0.006(0.014)	0.004(0.011)	0.005(0.013)	0.004(0.013)	0.002(0.004)	0.001(0.004)	0.001(0.004)	
Man Grades Cov Def	-0.004(0.009)	-0.006(0.011)	-0.005(0.012)	0.003(0.008)	0.005(0.010)	0.005(0.010)	0.003(0.003)	0.003(0.003)	0.003(0.003)	
Zone Grades Cov Def	-0.012(0.011)	-0.016(0.013)	-0.016(0.013)	-0.003(0.011)	-0.005(0.012)	-0.005(0.013)	-0.008(0.003)**	-0.007(0.003)**	-0.006(0.003)**	
LB2										
Grades Run Defense	0.031(0.011)***	0.039(0.013)***	0.040(0.014)***	-0.010(0.023)	-0.009(0.026)	-0.011(0.027)	0.004(0.004)	0.005(0.004)	0.005(0.003)	
Man Grades Cov Def	-0.011(0.010)	-0.014(0.011)	-0.015(0.012)	0.004(0.013)	0.007(0.016)	0.006(0.016)	-0.002(0.003)	-0.003(0.003)	-0.002(0.002)	
Zone Grades Cov Def	-0.000(0.011)	0.000(0.012)	-0.000(0.013)	0.016(0.018)	0.018(0.021)	0.019(0.022)	-0.009(0.003)**	-0.008(0.003)**	-0.006(0.003)**	
LB3	()	()	()	(/	()	(,	(,	()	()	
Grades Run Defense	0.004(0.012)	0.005(0.014)	0.006(0.014)	-0.073(0.045)	-0.088(0.052)*	-0.089(0.055)	-0.005(0.004)	-0.004(0.004)	-0.004(0.004)	
Man Grades Cov Def	-0.012(0.010)	-0.013(0.012)	-0.013(0.012)	0.019(0.019)	0.021(0.021)	0.023(0.022)	0.000(0.003)	0.002(0.003)	0.002(0.003)	
Zone Grades Cov Def	0.010(0.012)	0.011(0.013)	0.011(0.014)	-0.049(0.029)*	-0.059(0.035)*	-0.061(0.036)*	-0.000(0.004)	-0.001(0.004)	-0.001(0.003)	
LB4	(,	()	(,	(,	(,	(,	()	()	(,	
Grades Run Defense	0.007(0.012)	0.007(0.014)	0.006(0.015)	0.068(0.055)	0.085(0.061)	0.087(0.064)	-0.007(0.005)	-0.008(0.005)	-0.007(0.004)*	
Man Grades Cov Def	0.015(0.012)	0.019(0.013)	0.020(0.014)	-0.001(0.018)	-0.004(0.021)	-0.004(0.022)	0.001(0.003)	0.001(0.003)	0.001(0.003)	
Zone Grades Cov Def	0.004(0.013)	0.003(0.015)	0.004(0.015)	-0.001(0.030)	0.002(0.036)	0.003(0.038)	0.004(0.004)	0.007(0.004)*	0.006(0.003)*	
CB1	()	()	(,	(,	()		(,	(,		
Grades Run Defense	0.029(0.013)**	0.035(0.015)**	0.036(0.016)**	-0.008(0.018)	-0.007(0.021)	-0.007(0.022)	-0.002(0.005)	-0.002(0.005)	-0.001(0.004)	
Man Grades Cov Def	-0.014(0.012)	-0.018(0.014)	-0.019(0.014)	-0.036(0.015)**	-0.042(0.017)**	-0.045(0.017)***	0.001(0.004)	0.000(0.004)	0.001(0.003)	
Zone Grades Cov Def	-0.010(0.013)	-0.010(0.015)	-0.011(0.015)	-0.027(0.017)	-0.032(0.019)*	-0.032(0.020)	-0.000(0.004)	0.000(0.004)	-0.000(0.004)	
CB2										
Grades Run Defense	-0.052(0.013)***	-0.061(0.016)***	-0.064(0.016)***	-0.026(0.022)	-0.030(0.025)	-0.031(0.026)	-0.002(0.004)	-0.003(0.005)	-0.002(0.004)	
Man Grades Cov Def	-0.010(0.012)	-0.011(0.014)	-0.010(0.015)	0.007(0.018)	0.008(0.021)	0.008(0.022)	-0.002(0.004)	-0.002(0.004)	-0.002(0.003)	
Zone Grades Cov Def	0.029(0.012)**	0.034(0.015)**	0.035(0.015)**	-0.011(0.023)	-0.015(0.027)	-0.014(0.028)	0.001(0.004)	0.001(0.004)	0.000(0.003)	
CB3	` ′		` ′							
Grades Run Defense	0.009(0.012)	0.010(0.014)	0.011(0.014)	-0.023(0.038)	-0.027(0.044)	-0.029(0.046)	-0.007(0.004)	-0.005(0.004)	-0.005(0.004)	
Man Grades Cov Def	0.004(0.012)	0.004(0.013)	0.006(0.014)	-0.018(0.031)	-0.018(0.034)	-0.018(0.036)	0.004(0.003)	0.005(0.004)	0.005(0.003)	
Zone Grades Cov Def	-0.002(0.013)	-0.001(0.014)	-0.002(0.015)	0.006(0.035)	0.006(0.039)	0.008(0.041)	-0.003(0.004)	-0.005(0.004)	-0.004(0.004)	
S1										
Grades Run Defense	-0.027(0.014)*	-0.032(0.016)**	-0.034(0.017)*	-0.017(0.016)	-0.019(0.018)	-0.021(0.019)	-0.002(0.005)	-0.004(0.006)	-0.002(0.005)	
Man Grades Cov Def	0.007(0.014)	0.008(0.016)	0.007(0.017)	0.002(0.013)	0.002(0.016)	0.001(0.017)	-0.003(0.004)	-0.003(0.005)	-0.003(0.004)	
Zone Grades Cov Def	0.015(0.013)	0.019(0.015)	0.020(0.016)	0.011(0.013)	0.016(0.015)	0.016(0.016)	0.000(0.004)	-0.002(0.005)	-0.001(0.004)	
S2	((*)	()	((//	(//	()	()	(, -)	
Grades Run Defense	-0.022(0.015)	-0.026(0.017)	-0.027(0.018)	-0.011(0.030)	-0.016(0.034)	-0.015(0.035)	0.005(0.006)	0.005(0.006)	0.003(0.005)	
Man Grades Cov Def	0.019(0.014)	0.022(0.016)	0.021(0.017)	-0.005(0.025)	-0.005(0.030)	-0.006(0.031)	0.006(0.004)	0.007(0.005)	0.007(0.004)	
Zone Grades Cov Def	-0.003(0.015)	-0.002(0.017)	-0.002(0.018)	-0.002(0.027)	-0.002(0.031)	-0.001(0.033)	0.002(0.004)	0.005(0.005)	0.005(0.004)	
S3	(0)	()	()	(1)	***************************************	()	=(+)	()	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Grades Run Defense	0.009(0.013)	0.010(0.015)	0.009(0.015)	0.003(0.043)	0.001(0.051)	-0.000(0.055)	0.002(0.004)	0.004(0.004)	0.003(0.003)	
Man Grades Cov Def	-0.026(0.012)**	-0.032(0.014)**	-0.033(0.015)**	-0.009(0.043)	-0.006(0.049)	-0.007(0.051)	-0.005(0.004)	-0.005(0.004)	-0.005(0.003)	
Zone Grades Cov Def	0.008(0.012)	0.010(0.016)	0.012(0.017)	0.012(0.047)	0.012(0.055)	0.015(0.059)	0.001(0.004)	0.000(0.004)	0.001(0.004)	
Perf. Measures	,,,,,,(,,, , ,,,,,,,,,,,,,,,,,,,,,,,,,,	()	(1)	, <u>-</u> ()	0.0-=(0.000)	()	(*)	(*)	,,,,,,	
GIMR	0.038(0.009)***	0.051(0.011)***	0.053(0.012)***	0.034(0.009)***	0.045(0.011)***	0.047(0.012)***				
Control Variables	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(0.011)	(0.012)	,,(0.000)	0.0.20(0.022)	,()				
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	No	No	No	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. Flayers	NO	INO	NO	NO	INO	INO	INO	NO	INO	

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

Table 6: Defense Tackles Model Results

		Starter Models			On-Field Models		Attempt Models			
Variable	Starter LPM	Starter Probit	Starter Logit	On-Field LPM	On-Field Probit	On-Field Logit	Attempt LPM	Attempt Probit	Attempt Logit	
DL1										
Grades Tackles	0.012(0.009)	0.014(0.010)	0.015(0.011)	-0.007(0.009)	-0.009(0.010)	-0.009(0.011)	0.003(0.003)	0.002(0.003)	0.002(0.002)	
Productivity Sacks	-0.013(0.009)	-0.016(0.010)	-0.016(0.010)	-0.008(0.009)	-0.010(0.010)	-0.011(0.011)	-0.002(0.002)	-0.001(0.003)	-0.002(0.002)	
DL2	` ′			` ′	` ′	` ′	` ′	` ′		
Grades Tackles	-0.011(0.009)	-0.012(0.010)	-0.012(0.011)	0.018(0.009)**	0.021(0.010)**	0.021(0.011)*	0.003(0.002)	0.002(0.003)	0.002(0.002)	
Productivity Sacks	-0.009(0.009)	-0.011(0.010)	-0.011(0.010)	-0.010(0.009)	-0.011(0.010)	-0.011(0.011)	-0.005(0.002)**	-0.005(0.003)*	-0.004(0.002)*	
DL3	` ′		` ′		` ′	` ′	` ′	` ′	` ′	
Grades Tackles	-0.015(0.009)*	-0.019(0.010)*	-0.019(0.011)*	0.001(0.011)	0.001(0.012)	-0.000(0.013)	0.003(0.002)	0.003(0.003)	0.003(0.002)	
Productivity Sacks	-0.007(0.009)	-0.007(0.010)	-0.008(0.011)	0.001(0.010)	0.002(0.011)	0.001(0.012)	-0.006(0.002)**	-0.005(0.003)**	-0.005(0.002)**	
DL4										
Grades Tackles	0.002(0.009)	0.002(0.011)	-0.000(0.011)	0.001(0.011)	0.001(0.012)	0.000(0.013)	-0.001(0.003)	-0.002(0.003)	-0.001(0.002)	
Productivity Sacks	-0.008(0.009)	-0.009(0.010)	-0.009(0.011)	-0.020(0.010)**	-0.023(0.011)**	-0.025(0.012)**	-0.004(0.002)	-0.004(0.003)	-0.004(0.002)	
LB1										
Grades Tackles	-0.004(0.011)	-0.005(0.013)	-0.005(0.013)	0.010(0.011)	0.013(0.013)	0.013(0.014)	0.004(0.003)	0.004(0.003)	0.003(0.003)	
Man Tackles	-0.004(0.011)	-0.005(0.012)	-0.006(0.013)	-0.003(0.011)	-0.003(0.012)	-0.004(0.013)	0.002(0.003)	0.001(0.003)	0.002(0.003)	
Zone Tackles	-0.008(0.012)	-0.009(0.014)	-0.009(0.014)	-0.013(0.013)	-0.017(0.015)	-0.016(0.015)	0.000(0.003)	0.000(0.004)	0.000(0.003)	
LB2										
Grades Tackles	-0.001(0.011)	-0.001(0.013)	-0.001(0.014)	-0.026(0.013)**	-0.032(0.015)**	-0.032(0.015)**	0.002(0.003)	0.002(0.003)	0.003(0.003)	
Man Tackles	-0.006(0.011)	-0.007(0.012)	-0.008(0.013)	0.003(0.011)	0.004(0.012)	0.004(0.013)	0.001(0.003)	0.003(0.003)	0.001(0.003)	
Zone Tackles	-0.005(0.013)	-0.006(0.014)	-0.006(0.015)	0.011(0.012)	0.013(0.014)	0.013(0.015)	-0.000(0.003)	-0.001(0.004)	-0.001(0.003)	
LB3	0.000(0.020)	0.000(0.022)	0.000(0.020)	0.011(0.012)	***************************************	0.020(0.020)	0.000(0.000)	***************************************	0.002(0.000)	
Grades Tackles	-0.006(0.012)	-0.005(0.014)	-0.006(0.015)	-0.017(0.016)	-0.022(0.018)	-0.022(0.018)	0.000(0.003)	0.000(0.003)	0.001(0.003)	
Man Tackles	-0.019(0.011)*	-0.022(0.013)*	-0.023(0.013)*	0.007(0.011)	0.010(0.012)	0.010(0.013)	0.004(0.003)	0.004(0.003)	0.004(0.003)	
Zone Tackles	0.007(0.013)	0.007(0.015)	0.008(0.015)	0.009(0.014)	0.011(0.016)	0.011(0.016)	-0.001(0.003)	-0.001(0.004)	-0.001(0.003)	
LB4	0.001(0.010)	0.001 (0.010)	0.000(0.010)	0.000(0.011)	0.011(0.010)	0.011(0.010)	0.001(0.000)	0.001(0.001)	0.001(0.000)	
Grades Tackles	-0.003(0.012)	-0.002(0.013)	-0.003(0.014)	-0.002(0.015)	-0.004(0.018)	-0.004(0.018)	0.002(0.003)	0.002(0.004)	0.003(0.003)	
Man Tackles	0.008(0.011)	0.009(0.012)	0.010(0.013)	-0.014(0.011)	-0.018(0.012)	-0.018(0.013)	0.002(0.003)	0.002(0.003)	0.002(0.003)	
Zone Tackles	-0.002(0.011)	-0.001(0.013)	-0.001(0.014)	0.015(0.013)	0.019(0.016)	0.020(0.016)	-0.001(0.003)	-0.002(0.003)	-0.001(0.003)	
CB1	-0.002(0.011)	-0.001(0.013)	-0.001(0.014)	0.010(0.013)	0.019(0.010)	0.020(0.010)	-0.001(0.003)	-0.000(0.003)	-0.001(0.003)	
Grades Tackles	0.006(0.009)	0.008(0.010)	0.008(0.011)	0.006(0.009)	0.006(0.011)	0.006(0.011)	0.001(0.003)	0.001(0.003)	0.001(0.002)	
Man Tackles	0.005(0.010)	0.006(0.010)	0.006(0.011)	0.025(0.010)**	0.029(0.012)**	0.030(0.011)	-0.003(0.003)	-0.003(0.003)	-0.002(0.003)	
Zone Tackles	0.001(0.010)	0.002(0.011)	0.001(0.012)	0.006(0.010)	0.008(0.012)	0.009(0.012)	0.002(0.003)	0.002(0.003)	0.002(0.003)	
CB2	0.001(0.010)	0.002(0.011)	0.001(0.012)	0.000(0.010)	0.000(0.012)	0.009(0.012)	0.002(0.003)	0.002(0.003)	0.002(0.002)	
Grades Tackles	-0.006(0.009)	-0.006(0.011)	-0.007(0.011)	0.001(0.010)	0.002(0.012)	0.003(0.012)	0.002(0.003)	0.003(0.003)	0.002(0.002)	
Man Tackles	0.011(0.010)	0.013(0.011)	0.013(0.012)	0.006(0.011)	0.007(0.012)	0.006(0.012)	-0.001(0.003)	-0.001(0.003)	-0.002(0.002)	
Zone Tackles	-0.007(0.010)	-0.009(0.011)	-0.009(0.012)	-0.002(0.011)	-0.002(0.012)	-0.003(0.013)	0.003(0.003)	0.002(0.003)	0.002(0.003)	
CB3	-0.007(0.010)	-0.009(0.011)	-0.009(0.012)	-0.002(0.011)	-0.002(0.012)	-0.003(0.013)	0.003(0.003)	0.002(0.003)	0.002(0.002)	
Grades Tackles	-0.003(0.010)	-0.003(0.012)	-0.004(0.012)	-0.004(0.012)	-0.006(0.013)	-0.005(0.014)	0.002(0.003)	0.001(0.003)	0.001(0.002)	
Man Tackles	0.017(0.010)*	0.019(0.012)*	0.019(0.012)	-0.012(0.012)	-0.014(0.013)	-0.014(0.014)	0.002(0.003)	0.003(0.003)	0.001(0.002)	
Zone Tackles	0.005(0.010)	0.007(0.012)	0.019(0.012)	-0.012(0.012)	-0.014(0.013)	-0.005(0.015)	-0.002(0.003)	-0.002(0.003)	-0.002(0.003)	
S1	0.003(0.010)	0.007(0.011)	0.008(0.012)	-0.004(0.013)	-0.003(0.013)	-0.003(0.013)	-0.002(0.003)	-0.002(0.003)	-0.002(0.003)	
Grades Tackles	-0.003(0.010)	-0.005(0.011)	-0.005(0.012)	0.005(0.010)	0.007(0.011)	0.007(0.012)	0.001(0.003)	-0.001(0.003)	-0.000(0.002)	
Man Tackles	-0.006(0.010)	-0.007(0.011)	-0.008(0.012)	0.005(0.010)	0.004(0.012)	0.005(0.012)	-0.003(0.003)	-0.002(0.003)	-0.002(0.003)	
Zone Tackles S2	0.006(0.010)	0.008(0.011)	0.007(0.012)	-0.001(0.010)	-0.001(0.011)	-0.002(0.012)	-0.001(0.003)	-0.002(0.003)	-0.001(0.002)	
U_	0.001(0.010)	0.004(0.044)	0.004(0.040)	0.000(0.010)	0.000(0.014)	0.010(0.014)	0.000(0.000)	0.000(0.000)	0.000(0.000)	
Grades Tackles	0.001(0.010)	0.004(0.011)	0.004(0.012)	0.008(0.012)	0.009(0.014)	0.010(0.014)	0.002(0.003)	0.003(0.003)	0.002(0.002)	
Man Tackles	0.010(0.010)	0.012(0.012)	0.013(0.012)	-0.001(0.011)	0.001(0.013)	-0.000(0.013)	-0.002(0.003)	-0.004(0.003)	-0.003(0.003)	
Zone Tackles	0.000(0.010)	-0.001(0.011)	-0.001(0.012)	-0.001(0.012)	-0.002(0.014)	-0.002(0.014)	-0.004(0.003)	-0.003(0.003)	-0.002(0.003)	
S3										
Grades Tackles	-0.008(0.010)	-0.010(0.012)	-0.011(0.013)	0.015(0.013)	0.018(0.015)	0.019(0.016)	0.004(0.003)	0.004(0.003)	0.003(0.003)	
Man Tackles	-0.006(0.010)	-0.007(0.012)	-0.007(0.012)	-0.004(0.013)	-0.005(0.015)	-0.005(0.015)	-0.004(0.003)	-0.003(0.003)	-0.003(0.003)	
Zone Tackles	-0.004(0.011)	-0.005(0.012)	-0.005(0.013)	-0.007(0.014)	-0.009(0.016)	-0.009(0.017)	-0.001(0.003)	-0.001(0.003)	-0.001(0.003)	
Perf. Measures										
GIMR	0.042(0.009)***	0.049(0.011)***	0.051(0.012)***	0.038(0.009)***	0.044(0.011)***	0.045(0.012)***				
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	No	No	No	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:										

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