## Online Supplementary Material for

## Unraveling Yields Inefficient Matchings:

Evidence from Post-Season College Football Bowls
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## Appendix 1

Table 6. End-of-Regular-Season AP Rankings of Teams that Participated in the Bowls

| Year | Rose Bowl |  | Fiesta Bowl |  | Orange Bowl |  | Sugar Bowl |  | Cotton Bowl |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Winner | Loser | Winner | Loser | Winner | Loser | Winner | Loser | Winner | Loser |
| 1977 | 13 | 4 | 8 | 15 | 6 | 2 | 3 | 9 | 5 | 1 |
| 1978 | 3 | 5 | 8 | 15 | 4 | 6 | 2 | 1 | 10 | 9 |
| 1979 | 3 | 1 | 10 | 26 | 5 | 4 | 2 | 6 | 8 | 7 |
| 1980 | 5 | 16 | 10 | 11 | 4 | 2 | 1 | 7 | 9 | 6 |
| 1981 | 12 | 13 | 7 | 8 | 1 | 4 | 10 | 2 | 6 | 3 |
| 1982 | 5 | 19 | 11 | 12 | 3 | 13 | 2 | 1 | 4 | 6 |
| 1983 | 26 | 4 | 14 | 15 | 5 | 1 | 3 | 8 | 7 | 2 |
| 1984 | 18 | 6 | 14 | 13 | 4 | 2 | 5 | 11 | 8 | 26 |
| 1985 | 13 | 4 | 5 | 7 | 3 | 1 | 8 | 2 | 11 | 16 |
| 1986 | 7 | 4 | 2 | 1 | 3 | 9 | 6 | 5 | 11 | 8 |
| 1987 | 8 | 16 | 3 | 5 | 2 | 1 | 4 | 6 | 13 | 12 |
| 1988 | 11 | 5 | 1 | 3 | 2 | 6 | 4 | 7 | 9 | 8 |
| 1989 | 12 | 3 | 5 | 6 | 4 | 1 | 2 | 7 | 8 | 10 |
| 1990 | 8 | 17 | 18 | 25 | 1 | 5 | 10 | 26 | 4 | 3 |
| 1991 | 2 | 4 | 6 | 10 | 1 | 11 | 18 | 3 | 5 | 9 |
| 1992 | 7 | 9 | 6 | 10 | 3 | 11 | 2 | 1 | 5 | 4 |
| 1993 | 9 | 14 | 16 | 10 | 1 | 2 | 8 | 3 | 4 | 7 |
| 1994 | 2 | 12 | 4 | 26 | 1 | 3 | 7 | 5 | 21 | 26 |
| 1995 | 17 | 3 | 1 | 2 | 8 | 6 | 13 | 9 | 7 | 12 |
| 1996 | 4 | 2 | 7 | 20 | 6 | 10 | 3 | 1 | 5 | 14 |
| 1997 | 1 | 9 | 8 | 21 | 2 | 7 | 3 | 12 | 5 | 20 |
| 1998 | 9 | 6 | 1 | 2 | 7 | 18 | 3 | 8 | 20 | 25 |
| 1999 | 4 | 22 | 3 | 6 | 8 | 5 | 1 | 2 | 24 | 14 |
| 2000 | 4 | 14 | 5 | 10 | 1 | 3 | 2 | 7 | 11 | 21 |
| 2001 | 1 | 4 | 2 | 3 | 5 | 6 | 12 | 7 | 10 | 26 |
| 2002 | 8 | 7 | 2 | 1 | 5 | 3 | 4 | 16 | 9 | 26 |
| 2003 | 1 | 4 | 7 | 8 | 10 | 9 | 2 | 3 | 16 | 21 |
| 2004 | 6 | 13 | 5 | 19 | 1 | 2 | 3 | 9 | 15 | 22 |
| 2005 | 2 | 1 | 4 | 5 | 3 | 22 | 11 | 8 | 13 | 18 |

Table 7. Nielsen Ratings of College Bowls and Super Bowl (\%)

| Year | Rose <br> Bowl | Fiesta <br> Bowl | Orange <br> Bowl | Sugar <br> Bowl | Cotton <br> Bowl | Super <br> Bowl |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1985 | 22.7 | 14.7 | 21.3 | 6.8 | 12.7 | 48.3 |
| 1986 | 17.7 | 24.9 | 16 | 8.6 | 13.6 | 45.8 |
| 1987 | 16.5 | 8.7 | 20.8 | 7.9 | 10 | 41.9 |
| 1988 | 10.8 | 17 | 12.9 | 8.1 | 9.8 | 43.5 |
| 1989 | 14.6 | 8.8 | 18.5 | 7.4 | 7.5 | 39 |
| 1990 | 11.9 | 6.2 | 18.3 | 4.9 | 9.4 | 41.9 |
| 1991 | 15.4 | 7 | 11 | 10.8 | 10.3 | 40.3 |
| 1992 | 14.3 | 6.2 | 4 | 18.2 | 10.2 | 45.1 |
| 1993 | 11.3 | 7.9 | 17.8 | 5.2 | 11.3 | 45.5 |
| 1994 | 18.2 | 6 | 11.4 | 14.9 | 4.6 | 41.3 |
| 1995 | 19.2 | 18.8 | 12.5 | 6.3 | 5.6 | 46.0 |
| 1996 | 16.5 | 10 | 7.8 | 17.9 | 5.6 | 43.3 |
| 1997 | 17.6 | 5.8 | 13.3 | 11.2 | 6.2 | 44.5 |
| 1998 | 13.3 | 17.2 | 8.4 | 11.5 | 4.1 | 40.2 |
| 1999 | 14.1 | 9.6 | 11.4 | 17.5 | 4.1 | 43.3 |
| 2000 | 14 | 10.7 | 17.8 | 13 | 4.4 | 40.4 |
| 2001 | 13.8 | 11.3 | 9.5 | 8.6 | 4.3 | 40.4 |
| 2002 | 11.3 | 17.2 | 9.7 | 9.2 | 3.4 | 40.7 |
| 2003 | 14.3 | 8.5 | 9.1 | 14.8 | 4.3 | 41.4 |
| 2004 | 12.4 | 7.4 | 13.7 | 9.5 | 2.6 | 41.1 |
| 2005 | 21.7 | 12.9 | 12.3 | 9 | 3.7 | 41.6 |

Table 8: Possibility of creating a match-up between the number 1 and number 2 teams in the AP Sports Writers' Poll rankings in a bowl game:

| Regime | Years | AP Ranked No. 1 | Conference | AP - Ranked No. 2 | Conference | Possible <br> to match? | Actually matched? | Why not possible to match / Why not matched? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Pre- } \\ & \text { coalition } \\ & \text { Era } \end{aligned}$ | 1977 | Texas | Southwest | Oklahoma | Big Eight | NO | - | Southwest Conf. champion was precommitted to Cotton Bowl and Big Eight champion was precommitted to Orange Bowl |
|  | 1978 | Penn State | independent (at-large) | Alabama | Southeastern | YES, at Sugar Bowl | YES | - |
|  | 1979 | Ohio State | Big Ten | Alabama | Southeastern | NO | - | Big Ten champion was pre-committed to Rose Bowl, which was a closed bowl and Southeastern Conf. champion was precommitted to Sugar Bowl |
|  | 1980 | Georgia | Southeastern | Florida State | $\mathrm{ACC}^{1}$ | YES, at Sugar <br> Bowl | NO | In-season unraveling |
|  | 1981 | Clemson | ACC | Georgia | Southeastern | YES, at Sugar <br> Bowl | NO | In-season unraveling |
|  | 1982 | Georgia | Southeastern | Penn State | independent (at-large) | YES, at Sugar Bowl | YES | - |
|  | 1983 | Nebraska | Big Eight | Texas | Southwest | NO | - | Big Eight champion was pre-committed to Orange Bowl and Southwest Conf. champion was precommitted to Cotton Bowl |
|  | 1984 | BYU | Western | Oklahoma | Big Eight | NO | - | Western Conf. champion was pre-committed to Holiday Bowl and Big Eight champion was precommitted to Orange Bowl |
|  | 1985 | Penn State | independent (at-large) | Miami | independent (at-large) | YES, at <br> Fiesta <br> Bowl | NO | In-season unraveling |
|  | 1986 | Miami | independent (at-large) | Penn State | independent (at-large) | YES, at <br> Fiesta <br> Bowl | YES | - |

[^0]| Regime | Years | AP - <br> Ranked <br> No. 1 | Conference | $\begin{gathered} \text { AP - } \\ \text { Ranked No. } \\ 2 \end{gathered}$ | Conference | $\begin{gathered} \text { Possible } \\ \text { to } \\ \text { match? } \end{gathered}$ | Actually matched? | Why not possible to match / Why not matched? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1987 | Oklahoma | Big Eight | Miami | independent (at-large) | YES, at Orange Bowl | YES | - |
|  | 1988 | Notre <br> Dame | independent (at-large) | Miami | independent (at-large) | YES, at Fiesta Bowl | NO | In-season unraveling |
|  | 1989 | Colorado | Big Eight | Miami | independent (at-large) | YES, at Orange Bowl | NO | In-season unraveling |
|  | 1990 | Colorado | Big Eight | Georgia Tech | ACC | YES, at Orange Bowl | NO | In-season unraveling |
|  | 1991 | Miami | Big East (atlarge) | Washington | Pacific Ten | NO | - | Pacific Ten champion was pre-committed to Rose Bowl, which was a closed bowl |
| BC | 1992 | Miami | Big East <br> (BC) | Alabama | Southeastern <br> (BC) | YES, at Sugar Bowl | YES | - |
|  | 1993 | Florida State | ACC (BC) | Nebraska | Big Eight (BC) | YES, at Orange Bowl | YES | - |
|  | 1994 | Nebraska | Big Eight <br> (BC) | Penn State | Big Ten | NO | - | Big Ten was not part of Bowl Coalition |
| BA | 1995 | Nebraska | Big Eight <br> (BA) | Florida | Southeastern <br> (BA) | YES, at Fiesta Bowl | YES | - |
|  | 1996 | Florida State | ACC (BA) | Arizona State | Pacific Ten | NO | - | Pacific Ten was not part of Bowl Alliance |
|  | 1997 | Michigan | Big Ten | Nebraska | Big Twelve <br> (BA) | NO | - | Big Ten was not part of Bowl Alliance |
| BCS | 1998 | Tennessee | Southeastern (BCS) | Florida <br> State | ACC (BCS) | YES, at Fiesta Bowl | YES | - |
|  | 1999 | Florida State | ACC (BCS) | Virginia Tech | Big East (BCS) | YES, at Sugar Bowl | YES | - |
|  | 2000 | Oklahoma | Big Twelve (BCS) | Miami | Big East (BCS) | NO | - | AP and BCS rankings differ. |
|  | 2001 | Miami | Big East (BCS) | Oregon | Pacific Ten <br> (BCS) | NO | - | AP and BCS rankings differ. |
|  | 2002 | Miami | Big East (BCS) | Ohio State | Big Ten (BCS) | YES, at Fiesta Bowl | YES | - |
|  | 2003 | USC | Pacific Ten (BCS) | LSU | $\begin{aligned} & \text { Southeastern } \\ & \text { (BCS) } \\ & \hline \end{aligned}$ | NO | - | AP and BCS rankings differ. |
|  | 2004 | USC | Pacific Ten <br> (BCS) | Oklahoma | Big Twelve <br> (BCS) | YES, at Orange Bowl | YES | - |


| Regime | Years | AP - <br> Ranked <br> No. 1 | Conference | AP - <br> Ranked No. <br> 2 | Conference | Possible <br> to <br> match? | Actually <br> matched? | Why not possible to <br> match / Why not <br> matched? |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2005 | USC | Pacific Ten <br> (BCS) | Texas | Big Twelve <br> (BCS) | YES, at <br> Rose <br> Bowl | YES |  |

## Appendix 3

Table 5.1 replicates the specifications 5, 6, and 7 of Table 5 (in the text) using only the data prior to the formation of the first coalition (in 1992). Over that period, only one bowl for which we have the Nielsen rating had an unranked team playing, hence that bowl is dropped as well as the associated regressors from specifications 5,6 , and 7 .

Table 5.2. Estimates of the Determinants of Nielsen Rating of a Bowl: Pre-Coalition Era

|  | Nielsen Rating of a Bowl |  |  |
| :---: | :---: | :---: | :---: |
| Regressors: | Spec. (5.2) | Spec. (6.2) | Spec. (7.2) |
| Championship (No. 1 vs. No. 2) | 4.703* | 5.028* | 4.359 |
|  | (2.169) | (2.286) | (2.562) |
| No. 1 Ranked Team | 5.271** | 5.239** | 5.288** |
|  | (1.756) | (1.726) | (1.906) |
| Average Rank (if unranked Team Is not playing) | -0.243* | -0.196 | -0.272 |
|  | (0.121) | (0.115) | (0.192) |
| Difference in Rank (if unranked Team is not playing) | 0.254** | 0.154 | 0.275 |
|  | (0.096) | (0.114) | (0.247) |
| Regular Season College Football Average Nielsen Rating | 1.338 | 2.233 |  |
|  | (1.122) | (1.318) |  |
| Super Bowl's Nielsen Rating | 0.187 | 0.386 |  |
|  | (0.135) | (0.206) |  |
| Fiesta Bowl | 3.281 | 2.906 | 3.313* |
|  | (1.825) | (2.023) | (1.779) |
| Orange Bowl | 4.306* | 4.260* | 4.200** |
|  | (1.947) | (2.072) | (1.876) |
| Rose Bowl | 7.960*** | 7.954** | 7.900*** |
|  | (2.046) | (2.149) | (1.504) |
| Cotton Bowl | 4.053** | 3.586* | 4.108** |
|  | (1.332) | (1.601) | (1.878) |
| Year | -0.455*** |  |  |
|  | (0.112) |  |  |
| 1986-1988 |  | 0.377 |  |
|  |  | (0.771) |  |
| 1989-1991 |  | 0.635 |  |
|  |  | (1.223) |  |
| Constant | -6.647 | -22.812** | 8.210*** |
|  | (5.375) | (7.748) | (1.535) |
| Team Dummies | No | No | No |
| Time Fixed Effects | No | No | Yes |
| Observations | 105 | 105 | 105 |
| Robust standard errors in parentheses |  |  |  |


[^0]:    ${ }^{1}$ In the pre-coalitions era, although the ACC champion was not an at-large team, escape clauses in the agreement of ACC with the Citrus Bowl made it possible that the ACC champion could play at a different bowl when it had a shot at the national championship.

