

Appendix A. U.S. College Football

Division IA: College football is an important part of U.S. higher education and culture. Many colleges and universities sponsor a football team, which is managed and operated by their athletic department and coaching staff. To distinguish the level of competition, the National Collegiate Athletic Association (NCAA) divides schools into different divisions, with Division IA being the most competitive and also the most lucrative division. There are around 120 Division IA schools (the total number of Division IA schools may vary because some schools may be disqualified for Division IA).

Bowl games: A football season consists of the regular season and the playoff. During the regular season starting from late August to late November/early December, a Division IA school typically plays 11 to 13 games. The playoff typically starts around the middle of December and ends in early January. Playoff football games are called bowl games. The emergence of bowl games was a response to demand for more football games during holidays after the regular season. Non-profit organizations (e.g., the Tournament of Rose) independent of the NCAA started to organize bowl games by inviting college football teams (these games are called bowl games because the stadiums for these games typically look like “bowl.” Bowl games bring both significant revenues and national exposure.

Conferences: The role and importance of conferences have evolved over time. Conferences were initially formed to secure and coordinate play schedules among geographically proximate football teams; member schools automatically played against each other, especially in their subdivision in a conference of adequate size. The further development of college sports expanded the role of conferences to provide access to postseason bowl opportunities; to secure top teams for their bowl games, bowl organizations reach agreements with conferences by offering conferences automatic bids for their bowl games. Finally, conferences gained even more importance by becoming new collective bodies in negotiations for lucrative cable TV network contracts. The NCAA originally monopolized lucrative contracts with cable networks and divided TV revenues among member schools. The 1984 Supreme Court decision returned the right to negotiate TV contracts to individual schools, most of which quickly found that they were unable to effectively negotiate individually with the gigantic cable networks. As a result, the schools joined together to establish the College Football Association (CFA) as their agent to negotiate on a collective basis. By the late 1980s, however, the CFA was also dissolved. When the two national arrangements (i.e., the NCAA, the CFA) did not succeed, conferences moved to the center stage as the sub-national organizations responsible for collective negotiation.

Appendix B. Missouri's Defection from the Big 12 Conference^a

Stayer (membership)	Defector (membership)	Relational Strength^a
Kansas (1907-)	Missouri (1907-2011)	104
Iowa State (1908-)	Missouri (1907-2011)	103
Kansas State (1913-)	Missouri (1907-2011)	98
Oklahoma (1919-)	Missouri (1907-2011)	92
Oklahoma State (1958-)	Missouri (1907-2011)	53
Texas (1996-)	Missouri (1907-2011)	15
Texas Tech (1996-)	Missouri (1907-2011)	15
Baylor (1996-)	Missouri (1907-2011)	15

^a The Big 12 conference was extended from the Big Eight conference in 1996 with the addition of a few members from the disbanded Southwest conference. Because two members of the Big 12 conference, Nebraska and Texas A&M, defected either before or in the same year as Missouri's defection, they are not counted as stayers in the Big 12 conference.

^b The relational strength is not equal to the overlapped years between Missouri and a stayer in some cases because the Big 12 conference was divided into two subdivisions and consequently Missouri did not play against every other members in the conference.

Appendix C. Probit Model of Schools' Defection from Conferences^a

Variables	(13)
School football stadium size (log)	0.501+ (1.93)
School enrollment (log)	0.470* (2.25)
School endowment (log)	0.144 (1.52)
School degrees offered (bachelor=1, master=2, doctoral=3)	-0.097 (-0.39)
School academic reputation (gourman score)	-0.366 (-1.18)
School ownership (state=1)	-0.512+ (-1.68)
School religious affiliation (religion=1)	-0.277 (-0.68)
School bowl game payouts (t-1 to t-4)	-0.023 (-0.49)
School football winning percentage (t-1 to t-4)	1.311* (2.33)
Conference average stadium size (log)	-3.172* (-2.19)
Conference average enrollment (log)	4.364* (2.38)
Conference average endowment (log)	-1.953** (-3.56)
Conference average degree offered	79.867** (4.38)
Conference average academic reputation	-0.903 (-0.51)
Conference stage school percentage	-7.243 (-1.40)
Conference religious school percentage	-175.805 (-1.28)
Conference average bowl payouts (t-1 to t-4)	1.456+ (1.93)
Conference average winning percentage (t-1 to t-4)	6.203+ (1.86)
Conference stadium size heterogeneity (standard deviation)	-0.030 (-0.03)
Conference enrollment heterogeneity (standard deviation)	3.667* (1.96)
Conference endowment heterogeneity (standard deviation)	1.366** (2.88)
Conference degree heterogeneity (standard deviation)	26.358** (4.30)
Conference academic reputation heterogeneity (standard deviation)	4.739+ (1.74)
Conference ownership heterogeneity (Blau's index)	-1.715 (-0.45)
Conference religious affiliation (Blau's index)	103.162 (1.31)
Conference bowl payout heterogeneity (standard deviation)	0.258 (1.32)
Conference winning percentage heterogeneity (standard deviation)	-0.654 (-0.21)
Conference size	-0.287** (-3.70)
Conference defections (t-1 to t-4)	-0.097 (-1.52)
College football defections (t-1 to t-4)	-0.021 (-1.20)
Constant	-245.917** (-4.04)
Log likelihood	-166.906

^a a † p < 0.10; * p < 0.05; ** p < 0.01. Two-tailed test for all variables. t values in parentheses. N = 2,171 school-year observations.

Appendix D. Selection Corrected Cox Models of Scheduling the First Game with Stayers in the Aftermath of Defection^a

Variables	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
Baseline prediction: H1												
Past games (relational strength)		0.457** (5.18)	1.465** (6.08)	1.126** (4.63)	-3.675 (-1.52)	1.073** (4.64)	4.669** (2.64)	0.884** (4.35)	2.571** (4.85)	2.298** (5.67)	2.516** (4.52)	1.391** (3.42)
Past games ² (relational strength ²)			-0.238** (-3.89)	-0.162* (-2.44)	0.911+ (1.93)	-0.138* (-2.33)	-0.815* (-2.57)	-0.093+ (-1.76)	-0.450** (-3.33)	-0.365** (-3.38)	-0.367** (-3.57)	-0.227* (-2.22)
Voluntariness as moderator: H2												
Past games × initial defector				8.712* (2.39)								
Past games ² × initial defector				-1.436* (-2.31)								
Past games × former conference win/loss at defection					12.603+ (1.89)							
Past games ² × former conference win/loss at defection					-2.737* (-2.22)							
Potential harm as moderator: H3												
Past games × both founders						6.823+ (1.77)						
Past games ² × both founders						-1.192+ (-1.93)						
Past games × former conference size at defection							-0.232* (-2.08)					
Past games ² × former conference size at defection							0.043* (2.08)					
Past games × defector bowl payout at defection								2.302* (2.21)				
Past games ² × defector bowl payout at defection								-0.479** (-2.65)				
Personalization as moderator: H4												
Past games × stayer president change									-1.800** (-2.86)			
Past games ² × stayer president change									0.353* (2.08)			
Past games × defector president change										-2.681** (-3.34)		
Past games ² × defector president change										0.489* (2.39)		
Past games × stayer coach change											-0.909 (-1.33)	
Past games ² × stayer coach change											0.051 (0.34)	
Past games × defector coach change												0.105 (0.20)
Past games ² × defector coach change												-0.013 (-0.09)

^a † p < 0.10; * p < 0.05; ** p < 0.01. Two-tailed test and robust standard errors for all variables. t values in parentheses. N = 2,089 defector-stayer-year spells. The standard Heckman selection approach cannot be directly applied to our case because of the different units of analysis for the first and the second stage. The units of analysis for predicting the probability of defection are schools whereas the units of analysis for predicting the probability of resuming schedules are stayer-defector dyads. We had to estimate the two stages separately. We first estimated the defection model to obtain the inverse Mill's ratios for both stayers and defectors and then included them as controls in the survival analysis of resuming schedules.

Appendix D (continued)

Variables	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
Initial defector	-0.043 (-0.07)	-0.088 (-0.14)	-0.097 (-0.15)	-12.540* (-2.48)	-0.172 (-0.27)	-0.172 (-0.25)	-0.174 (-0.29)	-0.092 (-0.17)	-0.094 (-0.16)	-0.158 (-0.25)	-0.063 (-0.10)	-0.089 (-0.14)
Former conference win/loss at defection	-0.813 (-0.32)	-4.468+ (-1.75)	-2.338 (-0.92)	-2.848 (-1.23)	-14.614 (-1.32)	-1.436 (-0.46)	-2.442 (-0.95)	-2.675 (-0.95)	-1.850 (-0.82)	-3.005 (-1.04)	-2.727 (-1.00)	-2.374 (-0.90)
Both founders of prior conference	-0.227 (-0.36)	-0.500 (-0.80)	-0.556 (-0.94)	-0.768 (-1.16)	-0.549 (-0.90)	-9.804+ (-1.72)	-0.720 (-1.21)	-0.663 (-1.21)	-0.514 (-0.97)	-0.596 (-1.00)	-0.578 (-0.97)	-0.557 (-0.95)
Former conference size at defection	0.007 (0.06)	0.010 (0.09)	0.032 (0.27)	-0.009 (-0.08)	0.043 (0.40)	0.058 (0.59)	0.293+ (1.68)	0.055 (0.50)	0.031 (0.25)	0.032 (0.27)	0.040 (0.35)	0.031 (0.26)
Defector bowl payout at defection	0.135 (0.21)	0.338 (0.58)	0.295 (0.50)	0.094 (0.17)	0.347 (0.62)	0.311 (0.59)	0.281 (0.50)	-1.926 (-1.18)	0.247 (0.42)	0.230 (0.40)	0.312 (0.55)	0.285 (0.50)
Stayer president change	0.216 (0.25)	0.106 (0.12)	0.207 (0.23)	0.164 (0.18)	0.209 (0.22)	0.212 (0.24)	0.159 (0.17)	0.211 (0.23)	2.149* (1.97)	-0.022 (-0.03)	0.120 (0.15)	0.212 (0.24)
Defector president change	-1.181* (-2.42)	-1.386** (-2.82)	-1.388** (-3.03)	-1.292** (-2.60)	-1.331** (-2.83)	-1.360** (-2.88)	-1.351** (-2.77)	-1.363** (-2.93)	-1.375** (-2.66)	1.280** (2.86)	-1.366** (-3.05)	-1.401** (-3.02)
Stayer coach change	-0.040 (-0.07)	0.038 (0.07)	0.149 (0.28)	0.111 (0.19)	0.076 (0.13)	0.137 (0.25)	0.117 (0.20)	0.099 (0.18)	0.181 (0.32)	0.131 (0.22)	1.910+ (1.89)	0.148 (0.27)
Defector coach change	0.161 (0.74)	0.046 (0.17)	0.032 (0.12)	0.091 (0.36)	0.041 (0.14)	0.055 (0.21)	0.028 (0.10)	0.006 (0.02)	0.063 (0.22)	0.098 (0.34)	0.025 (0.10)	-0.105 (-0.30)
Control variables												
Former conference size (t-1)	-0.022 (-0.15)	-0.064 (-0.45)	-0.058 (-0.39)	-0.042 (-0.31)	-0.064 (-0.47)	-0.052 (-0.40)	-0.058 (-0.41)	-0.078 (-0.56)	-0.040 (-0.27)	-0.050 (-0.34)	-0.047 (-0.32)	-0.058 (-0.39)
Former conference win/loss (t-4 to t-1)	0.015 (0.01)	0.968 (0.45)	0.880 (0.45)	1.120 (0.65)	0.645 (0.33)	0.648 (0.39)	1.206 (0.65)	0.773 (0.40)	0.381 (0.21)	0.633 (0.32)	0.452 (0.22)	0.917 (0.46)
Stayer win/loss at present (t-4 to t-1)	-0.406 (-0.26)	-0.266 (-0.17)	-0.382 (-0.24)	-0.636 (-0.40)	-0.331 (-0.20)	-0.329 (-0.20)	-0.376 (-0.23)	-0.319 (-0.20)	-0.466 (-0.28)	-0.246 (-0.16)	-0.335 (-0.23)	-0.383 (-0.24)
New conference size (t-1)	-0.045 (-0.36)	-0.033 (-0.26)	-0.054 (-0.43)	-0.047 (-0.40)	-0.064 (-0.51)	-0.071 (-0.57)	-0.050 (-0.39)	-0.055 (-0.43)	-0.050 (-0.42)	-0.052 (-0.40)	-0.045 (-0.36)	-0.054 (-0.42)
New conference win/loss (t-4 to t-1)	-1.839 (-0.43)	-2.002 (-0.47)	-1.066 (-0.26)	-0.609 (-0.17)	-1.436 (-0.36)	-1.205 (-0.32)	-0.981 (-0.25)	-1.999 (-0.47)	-1.183 (-0.31)	0.083 (0.02)	-1.467 (-0.37)	-1.056 (-0.26)
Defector win/loss (t-4 to t-1)	0.483 (0.33)	0.408 (0.28)	0.314 (0.22)	0.305 (0.23)	0.363 (0.26)	0.392 (0.28)	0.308 (0.22)	0.252 (0.18)	0.285 (0.21)	0.017 (0.01)	0.356 (0.24)	0.321 (0.22)
Defector-stayer geographic distance	-0.695** (-4.09)	-0.550** (-3.32)	-0.578** (-3.21)	-0.508** (-2.71)	-0.587** (-2.89)	-0.554** (-3.13)	-0.563** (-2.96)	-0.591** (-3.10)	-0.526** (-2.89)	-0.483* (-2.17)	-0.539** (-2.72)	-0.584** (-3.28)
Both in the same new conference	4.648** (9.69)	4.649** (8.21)	4.766** (8.58)	4.761** (8.32)	4.840** (8.72)	4.690** (8.62)	4.776** (8.47)	4.810** (8.94)	4.742** (8.74)	4.977** (8.10)	4.687** (7.72)	4.770** (8.50)
Bowl Championship Series (BCS)	20.056** (13.77)	20.030** (13.15)	19.652** (12.63)	19.718** (11.43)	19.412** (11.69)	19.412** (11.57)	19.680** (12.25)	19.438** (12.04)	19.594** (12.48)	19.567** (12.69)	19.486** (12.44)	19.718** (13.21)
Simultaneous defections	-0.054 (-0.94)	-0.026 (-0.41)	-0.030 (-0.49)	-0.035 (-0.60)	-0.014 (-0.28)	-0.018 (-0.40)	-0.017 (-0.32)	-0.008 (-0.15)	-0.027 (-0.49)	-0.015 (-0.25)	-0.016 (-0.24)	-0.031 (-0.51)
Inverse Mill's Ratio for defector	-0.800 (-1.51)	-0.958+ (-1.68)	-0.971+ (-1.73)	-0.765 (-1.35)	-0.949+ (-1.72)	-0.917+ (-1.65)	-0.945+ (-1.72)	-1.014+ (-1.88)	-0.953+ (-1.82)	-0.987+ (-1.83)	-0.974+ (-1.75)	-0.974+ (-1.73)
Inverse Mill's Ratio for stayer	-0.338 (-0.83)	-0.140 (-0.28)	-0.092 (-0.19)	0.131 (0.26)	-0.003 (-0.01)	-0.056 (-0.11)	-0.026 (-0.05)	-0.037 (-0.08)	-0.092 (-0.20)	0.021 (0.04)	-0.121 (-0.26)	-0.095 (-0.19)
Year-fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Log pseudolikelihood	-248.118	-244.893	-243.201	-240.992	-242.198	-242.065	-242.599	-242.199	-242.113	-240.680	-241.761	-243.188

a † p < 0.10; * p < 0.05; ** p < 0.01. Two-tailed test and robust standard errors for all variables. t values in parentheses. N = 2,089 defector-stayer-year spells. The standard Heckman selection approach cannot be directly applied to our case because of the different units of analysis for the first and the second stage. The units of analysis for predicting the probability of defection are schools whereas the units of analysis for predicting the probability of resuming schedules are stayer-defector dyads. We had to estimate the two stages separately. We first estimated the defection model to obtain the inverse Mill's ratios for both stayers and defectors and then included them as controls in the survival analysis of resuming schedules.

Appendix E. The Moderating Effect of 2004 Change

Variables	(26)	(27)
Past games (relational strength)	1.465** (6.08)	1.284 (1.44)
Past games ² (relational strength ²)	-0.238** (-3.89)	-0.058 (-0.31)
Past games × 2004 change		0.528 (0.39)
Past games ² × 2004 change		-0.346 (-1.27)
2004 change	-1.065 (-0.80)	0.194 (0.11)
Initial defector	-0.097 (-0.15)	0.122 (0.21)
Former conference win/loss at defection	-2.338 (-0.92)	-4.846+ (-1.68)
Both founders of prior conference	-0.556 (-0.94)	-0.426 (-0.78)
Former conference size at defection	0.032 (0.27)	0.011 (0.09)
Defector bowl payout at defection	0.295 (0.50)	0.319 (0.56)
Stayer president change	0.207 (0.23)	0.201 (0.25)
Defector president change	-1.388** (-3.03)	-1.364** (-2.79)
Stayer coach change	0.149 (0.28)	0.104 (0.20)
Defector coach change	0.032 (0.12)	-0.010 (-0.04)
Former conference size (t-1)	-0.058 (-0.39)	-0.064 (-0.40)
Former conference win/loss (t-4 to t-1)	0.880 (0.45)	1.195 (0.60)
Stayer win/loss at present (t-4 to t-1)	-0.382 (-0.24)	-0.254 (-0.17)
New conference size (t-1)	-0.054 (-0.43)	-0.045 (-0.35)
New conference win/loss (t-4 to t-1)	-1.066 (-0.26)	-1.563 (-0.38)
Defector win/loss (t-4 to t-1)	0.314 (0.22)	0.109 (0.08)
Defector-stayer geographic distance	-0.578** (-3.21)	-0.591** (-3.45)
Both in the same new conference	4.766** (8.58)	4.719** (9.68)
Bowl Championship Series (BCS)	20.717** (10.35)	20.977** (10.91)
Simultaneous defections	-0.030 (-0.49)	-0.051 (-0.73)
Inverse Mill's Ratio for defector	-0.971+ (-1.73)	-1.011* (-1.99)
Inverse Mill's Ratio for stayer	-0.092 (-0.19)	-0.168 (-0.36)
Year-fixed effect	Yes	Yes
Log likelihood	-243.201	-239.609

a † $p < 0.10$; * $p < 0.05$; ** $p < 0.01$. Two-tailed test and robust standard errors for all variables. t values in parentheses. N = 2,089 defector-stayer-year spells.

Appendix F. Cox Models of the Scheduling between Defectors and Nonconference Partners^a

Variables	(28)	(29)	(30)
Past games (relational strength)		0.502*	0.997
		(2.46)	(1.58)
Past games ² (relational strength ²)			-0.085
			(-0.97)
Initial defector	-0.205	0.300	0.201
	(-0.24)	(0.39)	(0.26)
Prior conference win/loss at defection	7.030	-4.589	-4.441
	(0.67)	(-0.46)	(-0.44)
Prior conference size at defection	0.181	0.321*	0.321*
	(1.20)	(2.45)	(2.47)
Defector win/loss at defection	0.480	1.645+	1.553
	(0.50)	(1.67)	(1.59)
Defector president change	1.003+	0.783	0.711
	(1.87)	(1.47)	(1.30)
Nonconference school president change	0.182	-0.051	-0.078
	(0.47)	(-0.14)	(-0.21)
Defector coach change	-0.322	-0.100	-0.221
	(-0.63)	(-0.21)	(-0.45)
Nonconference school coach change	-0.692	-0.711	-0.688
	(-1.36)	(-1.51)	(-1.46)
Nonconference conference size at present	-0.333**	-0.291**	-0.297**
	(-3.50)	(-3.02)	(-3.08)
Nonconference conference win/loss at present	8.832**	7.185*	7.390**
	(2.93)	(2.47)	(2.62)
Nonconference school will/loss at present	-1.795	-1.749	-1.631
	(-1.55)	(-1.50)	(-1.38)
Defector new conference size at present	-0.090	-0.228+	-0.215+
	(-0.67)	(-1.71)	(-1.65)
Defector new conference win/loss at present	-7.862	-6.182	-5.195
	(-0.86)	(-0.66)	(-0.57)
Defector win/loss at present	0.529	1.064	0.987
	(0.38)	(0.81)	(0.73)
Defector-nonconference partner geographic distance	-0.956**	-0.571*	-0.605**
	(-5.70)	(-2.48)	(-2.76)
Simultaneous defections	0.073	0.059	0.061
	(1.02)	(0.93)	(0.98)
Bowl Championship Series	10.992**	1.390	6.555**
	(5.64)	(0.71)	(3.30)
Year-fixed effect	Yes	Yes	Yes
Log pseudolikelihood	-134.881	-131.653	-131.369

^a † p < 0.10; * p < 0.05; ** p < 0.01. Two-tailed test and robust standard errors for all variables. t values in parentheses. N = 849 defector-nonconference partner-year spells.