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# Rule Changes and Incentives in the League of Ireland from 1970 – 2014

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**Rule Changes and Incentives in the League of Ireland from 1970 – 2014**

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**Abstract**

We consider how five rule changes in the League of Ireland have affected the amount of goals scored in the domestic league from 1970 to 2014. Altering the rules represents a significant departure from the previous season and changes the incentive structure for teams. Numerous individual rule changes were imposed on the league during this period, each with the intention of improving playing standards and incentivising more attacking football. This paper describes the impact of three new point systems introduced in 1981-1982, 1982-1983 and 1993-1994, the introduction of the First Division League in 1985-1986, and the switch to a single calendar year league with a March to November schedule in 2003 known as *Summer Soccer*. A retrospective analysis of goals per season and single match outcomes suggests that changes to the points system has not resulted in a considerable increase in the number of goals scored in the Premier Division, nor has the introduction of the First Division.

**Keywords:** Association Football, League of Ireland, Rules, Incentives

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## Introduction

In a broad sense institutions act as the 'rules of the game'. These exist in conjunction, and are reliant upon, the individuals that use them. The structure and nature of institutions change the behaviour and choices that individuals make. Rules are one form of an institution and are formal constraints that establish the incentive structures in which humans' interact[1]. Alterations to the rules of a society are often a product of relatively minor events and can cause critical junctures in a state's history, ultimately leading to different cultural, social and economic developments[2;3].

One can draw parallels with this to football where minor events induce rule changes. Historically, relatively negligible events on the field of play have invoked rule changes from football authorities that adapt the incentive structure for teams and have important long run consequences. There are many examples of this. For instance, additional time was introduced due to an incident in 1891, when the Aston Villa goalkeeper Albert Hinchley kicked the ball out of the stadium (that could not be retrieved) after a penalty was awarded to Stoke[4]. In 1927 a rule was introduced to ensure that all goalkeepers stay on their line for penalty kicks after Dubliner Tom Farquharson, who played for Cardiff City, was titled the 'Penalty King' for continually rushing off his line as a penalty was about to be taken[5]. In 1992 the back-pass rule was introduced. The establishment of this rule was linked to the actions of Irish goalkeeper 'Packie' Bonner in the 1990 World Cup. *The Guardian* newspaper argued that Ireland's defensive displays in the 1990 World Cup caused the Fédération Internationale de Football Association (FIFA) to "rethink the laws of the game....in particular one passage of play in the group match between the Republic of Ireland and Egypt [saw] the Irish keeper hold the ball for almost six minutes [cumulatively] without releasing it"[6]. The lesson we take

from such narratives is that changing the rules can be important – both socio-economic interactions and modern football are structured by cumulative rule changes.

This paper provides a retrospective analysis of how five rules changes in the League of Ireland (hereafter LoI) have affected the amount of goals scored in the league, from 1970 to 2014. We analyse both goals per season and single match outcomes. Such instances are interesting to study from an economic perspective as they constitute institutional variations in a natural setting, where the resulting change in behaviour can be observed. Given that the LoI competition design has repeatedly transformed since 1970, we do not intend to provide a detailed empirical analysis of each rule change. We nest these five changes within a wider context, considering the evolution of the LoI from 1970 to 2014.

In each case, altering the rules represents a significant departure from the previous season(s) and changes the incentive structure for teams. While the rule changes considered in this paper were not a consequence of individual actions on the field of play, like those of the narratives introduced above, the alterations were done so with the intention of improving playing standards and incentivising more attacking football. We explore how three different point systems, the introduction of a new division, and the switch to a single calendar year league affected the number of goals scored in the league. While other rule changes did occur from 1970 to 2014, we consider these five the most important.

This paper continues as follows. The next section provides a background on the specific rule changes considered since 1970. Following this, data is presented on the number of goals scored and results in the LoI from 1970 to 2014. An analysis of goals scored and the distribution of score lines for the period is also provided. The paper concludes by discussing

the impact and effectiveness of these rule changes in increasing the number of goals in the League.

**League of Ireland Rule Changes 1970-2014**

From 1970 to 2014 five major rule changes occurred in the LoI. Each one signified an effort to increase the attractiveness of the game to audiences and encourage more attacking play. In this section we explain each specific rule change. From 1970 until 1982 either fourteen or sixteen clubs competed in the LoI. Two points were awarded for a win and one point was awarded for a draw. The original two point winning system in operation existed in England until the 1981-1982 season and is suggested to have emerged directly from challenge matches where two teams would compete for a prize pot. As noted in the *The Guardian* on February 5th , 2009, if a game was won, the winner would take the prize pot but if the match was drawn the pot would be split equally . In the 1981-1982 season the English FA introduced a three points system in its place. The Irish football authorities however conducted an alternative trial.

***1981-1982 Season Experiment***

For the 1981-1982 season the LoI conducted an experiment by altering the points awarded for winning and drawing teams depending on the location of a match. Prior to this trial, winning teams were awarded two points for a win and one point for a draw, regardless of match venue. For the 1981-1982 LoI season teams were awarded four points for an away win and three for a home win. Additionally, if a team drew away from home they were awarded two points while the home team was awarded one. Logically, the rule change sought to incentivise greater attacking play, particularly from the visiting team. Achieving a draw

away was now worth an additional point, while winning away from home merited double the points of achieving the same result in previous seasons.

### *1982-1983 Season Experiment*

For the 1982-1983 season a second experiment was conducted in the LoI. A winning team were awarded three points for a win and one point for a draw regardless of the venue. Draws were now relatively devalued and less tied matches would be expected. Equally, higher scoring narrow victories would be predicted with the three point system. At the end of the 1982-1983 season the LoI decided against adopting either of the points systems trialled in the previous two seasons and opted to revert to the older scheme where two points were awarded for a win and one point for a draw, regardless of the venue. This system was maintained in the LoI until the end of the 1992-1993 season.

### *Introduction of the First Division 1985-1986*

Prior to the 1985-1986 season only one league existed (Division A) in the LoI and there was no promotion or relegation. The First Division was inaugurated for the 1985-1986 season and saw ten out of twenty two LoI clubs compete in a smaller, lower-grade division. The top twelve teams from the previous 1984-1985 season automatically qualified for the newly constituted Premier Division. A system of promotion and relegation was inaugurated between the two tiers. The bottom two teams in the Premier Division would be relegated and replaced by the winner and runner-up of the First Division for the following season. Given these incentives one would expect greater competition nearing the end of a season among those bidding to stay in the elite division. Since this First Division was introduced, the mechanism to decide relegation and promotion has been tumultuous as the LoI iterated

between a ten club and twelve club Premier Division. As was the case with the other rule changes in the LoI, this innovation aimed to generate greater excitement for fans[7].

During the 1992-1993 season the potential for a third team to be relegated/promoted was introduced via a playoff mechanism between the club finishing third from bottom in the Premier Division and the club third in the First Division. For the 2001-2002 season further changes to the specifics regarding relegation and promotion occurred. These changes were made to reverse the number of places in both leagues; the Premier Division was to become a ten team League and twelve teams would compete in the First Division. The bottom three teams in the 2001-2002 Premier Division were relegated and the team finishing 9$^{th}$ entered a play-off with the second place team in the First Division. Only the champions of the First Division were automatically promoted. In the 2002-2003 season only the bottom placed team in the Premier Division and the champions of the First Division could be automatically relegated and promoted respectively. The second last team in the Premier Division and the second to fourth teams in the First Division would enter a knock-out playoff competition.

Further promotion and relegation changes occurred in the 2004 LoI season under the new '*Summer Soccer*' fixture schedule. The LoI sought to revert to a twelve team Premier Division, with only the bottom club automatically relegated. The top three First Division clubs were promoted. In 2007 the bottom placed team in the Premier Division and the champions of the First Division were automatically relegated and promoted respectively while a three way play-off occurred, where the second and third placed team in the First Division played each other to decide who met the second last Premier League team in the play-off final. In 2008, once again, a ten team Premier Division was reinstated as three teams

were relegated automatically from the Premier Division and only the champions of the First Division were automatically promoted. Finally, in 2009 there was no automatic relegation.

A mechanism to create relegation from the First Division was established in 2008. The bottom First Division club would enter a play-off with an 'A' League Championship club for the privilege to play in the First Division the following season. The 'A' League Championship was a third tier established by the FAI to aid a club's progression to the LoI. The 'A' League Championship was abolished at the end of the 2011 season. No relegation mechanism from the First Division currently exists.

***The Dawn of the Modern Point System***

The LoI changed the points system again for the 1993-1994 season. This move constituted the final change to the amount of points allocated for different results. A three points for a win and one point for a draw system was assumed. As mentioned earlier, this change occurred far earlier in the English League in response to falling attendances. The motivation for the change was another attempt to alter incentives, encouraging a more attacking from teams and achieve more goals per match. Given that this system did not come to fruition earlier, despite it being experimented with in the 1982-1983 season, one could assume this change was motivated by influences external to the league, in particular international trends in the sport.

Notably, FIFA had supported this move to a three point system. The three points innovation aided the development of the game internationally and was particularly relevant given that the FIFA World Cup was due to be hosted in America in 1994. American sport audiences were generally unfamiliar with the concept of a tied game. In June 1993 Joseph (Sepp)

Blatter, General Secretary of FIFA, announced that the number of points awarded to a team for winning a group stage game at the 1994 World Cup was to increase from two to three points. An *LA times* article in 1993 suggested that "an underlying reason for FIFA's action…was the feeling that American fans, used to higher-scoring American games, would be much less tolerant and much more quickly turned off than a more traditional soccer audience by an early parade of 0-0 and 1-1 results" [8]. An article from the *New York Times* in 1994 concurred with this sentiment, suggesting that the change "increased optimism that teams will emphasize offense and produce a scoring spectacle in the World Cup" [9].

Although this change occurred for the World Cup in 1994, moving to a three points system did not uniformly occur across European league competitions. Before the 1995-1996 season FIFA set an international rule change to put the three point system in place. Economists have since developed a formal model[10] to consider this unilateral change and have conducted empirical studies on the effects of the rule in European countries outside of Ireland. Interestingly, empirical studies addressing the effects of adopting a three points system for a win find that the change did the opposite to what it intended to achieve. Data from referee post-match reports from the 1994-1995 and 1995-1996 (when the rule change for a three point win was introduced) in Spain's, *La Liga*, indicates that teams in a winning position were more likely to commit offences and incur punishment, with a higher probability of red cards occurring in matches with a three point system[11]. After the points system change, winning teams adopt more defensive tactics in the German *Bundesliga* which leads to both teams having fewer shots on goals[12]. Further studies of the German *Bundesliga* show only minimal evidence exists to suggest that the three points system increases the second-half goals of losing first-half teams and no evidence exists that the rule made games more decisive[13]. However, a study from the Portuguese league, *Primeira Liga*[14] finds evidence of

"some positive effects in the game" but that the general effect was modest and non-uniform, impacting the strategies of different teams (such as underdogs) in different ways.

***The Summer Soccer Era (2003 – to date)***

For the 2002-2003 LoI season the league was purposefully condensed to aid a transition to *Summer Soccer*. This was a switch to a single calendar year league in 2003. The term *Summer Soccer* was used to describe this shift. The LoI moved from a model where the season began in August and played through the winter months in the Northern Hemisphere (concluding in May) to a model where the season would commence in March with the majority of the fixtures being played through the summer months (concluding in November).

There were many motivations for introducing this change. Firstly, given the inclement Irish winters, it was likely players would be playing in better conditions and on playing surfaces more conducive to attractive football. As a corollary of the on-field climatic motivations, it was deemed that supporters were more likely to enjoy attending live football in warmer conditions. A further motivation for the switch related to player fitness and Irish clubs involvement in European competitions. European competitions start in July. This would now be mid-season for Irish clubs following the switch to *Summer Soccer*, but pre-season for the majority of other European clubs. Irish teams therefore would have a fitness advantage over European counterparts who were only returning for pre-season training.

To understand the possible impact of rule changes to the points system, the inauguration of relegation, and a move to a single calendar season had on the number of goals scored, an overview of the League from 1970 to 2014 is presented in Table 1.

## Table 1. The League of Ireland Structure, Points System and Calendar: 1970-2014

| Year | No. Premier Clubs | No. 1st Div Clubs | Relegation Places | Premier Playoff | 1st Div Relegation | Win Pts | Draw Pts | Calendar |
|---|---|---|---|---|---|---|---|---|
| 1970-1977 | 14 | - | - | - | - | 2 | 1 | Winter |
| 1977-1981 | 16 | - | - | - | - | 2 | 1 | Winter |
| 1981-1982 | 16 | - | - | - | - | 3-4 | 1-2 | Winter |
| 1982-1983 | 14 | - | - | - | - | 3 | 1 | Winter |
| 1983-1984 | 14 | - | - | - | - | 2 | 1 | Winter |
| 1984-1985 | 16 | - | 4 | - | No | 2 | 1 | Winter |
| 1985-1992 | 12 | 10 | 2 | No | No | 2 | 1 | Winter |
| 1992-1993 | 12 | 10 | 3 | Yes | No | 2 | 1 | Winter |
| 1993-2001 | 12 | 10 | 3 | Yes | No | 3 | 1 | Winter |
| 2001-2002 | 12 | 9** | 4 | Yes | No | 3 | 1 | Winter |
| 2002-2003 | 10 | 12 | 2 | Yes | No | 3 | 1 | Winter |
| 2003 | 10 | 12 | 2 | Yes | No | 3 | 1 | Summer |
| 2004 | 10 | 12 | 1 | No | No | 3 | 1 | Summer |
| 2005 | 12 | 10 | 2 | Yes | No | 3 | 1 | Summer |
| 2006 | 11** | 10 | - | Yes* | - | 3 | 1 | Summer |
| 2007 | 12 | 10 | 2 | Yes | No | 3 | 1 | Summer |
| 2008 | 12 | 10 | 3 | No | Yes | 3 | 1 | Summer |
| 2009-2010 | 10 | 12 | 2 | Yes | Yes | 3 | 1 | Summer |
| 2011 | 10 | 11** | 1 | Yes | No | 3 | 1 | Summer |
| 2012 | 11** | 8 | 1 | Yes | No | 3 | 1 | Summer |
| 2013-2014 | 12 | 8 | 2 | Yes | No | 3 | 1 | Summer |

*The Football Association of Ireland took over the running of the LoI in 2007. For the 2007 LoI season an Independent Assessment Group established by the Football Association of Ireland determined which clubs would enter the Premier League and First Division. Although there was a playoff in the 2006 season, which Dundalk F.C won, the club was not selected to enter the 2007 Premier League. Thus, despite the play-off occurring in 2006, the result had no bearing on the teams in the Premier Division for the subsequent year.

**Years where an odd number of teams competed in the LoI refers to a case where a team did not complete the season after they were accepted to enter. In 2001-2002 St. Francis FC withdrew from the First Division before the start of the season. In 2006 Dublin City disbanded during the season for financial reasons and their results were erased. In 2011 Drogheda United were reinstated to the Premier League, even though they were relegated the previous year, as Sporting Fingal withdrew from the League in February 2011. In June 2012 Monaghan United withdrew and their results were erased. These represent unique cases as previously teams that withdrew before the start of the season may have been replaced, as was the case for the 1996-1997 First Division when St. James Gate FC were replaced by St. Francis FC before the league commenced.

**Data and Descriptive Statistics**

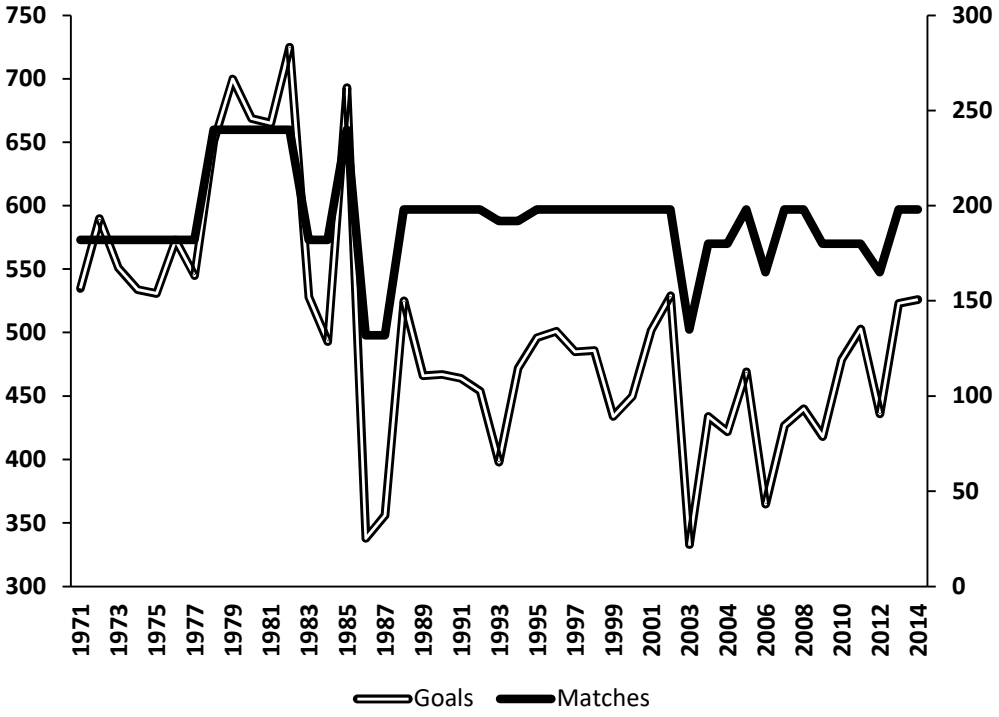
To establish the impact these rule changes have had on the number of goals scored in the LoI, data is collected from 1970 to 2014 on all matches played in the top tier of the Irish domestic league. Following the establishment the First Division, commencing in the 1985-1986 season, the top tier is referred to thereafter as the Premier Division. The data is sourced from *Republic of Ireland Football League Tables and Results 1921 – 2012* and from official LoI records for the last two years of the dataset. The sample under consideration covers a total of forty-five completed seasons, consisting of 8,655 individual match observations. Table 2 presents descriptive statistics on the matches from 1970-2014.

**Table 2: LoI 1970 – 2014 Descriptive Statistics**

| Variable | Total | Mean | St. Dev. | Min | Max |
|---|---|---|---|---|---|
| Games | 8,655 | 192.94 | (25.22) | 132 | 240 |
| Clubs in Division 'A'/Premier Division | - | 12.62 | (1.79) | 10 | 16 |
| Goals | 22,581 | 501.80 | (92.94) | 333 | 725 |

The number of games per season varied. The sixteen team leagues of the late 1970s and early 1980s played 240 games in total per season. The number of clubs in the top division has changed regularly, and has ranged from between ten and sixteen. As a result the number of goals per season has been irregular, depending mainly on the number of games per season. A mean of just over 500 goals per season is found between 1970 and 2014, with a standard deviation of almost 93 goals. Figures 1 and 2 examine this more closely. Figure 1 illustrates the number of goals scored per season (left-hand axis) in both Division 'A' (1970-1985) and Premier Division (1985-2014). The right-hand axis on the graph plots the number of matches in the division each season. As expected, the number of goals per season is highly correlated to the number of matches (R = 0.81).

**Figure 1: Number of Goals & Matches 1970 – 2014**

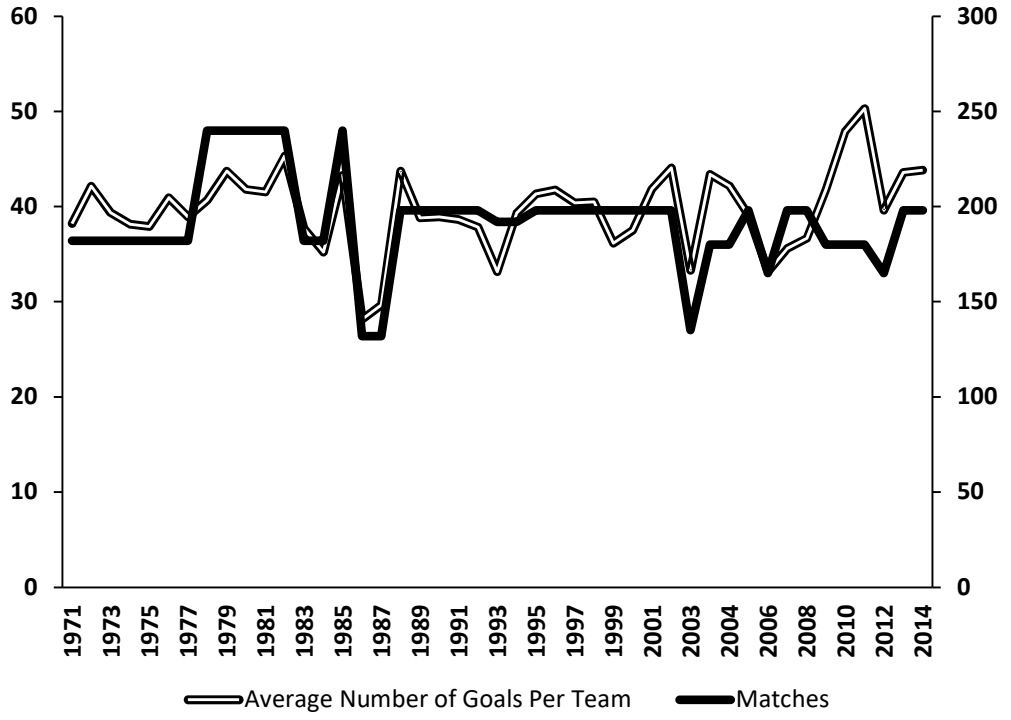



Interestingly, the highest number of goals in a single season occurred during the 1981-1982 campaign, the same year the points system was altered so that four points were awarded for an away win and two for an away draw. The introduction of the First Division for the 1985-1986 season coincides with a dramatic fall in the number of goals. This is primarily due to the reduction in the number of games. However, an increase in the number of matches from the 1987-1988 season to the 2001-2002 season does not see a return to the number of goals from 1970 to 1977 when a similar number of games per season were played. A reduction in the number of Premier Division teams in 2003, witnesses the lowest number of goals (333) in any season in the sample. This can be explained by the shortened league season, to accommodate the switch to *Summer Soccer*.

Figure 2 illustrates the mean number of goals per club across each season from 1970 to 2014. Again, a strong positive relationship exists between the two. A reduction in the number of

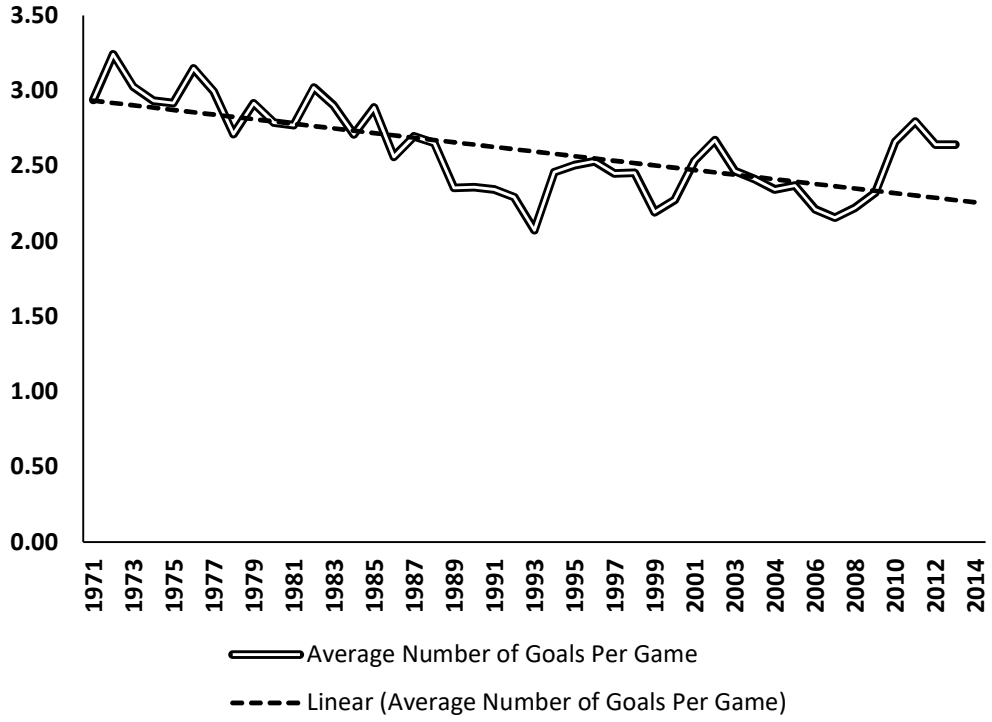
matches, most notably from 1985 to 1987 and again during the 2002-2003 season, resulted in a sharp drop in the average number of goals scored by each club (R = 0.60)

**Figure 2: Mean Number of Goals per Club and Number of Matches 1970 – 2014**




It is worth noting that there is an annual increase in the average number of goals scored per club from 2007 to 2011. A total of 503 goals were scored by the ten Premier Division teams in 2011, making this season the only time the league teams ever surpassed the 50 goal average and 500 goal total for a season. The following season (2012) reports a fall to just fewer than 40 goals per season. The evolving league structure makes it difficult to interpret Figures 1 and 2. However Figure 3 controls for changes in the number of matches played each season and the number of teams involved in each league campaign.

**Figure 3: Mean Number of Goals per Game 1970 – 2014**




Despite a relatively stable mean number of goals per club (Figure 2) the mean number of goals per game has declined over the entire sample period. In the LoI, as in many other leagues worldwide, goals are becoming scarcer[15]. Despite various rule changes to the points system, little has been done to arrest the continuous decline in the number of goals per game. This decline, further emphasised by the linear trend line, reaches its nadir during the 1992-1993 season, when just 2.07 goals per game were scored on average. It is noteworthy that since this low point, the average number of goals per game has slightly increased between the years 1993 and 2014 when three points are awarded for a win. This is primarily determined by the annual average increases between the years 2006 and 2011.

As a corollary, it is interesting to compare goals in the FAI Cup to the League competition. Accurate data for FAI Cup matches is accessible for a ten year period from 2004 to 2014 from The Rec.Sport.Soccer Statistics Foundation and the FAI website. Table 3 displays the average number of goals per round for the FAI cup from 2004 to 2014. The average number

of goals in the FAI cup competition ranged from 3.04 (maximum) to 2.47 (minimum). These averages would be comparable to the modern goal scoring trends in the League competition.

**Table 3: Mean Number of Goals per Round in the FAI Cup 2004 -2014**

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Qualifier | - | - | - | - | 2.27 | 3.25 | 3.00 | 2.00 | - | - | - |
| Round 1 | 3.00 | 2.69 | 3.30 | 2.40 | 2.11 | 3.27 | 2.33 | 2.29 | 3.00 | 2.73 | 3.29 |
| Round 2 | 3.61 | 2.50 | 2.53 | 2.84 | 2.89 | 3.62 | 3.10 | 3.53 | 3.33 | 3.56 | 3.00 |
| Last 16 | 2.50 | 2.64 | 2.30 | 2.50 | 4.25 | 1.45 | 2.30 | 3.09 | 2.50 | 3.10 | 2.36 |
| Quarter Final | 2.86 | 3.25 | 3.40 | 2.80 | 1.33 | 2.13 | 4.00 | 2.00 | 5.00 | 2.60 | 3.43 |
| Semi-Final | 2.00 | 2.00 | 2.33 | 1.50 | 2.50 | 3.50 | 2.00 | 2.33 | 2.67 | 2.00 | 3.67 |
| Final | 3.00 | 2.00 | 7.00 | 1.00 | 4.00 | 3.00 | 0.00 | 2.00 | 5.00 | 5.00 | 2.00 |
| Average | 3.04 | 2.61 | 2.81 | 2.52 | 2.48 | 2.92 | 2.73 | 2.78 | 3.00 | 2.47 | 2.98 |

The next part of this analysis considers single match outcomes. This is undertaken to determine if individual rule changes have had a significant impact on the outcome of individual matches. Again, we initially provide an overview of individual match outcomes from 1970 to 2014. Table 4 presents a matrix of possible results and covers 8,655 games. The results from the LoI are not dissimilar to those found for the Football League in England[16].

**Table 4: Frequency of League of Ireland Results from 1970 to 2014**

| | | Away Team Goals | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7+** |
| Home Team Goals | **0** | 9.07% | 8.87% | 5.55% | 2.39% | 0.82% | 0.34% | 0.09% | 0.06% |
| | **1** | 10.24% | 12.19% | 6.46% | 2.92% | 0.99% | 0.29% | 0.11% | 0.05% |
| | **2** | 6.70% | 7.62% | 4.41% | 1.78% | 0.53% | 0.22% | 0.06% | 0.01% |
| | **3** | 4.05% | 3.92% | 2.13% | 0.72% | 0.28% | 0.13% | - | 0.01% |
| | **4** | 1.53% | 1.55% | 0.72% | 0.24% | 0.08% | 0.05% | 0.02% | 0.01% |
| | **5** | 0.65% | 0.58% | 0.27% | 0.09% | 0.02% | 0.01% | - | - |
| | **6** | 0.39% | 0.21% | 0.12% | 0.04% | 0.01% | - | - | - |
| | **7+** | 0.16% | 0.13% | 0.06% | 0.02% | 0.02% | - | - | - |

The most frequent score in the LoI from 1970 to 2014 is a 1-1 draw. The second most common result is a 1-0 home win, followed by a scoreless draw, and 1-0 away win. More than 40% of LoI matches ended in one of these four outcomes between 1970 and 2014. Including games that finished 2-0, 2-1, 2-2, 0-2 and 1-2, we find that more than 71% of matches are covered by these nine possible score lines. Including score lines 3-0, 3-1, 3-2, 3-3, 0-3, 1-3 and 2-3, we find that 89% of games end in results ranging from scoreless draws at one extreme to games where both teams scored three goals each, with the match ending tied at 3-3.

Next we consider how each of the five rule changes mentioned in Section 2 impact the frequency of match outcomes over the course of the rule changes. Given that almost 90% of games are covered by the score lines with all combinations of one, two and three goals for both home and away teams, the matrices from each season are presented with only these results included.

**Table 5: 1970-1981 (Win 2 Points)**

| | | Away | | | |
|---|---|---|---|---|---|
| | | **0** | **1** | **2** | **3** |
| Home | **0** | 6.82% | 7.70% | 4.68% | 2.29% |
| | **1** | 8.92% | 10.77% | 6.38% | 3.41% |
| | **2** | 6.29% | 8.24% | 5.21% | 2.44% |
| | **3** | 4.04% | 4.48% | 2.39% | 1.02% |

**Table 6: 1981-1982 Trial System (4-3-2-1)**

| | | Away | | | |
|---|---|---|---|---|---|
| | | **0** | **1** | **2** | **3** |
| Home | **0** | 5.02% | 7.11% | 5.44% | 2.93% |
| | **1** | 9.62% | 9.62% | 6.28% | 4.18% |
| | **2** | 7.11% | 5.44% | 5.02% | 2.93% |
| | **3** | 5.44% | 4.60% | 2.09% | 1.67% |

**Table 7: 1982-1983 (Win 3 Points)**

| | | Away | | | |
|---|---|---|---|---|---|
| | | **0** | **1** | **2** | **3** |
| Home | **0** | 7.14% | 7.69% | 5.49% | 2.20% |
| | **1** | 8.79% | 13.19% | 7.14% | 3.85% |
| | **2** | 6.04% | 6.04% | 3.30% | 1.65% |
| | **3** | 2.20% | 5.49% | 1.10% | 1.10% |

**Table 8: 1983-1993 (Win 2 Points)**

| | | Away | | | |
|---|---|---|---|---|---|
| | | **0** | **1** | **2** | **3** |
| Home | **0** | 10.76% | 8.51% | 5.57% | 2.41% |
| | **1** | 9.90% | 13.17% | 6.42% | 3.16% |
| | **2** | 6.85% | 8.08% | 3.48% | 1.55% |
| | **3** | 3.80% | 3.59% | 1.98% | 0.59% |

**Table 9: 1993-2003 (Win 3 Points)**

| | | Away | | | |
|---|---|---|---|---|---|
| | | **0** | **1** | **2** | **3** |
| Home | **0** | 9.94% | 9.94% | 5.47% | 1.79% |
| | **1** | 11.42% | 13.36% | 6.26% | 2.16% |
| | **2** | 7.05% | 7.84% | 4.21% | 1.21% |
| | **3** | 4.05% | 3.68% | 2.10% | 0.84% |

**Table 10: 2003-2014 (Summer Soccer)**

| | | Away | | | |
|---|---|---|---|---|---|
| | | **0** | **1** | **2** | **3** |
| Home | **0** | 9.60% | 9.64% | 6.43% | 2.95% |
| | **1** | 10.98% | 11.92% | 6.74% | 2.72% |
| | **2** | 6.70% | 6.88% | 4.69% | 1.74% |
| | **3** | 4.33% | 3.66% | 2.14% | 0.31% |

Comparing across tables it is evident the rule changes have a negligible effect on match outcomes. The tables do point to an increase in the incidence of scoreless draws. While just 6.82% of games from 1970-1981, and just over 5% of games in the 1981-1982 season ended scoreless, the past thirty years have seen an increase. Since the permanent introduction of the three points system, almost one in ten games has finished without a goal. The trial 4-3-2-1 point system introduced during the 1981-1982 season did have an impact on match outcomes. 0-0 are reported at their lowest level (1 in 20 matches) for the entire sample, while 1-3, 2-3 and 3-3 occur more frequently than in any of the other five tables. Away teams, it appears, did attack more; however, when one considers the distribution of possible match outcomes

over the six periods, very little change has occurred despite the multiple rule changes. Table 11 provide a breakdown of match outcomes.

**Table 11: Match Outcomes 1970 – 2014**

| | Home | Draw | | Away |
|---|---|---|---|---|
| **1970-81** | 43.71% | 24.07% | | 32.21% |
| | | (6.82%) | (17.25%) | |
| **1981-82** | 44.77% | 21.34% | | 33.89% |
| | | (5.02%) | (16.32%) | |
| **1982-83** | 41.21% | 24.72% | | 31.87% |
| | | (7.14%) | (17.58%) | |
| **1983-93** | 40.26% | 28.05% | | 31.69% |
| | | (10.76%) | (17.29%) | |
| **1994-03** | 40.84% | 28.50% | | 30.66% |
| | | (9.65%) | (18.84%) | |
| **2003-14** | 40.49% | 26.54% | | 32.95% |
| | | (9.60%) | (16.94%) | |

*The outcomes for drawn games also report in parenthesis whether the game finished scoreless (left) or was a score draw (right).

Little variation has occurred in match outcomes, despite the various rule changes seeking to elicit more attacking football. The only noteworthy trend is a movement away from home wins towards more drawn games, albeit a minimal change (approximately 3%). Away wins have remained almost constant, with roughly one in three away teams emerging victorious.

**Discussion**

Despite the many attempts by the LoI and later the FAI to incentivise more attacking football, no significant and lasting increases in the number of goals scored are observed over the course of the past forty-five seasons. There are some signs of increased attacking effort in the 1981-1982 season but the difference between this season and others is negligible. Over the period an increasing amount of draws are observed. The permanent move to three points for winning a match in 1993 served to stem the declining trend in the number of goals in the LoI

from 1970 to the early 1990s, rather than increase the amount. The average goal scored in the FAI cup between 2004 and 2014 would be comparable to the recent goal scoring trends in the League competition.

While defensive football is not necessarily worse football, the objective of increasing goals per game with rule changes has, for the most part, been ineffective in the LoI. We suggest three explanations why these modifications to the structure and seasonal timing of the league, as well as alterations in the points system have been unsuccessful in incentivising more attacking football, as measured by goals scored. All three are conjectural.

Firstly, one could argue tactical developments in the football rather than rule changes have caused the downward trend in the number of goals scored. In particular, football in the 20th century saw an increased emphasis on defensive tactics. Historically teams lined out in relatively attacking formations. These included the WM or Meodo formations (5 forwards, 2 midfielders and 3 defenders), and the Pyramid or Danubain formations (5 forwards, 3 midfielders and 2 defenders). All four involved having five attacking players on the pitch at all times. Football formations have evolved toward including a greater number of defensive minded players over the course of the 20th century[17]. The period considered coincides with Irish teams participating in European competitions. Exposure to 'foreign' tactics may have affected Irish clubs. This in turn must have spread to other domestic clubs. There is a possibility that tactical innovations in the LoI may have derived from exposure to European practices. The diffusion of tactical knowledge from European clubs to Irish clubs is an area open to future research. Today, teams commonly start a match with just one recognised attacking player, or in some cases play without a recognised attacking player, otherwise known as the False Nine formation. This general movement in tactics, away from traditional

attacking play, has likely impacted the number of goals scored in each game as teams not only have fewer players attacking the opposition goal, but also a greater number of players to defend their own goal.

The second reason for the decline in the number of goals could be due to convergence between football clubs. Whilst often spoken about in an economic sense, where poorer countries grow more quickly and tend to catch up with richer countries, convergence in a football sense refers to the fact that the weaker teams in the LoI today are more competitive than they have been in the past. An improvement and standardisation of coaching practices, and advances in sports science and dietary requirements has resulted in all clubs having access to information concerning the best methods regarding physical, mental and tactical preparation for a match. UEFA licensing prerequisites and the requirement for clubs training personnel to hold coaching qualifications has served to further this standardisation. Finally, improved information has removed a degree of uncertainty clubs would have faced in the past when meeting an opponent. Technological advances, in particular the advent of televised football, has allowed clubs to reduce information barriers regarding an opponent's strengths and weaknesses. The use of technology in football has advanced rapidly since 1970. In the modern game, teams can prepare tactically days in advance by accessing sophisticated statistical information about the opponent.

A third reason may relate to non-rational responses. From a behavioural perspective the concept of loss aversion is important[18]. Individuals treat loses differently from gains. In short, loses loom larger and the pain of losing is psychologically approximately double to that of gaining. Loss aversion has been found to exist in other high stakes sporting environments[19]. If individuals are averse toward losses, offering greater incentives to teams to score more goals

may not sufficiently incentivise more attacking play. A winning team may be purely interested in protecting a lead once it is achieved. This may be of particular importance to this period of the leagues history as it has become more professional during this time; naturally losses may have become more costly to managers and players. Furthermore, one could argue that rational actions on the field are not susceptible to minor tweaks to the incentive structure. Decisions on the field of play are often more attributable to emotions than to rational behaviour[20]. Calculated responses to incentives are not usually attributed to high stakes environments where time pressures exist.

**Conclusion**

We consider five individual rule changes that are imposed on the LoI from 1970-2014. These were intended to incentivise more attacking football**.** By considering goals per season and individual match outcomes, we reason that changes to the points system have not resulted in a considerable increase in the number of goals scored in the Premier Division, nor has the introduction of relegation.

We are cognisant of the limitations of this study. Firstly, our analysis of individual rule changes rely upon the *ceteris paribus* assumption. This constrains the inferences one can make. The benefit of making this assumption is that it makes specific rule changes more amenable to analysis. Secondly, we focus upon external incentives. Given the complexity of the task, we do not consider the role of incentives within clubs, or those faced by coaches and management. This study does however provide evidence that historical changes to the point structure negligibly affected the observed outcomes of matches and the amount of goals scored in the league. We speculate why these changes may not have achieved their desired

effect and suggest that our conjecture may form the basis of future research into the League of Ireland.

**Notes**

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3. Mokyr, *The Enlightened Economy* pg.20.
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5. Toms, *Darling of the Gods* pg. 5-8.
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