

THE BONUS FOR IRISH IN THE LEAVING CERTIFICATE EXAMINATION

Eoghan Mac Aogáin, David Millar, and Thomas Kellaghan
*Educational Research Centre
St Patrick's College, Dublin*

Bonus marks awarded to a random sample of candidates (n=818) who sat Mathematics, French, History, and Economics, at Higher and Ordinary levels, through Irish in the 2002 Leaving Certificate Examination were analysed to determine the size and distribution of the Irish bonuses, and their impact on candidates' CAO points scores. Because points are awarded in multiples of 5 (corresponding to a grade interval), the possible points gains due to the Irish bonus in one examination are 0, 5 or 10. Over half (52.3%) of candidates received no additional points; 42.4% were awarded 5 points; and 5.2% were awarded 10 points. An analysis of scripts and examination papers indicated that the face values of bonuses were in line with the language tasks they contained. Requests for Irish-medium papers submitted by schools three months in advance of the examination show that 2,063 candidates, or 2.3% of all candidates sitting the four subjects in 2002, requested Irish-medium papers. The requests were mostly (93.7%) from All-Irish schools, from girls more than from boys, from Higher level candidates more than from Ordinary level candidates, and for papers carrying a 5% bonus or less rather more than for papers carrying a 10% bonus.

The practice of awarding additional marks to candidates sitting public examinations through the medium of Irish dates back to the 1920s. The so-called 'bonus for Irish' was one of several initiatives taken in the early years of the state to strengthen the position of the Irish language in the education system, with the long-term objective of maintaining and reviving its use in everyday life. Like other decisions that were made concerning the Leaving Certificate Examination (LCE) over the years, the bonus for Irish appears to have attracted little attention until the introduction of the points system operated by the Central Applications Office (CAO) in 1978 to control admission to third-level education. In this system (modified in 1992), admission is determined almost entirely by the grades awarded to candidates in their six best LCE subjects. Since the award of even a single additional mark in any LCE subject could in principle lead to a higher grade and thereby, an additional 5 or even 10 CAO points, questions were naturally raised about awarding a bonus for Irish, particularly about the way the scheme was being implemented and the impact it was having within the

points system. For example, the Higher Education Authority (1999) in its submission to the Commission on the Points System considered it 'appropriate to evaluate the extent to which these arrangements can affect the allocation of third-level places and their appropriateness as a policy instrument in circumstances which are radically different to those prevailing at the time when this measure was first introduced' (p. 13). The purpose of the present paper is to address some of these questions based on data from the 2002 Leaving Certificate Examination.

Although there is opposition to the bonus for Irish, few would question the right of the state, and its educational agencies, to attach bonuses to marks awarded in particular subjects in pursuance of particular educational priorities. Within the points system itself, third-level institutions are free to attach bonus points to the grades obtained by candidates in the LCE in specified subjects, and some do (CAO, 2007). In recent times, a Minister for Education and Science also raised the question of bonuses within the points system for LCE mathematics and science candidates who wish to pursue these or related subjects at third level (Minister backs bonus points system, 2006). The bonus for Irish, however, is different in that it is not attached to any particular subject, but to almost all subjects, provided they are examined through Irish. Thus expressions such as 'the bonus for Irish' or 'bonus marks for Irish' or the 'Irish bonus' can be misleading, since Irish, as a subject, carries no bonus.

The bonus was intended to help in the creation of a core group of schools that would teach partly or entirely through the medium of Irish, since it is widely accepted that maintenance of a weaker national language through a school-based programme is very difficult if the language is used only during the language lesson. This accounts for the growth of immersion second-language programmes, partial and total, in primary and secondary schools all around the English-speaking world following the initial experiments in Canada in the 1960s (Johnson & Swain, 1997; Laplante & Mac Aogáin, 2001).

While the bonus for Irish can be linked in a meaningful way with educational priorities, when considered as a component of a public examination system it can also appear arbitrary and inequitable. In particular, administration of the bonus seems to violate the principle of equality between subjects that is such a prominent feature of the LCE, since it means that the candidate's competence in Irish now plays a role in the marking of examinations other than Irish. This also violates a basic condition of measurement which specifies that students' performance should not be

determined by their competence in a domain other than the one an examination was designed to assess (Messick, 1989). It is not possible to say whether candidates' competence in Irish affects the marks they are awarded, positively or negatively, thus contributing to construct irrelevant variance in candidates' marks. It does seem reasonable to assume, however, that some candidates will experience difficulty in taking an examination in a language that is not their everyday language of discourse, and that this will be reflected in their performance. The fact that larger bonuses are awarded in subjects that would be expected to pose greater difficulty for candidates answering their papers in Irish is consistent with such an assumption.

The Commission on the Points System (1999) recommended that the bonus for Irish should end. The main reason given was that 'the bonus points awarded for answering through the medium of Irish give an unfair advantage to students when they are applying for third-level places' (p. 72). This was illustrated by a set of possible LCE marks that would have accumulated 45 additional CAO points, raising the total from 530 to 575, had the papers all been answered in Irish. Although it is not clear whether the inequity, in the view of the Commission, resides in the size of the accumulated bonuses or in the fact that any such bonus, however small, exists, there is merit in the recommendation of the HEA that the way the bonus works in practice should be looked at more closely.

Two factors determine the size of the bonus awarded for Irish (State Examinations Commission, 2007). Firstly, it is set at either 10%, 5%, 4%, 3.75%, or 2.5% of the total mark awarded to the candidate depending on the subject. This is based on a judgment about the difficulty that candidates will experience in answering papers in Irish. Secondly, in the case of candidates who are awarded more than 75% of the marks available in any subject, the bonus is scaled back to ensure that the composite mark, consisting of the subject mark and the bonus, does not exceed 100 percent. Thus, a candidate who is awarded a mark of 100% in a subject receives no additional marks for having answered the paper in Irish, and the maximum size of the bonus occurs when the pre-bonus mark is 75% of total marks.

The maximum bonus of 10% is awarded in Latin, Greek, Classical Studies, Hebrew Studies, History, Geography, Physics, Chemistry, Physics and Chemistry, Biology, Business Studies, Economics, Economic History, Agricultural Science, Agricultural Economics, Home Economics, Music, Business Studies, History and Appreciation of Art, Religious Education, and Arabic.

A 5% bonus is awarded in French, German, Italian, Spanish, Mathematics, Applied Mathematics, Accounting, Engineering, Construction Studies, Russian, and Japanese.

Table 1
Additional Marks Awarded in Examinations Carrying 10% and 5% Bonuses

Examination mark (%)	40	45	50	55	60	65	70	75	80	85	90	95	100
Additional marks for 10% bonus subjects	4	5	5	6	6	7	7	8	7	5	4	2	0
Additional marks for 5% bonus subjects	2	2	3	3	3	3	4	4	3	2	1	1	0

There is a further scaling back of the bonus in the case of modern languages. Since the 5% bonus for modern languages is based only on the written and aural papers, the oral examination being excluded because it is conducted entirely in the target language, it is effectively less than 5 percent. In the case of French, which is the only modern language included in the present study, the bonus was 4% on the Ordinary paper and 3.75% on the Higher paper.

The 5% bonus in Mathematics is split evenly between Papers 1 and 2, and candidates may choose to answer one paper in English and still retain the 2.5% bonus for the other paper if it is answered in Irish. This happens in only a small number of cases.

No bonus is awarded in Art (other than History and Appreciation of Art), presumably because only a small number of words and phrases would be needed to answer the paper in Irish. The Irish and English papers are also excluded from the bonus system, as the papers must be answered in the language in question.

The scaling down of the bonus after 75% means that the maximum bonus for a candidate with a mark of 75% in a paper carrying a 10% bonus is 8%, and for a paper carrying a 5% bonus, 4 percent. Thereafter, the bonus decreases as shown in Table 1 in which figures have been rounded up to the nearest whole number. Apart from preventing the anomaly of marks in excess of 100%, the scaling

down of the bonus also allows it to be interpreted as a correction for a likely underestimate in the subject marks of candidates at lower levels of achievement, given the added difficulty that they face in answering LCE papers through a language that, for most of them, is not their mother tongue.

In the study described in this paper, a sample of scripts answered in Irish in Economics, French, History, and Mathematics (Higher and Ordinary levels) was analyzed to estimate the actual value of the bonus marks to candidates, and the nature, amount, and quality of candidates' use of Irish in their examination scripts. Differences for gender, subject, level (Higher or Ordinary), size of bonus (10%, 5% or less), and type of school (All-Irish or ordinary) were examined, based on requests for Irish-medium papers received from schools three months prior to the examination.

METHOD

Sample of Scripts

Based on data obtained from the then Examinations Branch of the Department of Education and Science, a random sample of scripts completed in Irish in Economics, French, History, and Mathematics at both Higher and Ordinary levels, in the Leaving Certificate Examination of 2002 was drawn. The sampling unit was the school, with selection probabilities proportional to size, namely the number of Leaving Certificate students taking the subject at the level in question. The probability of a school being selected was

$$\frac{\text{MOS} \times \text{NS}}{\text{TOTMOS}} \quad (1)$$

where MOS is the measure of school size

NS is the number of schools to be selected

TOTMOS is the total number of students in all schools in the sampling frame.

It was decided to omit Ordinary level Economics because a very small number of scripts (fewer than 10 scripts from 7 schools) would be involved. Only All-Irish schools (Category A1) were included, since they accounted for 94% of all requests for Irish-medium papers received prior to the examination. A sample of three schools from Category A2 (some pupils doing all subjects through Irish) and one school from Category B (some pupils doing some subject through Irish) showed that the number of scripts in Irish would be too small (fewer than 100) to warrant separate analysis.

All scripts completed in Irish by candidates from selected schools were examined, even if the candidates had not submitted a request for an Irish-medium paper. The number of Irish scripts in the final sample was 818, distributed over subjects and levels as shown in Table 2.

Table 2
Distribution of Irish Scripts over LCE Subjects and Levels

Subject	Level		Total
	Higher	Ordinary	
Economics	42	--	42
French	123	144	267
History	88	22	110
Mathematics	108	291	399
Total	361	457	818

To compare the amount of Irish required to answer papers with the size of the bonuses they carry, while controlling for the ability of the candidates in the subject area examined, the five highest-scoring scripts were selected from each of the seven subject and level combinations in the sample and a count of the words of Irish they contained was made.

RESULTS

Value of the Bonus in CAO Points

The value of the bonus for Irish in CAO points was calculated by first subtracting the bonus from the candidates' marks to give a pre-bonus mark, to which a points value was assigned according to the CAO table (CAO, 2007). The points gain due to the bonus was then taken to be the difference between this points value and points actually assigned to the candidate, based on the mark plus the bonus. Since points are rounded to nearest multiples of 5, there are only three possible points gains due to the bonus, 0, 5, or 10. A gain of zero points occurs when the bonus fails to take the pre-bonus mark to the next 5-point boundary. If the bonus does take the pre-bonus mark to the next 5-point boundary, a gain of 5 points occurs. A gain of 10 points can occur in two ways, either by taking the pre-bonus mark to the second next 5-point boundary, or by promoting the candidate from grade A2 to A1.

Table 3
Number and Percentage of Candidates Receiving CAO Points Gains of 0, 5, or 10 Due to the Bonus for Irish by Subject, Level, and Size of Bonus

	Bonus Size	CAO Points Gains				N
		0	5	10 (5, 5)	10 (A2-A1)	
French H	3.75%	79 (64.2)	42 (34.1)	0 (0.0)	2 (1.6)	123
French O	4%	91 (63.2)	52 (36.1)	0 (0.0)	1 (0.7)	144
Maths H	5%	52 (48.1)	54 (50.0)	0 (0.0)	2 (1.9)	108
Maths O	5%	183 (62.9)	103 (35.4)	0 (0.0)	5 (1.7)	291
Total		405 (60.8)	251 (37.7)	0 (0.0)	10 (2.0)	666
Economics H	10%	9 (21.4)	28 (66.7)	4 (9.5)	1 (2.4)	42
History H	10%	7 (0.8)	57 (64.8)	20 (22.8)	4 (4.5)	88
History O	10%	7 (31.8)	11 (50.0)	3 (13.7)	1 (4.5)	22
Total		23 (15.0)	96 (63.2)	27 (17.8)	6 (3.7)	152
Total		428 (52.3)	347 (42.4)	27 (3.3)	16 (2.0)	818

Table 3 shows the number and the percentage of candidates in the sample who made gains of 0, 5, or 10 points as a result of the bonus. Subjects carrying a bonus of 5% or less cannot yield a gain of 10 points except by promoting a candidate from grade A2 to A1, which happened in 2% of cases. Large percentages of candidates, 52.3% over all subjects and levels, received no additional CAO points as a result of taking these subjects through Irish. Ten-point gains were recorded for 11.9% of candidates in Higher level Economics, and for 27.3% and 18.2% of candidates in Higher and Ordinary level History respectively. Five-point gains were the most common outcome (in 63.2% of cases) for papers carrying a 10% bonus.

The expected values of the bonus in CAO points for the seven combinations of subjects and levels in the study are shown in Table 4.

Table 4
Expected Value of the Bonus for Irish

	Bonus	Expected Value	N
Economics H	10%	4.53	42
History H	10%	5.94	88
History O	10%	4.32	22
Total		5.32	152
Maths H	5%	2.69	108
Maths O	5%	1.94	291
French O	4%	1.88	144
French H	3.75%	1.87	123
Total		2.04	666
Total		2.65	818

Expected values are the sums of the possible values, 0, 5, or 10, weighted by their probabilities of occurrence, based on the data in Table 3. They can be interpreted either as the average gain for a group of candidates, or alternatively, as the perceived value of the bonus to the candidates prior to the examination, taking into account that the closeness of their eventual pre-bonus mark to the next 5-point boundary is not within their control. The expected value of the bonus is 5.32 points for subjects carrying a 10% bonus, and 2.04 points for subjects carrying a bonus of 5% or less.

Irish Used in the Scripts

The Irish used in the scripts is almost always readily intelligible, but with frequent errors in grammar and spelling. The number of Irish words used in the five highest scoring scripts for each of the seven subject and level combinations in the sample is presented in Table 5.

Table 5
Number of Words of Irish in A-Grade Scripts by Subject, Level, and Size of Bonus

Level	Bonus	Subject	Words of Irish			N Scripts
			Min	Max	Median	
Ordinary	4%	French	144	305	238	5
	5%	Mathematics	33	250	125	5
	10%	History	1,620	3,150	1,980	5
Higher	3.75%	French	354	456	424	5
	5%	Mathematics	64	321	145	5
	10%	Economics	1,601	2,280	1,832	5
	10%	History	3,690	4,620	4,305	5
						35

A study of the scripts showed that Irish was used in Mathematics largely to label quantities and sections of answers, and to clarify the methods being used in calculations and proofs. Whole sentences were rarely needed at Ordinary level, but featured more prominently at Higher level, sometimes as independent steps in a proof. At Ordinary level, the number of words of Irish used ranged from 33 to 250. Although the bonuses for French are reduced to 4% at Ordinary level and 3.75% at Higher level, because of the exclusion of the oral examination, our data show that 300-400 words of Irish were required to obtain Grade A, compared to the much lower figures in Mathematics, which carries a 5% bonus. Essay-type answers are required in History and Economics, which carry a 10% bonus, leading to a sharp rise in the amount of Irish that candidates have to write, a minimum of 1,601 words in Economics, and 3,690 words in History. The lower figure in the case of Economics is due to the use of short-answer questions and questions testing mathematical skills.

The face values of the bonuses, whether 5% or less, or 10%, are therefore broadly in line with the amount of Irish required to achieve grade A in the subject. When considered as a series of communicative language tasks to be

completed in Irish, the examination questions in Irish have all the properties that would be looked for in an authentic test of writing, with an added requirement of realism not easily achieved in language examinations, that effective communication should take place with another person in a matter that is important to both parties.

Requests for Irish-Medium Papers, Type of School, and Gender of Candidates

Requests for Irish-medium papers submitted by schools in March of 2002, which were used in drawing the sample for the study, were analysed separately. They contain two items of information relevant to the bonus for Irish that are not available from the scripts: type of school (All-Irish or ordinary), and gender of candidates.

Numbers of requests for Irish-medium papers in Economics, French, History, and Mathematics for all schools, whether in the sample or not, are shown in Table 6. Of the 89,562 LCE candidates who eventually sat these papers, 2,063 or 2.3% indicated an intention to sit one of the subjects through Irish. The figure ranges from a maximum of 3.1% for French at Higher level to a minimum of 0.9% for Ordinary level History.

Table 6
Numbers of Candidates Sitting Examinations, Requesting Irish-Medium Papers, and Attending all-Irish Schools

Subject	Level	N Sitting	N (%)		N Schools
			Requesting Irish Papers	Attending All- Irish Schools	
Economics	H	3,238	70 (2.2)	67 (95.7)	10
	O	966	10 (1.0)	8 (80.0)	7
French	H	14,066	442 (3.1)	409 (92.5)	38
	O	16,233	300 (1.8)	286 (95.3)	36
History	H	6,184	170 (2.7)	166 (97.6)	22
	O	4,041	38 (0.9)	37 (97.4)	12
Mathematics	H	8,621	227 (2.6)	209 (92.1)	31
	O	36,213	806 (2.2)	751 (93.2)	47
Total		89,562	2,063 (2.3)	1,933 (93.7)	60

The highest number of requests was 806 for Ordinary level Mathematics, and the lowest (10) for Ordinary level Economics. The number of schools

involved ranged from a high of 47 for Ordinary level Mathematics to 7 for Ordinary level Economics. Candidates in all subjects at all levels came from 60 schools, which is approximately 8% of the 750 post-primary schools operating in 2001/2 (DES, 2003). The breakdown for subjects and levels for candidates attending all-Irish schools shows only random variation around the mean of 93.7 percent.

By treating the proportions of requests as binomial probabilities, a linear model can be fitted to the observed frequencies in the general form

$$p' = b_0 + b_1(\text{Variable 1}) + b_2(\text{Variable 2}) + \dots \quad (2)$$

where p' is the probability that a request will be received transformed to a logit scale; b_0 is the intercept; and the remaining b -terms are the regression coefficients for the predictor variables and their interactive terms that model the data most efficiently. The predictors in the following analyses are gender, subject, level of examination, and size of bonus (5% or less, or 10%). Subject (Economics, French, History, or Mathematics) was not found to play a role that was independent of level or size of bonus.

When the gender of candidates was used as a predictor, the best-fitting equation was

$$p' = -3.42 - .44(\text{Level}) - .26(\text{Gender}) + .20(\text{Level} \times \text{Gender}) \quad (3)$$

Since probabilities less than .5 appear as negative quantities on the p' scale, the result indicates that the probability of a request for an Irish-medium paper, already close to zero in the population, as indicated by the intercept of -3.42, is lower still among Ordinary level candidates and among boys. The positive interaction term shows that the advantage in favour of girls is less at Ordinary level. When these effects are accounted for, there is no significant effect for subject. The effects are shown in the raw data classified by level and gender (Table 7).

Table 7
Requests for English-Medium and Irish-Medium Papers by Level of Examination and Gender of Candidates

Level	Girls		Boys		Total	
	English	Irish (%)	English	Irish (%)	English	Irish (%)
Higher	16,484	539 (3.2)	14,716	370 (2.5)	31,200	909 (2.8)
Ordinary	29,881	630 (2.1)	26,418	524 (1.9)	56,299	1,154 (2.0)
Total	46,365	1169 (2.5)	41134	894 (2.1)	87,499	2,063 (2.3)

When the size of the bonus, 10% or 5% (or less), was introduced as a predictor of rate of requests for Irish-medium papers, the best-fitting equation was

$$p' = -3.5 - .34(\text{Level}) - .15(\text{Bonus Size}) - .65(\text{Level} \times \text{Bonus Size}) \quad (4)$$

Rate of requests for Irish-medium papers declines at Ordinary level and for papers carrying a 10% bonus. Surprisingly, the interaction between these two effects is much larger than either of them. When these effects are accounted for, there is no significant effect for subject. The effects are shown in the raw data classified by level and bonus size in Table 8.

Table 8
*Requests for Irish-Medium Papers and English-Medium Papers
by Level of Examination and Size of Bonus*

Level	5% or less		10%		Total	
	English	Irish (%)	English	Irish (%)	English	Irish (%)
Higher	22,687	669 (3.0)	9,422	240 (2.6)	32,109	909 (2.8)
Ordinary	49,446	1106 (3.2)	5,007	48 (1.0)	54,453	1154 (2.1)
Total	72,133	1,775 (2.5)	14,429	288 (2.0)	86,562	2063 (2.3)

A comparison between requests for Irish-medium papers and numbers of scripts in Irish in the sample shows that scripts fall short of requests by about 30% (Table 9). This means that figures for requests should be reduced by that amount when used as estimates of the final number of examinations answered through Irish. The figure of 2,063 candidates who, according to DES data, were listed as intending to sit their examinations through Irish in the four subjects under study (Table 8) suggests a final number of scripts around 1,500. Thus our sample of 818 contains over half of the scripts that were answered in Irish in these subjects. The shortfall is least for Mathematics, 23.9% at Higher level and 7.9% at Ordinary level, and highest for Higher level French (58.6%).

Table 9
*Requests for Irish-Medium Papers Received from Schools in the Sample and
 Numbers of Scripts Completed in Irish by Candidates from those Schools*

Subject	Level	Requests (N)	Scripts (N, %)	Shortfall (%)
Economics	H	59	42 (71.2)	28.8
	O	10	--	--
French	H	297	123 (41.4)	58.6
	O	180	144 (80.0)	20.0
History	H	147	88 (59.9)	40.1
	O	37	22 (59.9)	40.1
Mathematics	H	142	108 (76.1)	23.9
	O	316	291 (92.1)	7.9
Total		1,178	818 (69.4)	30.6

CONCLUSION

The data analysed in this paper show that CAO points gains due to the bonus for Irish in the 2002 Leaving Certificate Examination were modest in size. A majority (52%) of candidates gained no additional points as a result of sitting an examination in Irish, and only 5% made gains of 10 points. The remaining 42% made a 5-point gain. The relatively small number awarded a bonus is due to the fact that points are awarded in multiples of 5, which means that a random effect is involved in the calculation of points values, namely the closeness of the pre-bonus mark to the next 5-point boundary. This, in conjunction with the size of the bonus, determines whether its value to the candidate will be 0, 5, or 10 points.

While the rounding effect has been studied here only in connection with the bonus for Irish, it applies to whatever marks are added last to give a candidate's final mark on any LC examination, regardless of the language in which it is answered. While one could argue that a small degree of randomness in points awards that applies to all candidates in all subjects can be ignored, from a measurement perspective the important point is that the rounding is unnecessary, and is therefore tantamount to the deletion of relevant information. Furthermore, it raises issues of equity and transparency, since it is reasonable to assume that all of the marks awarded to candidates in the LCE are taken into account in their final points award. And in the case of

the bonus for Irish, the translation of marks into grades has the effect of denying a majority of candidates any benefit.

The situation could be otherwise. LCE marks could be allowed to remain on the raw scales on which they were awarded, which in the case of the present study is a scale of 300 for French Higher level, 320 for French Ordinary level, 400 for History and Economics, and 600 for Mathematics. The marks could then be standardized to a fixed maximum of 100 without losing any information before being summed for candidates' six best subjects to yield a points score, which would be on a scale of 600 but without rounding. And this was indeed the case when the bonus system was introduced, and continued to be so up to 1969 when grades replaced marks in reporting candidate performance.

It is not unreasonable to expect that all information that is relevant to the rank-ordering of candidates in any given LC examination will be retained when the mark is summed with marks for other subjects. Very likely, it is the public expectation that this is already the case that has led to the assumption that a 10% bonus for Irish leads to frequent gains of 10 points, including multiple 10-point gains for the same candidate. The hypothetical case in the final report of the Commission on the Points System (1999, p. 72), in which a candidate receives four promotions from A2 to A1 grades as a result of the Irish bonus, is possible, but extremely unlikely. The probability of a promotion, in any subject, at any level, from grade A2 to A1 as a result of the bonus, was at most .05 in our data (Table 3), and the probability that a single candidate would receive four such promotions is therefore at most .000006, which is odds in excess of 100,000 to 1 against such an event occurring. The more realistic case concerns 10-point gains of all kinds, whether by promotion from grade A2 to A1 or by promotion across two 5-point boundaries, since the latter is three times more likely than the former (Table 8). But in this case also, the probability of a 10-point gain by either means is still at most around .20, giving odds of less than 2 in 1,000 of accumulating four such gains. Since the total number of candidates taking four LCE papers in Irish, each carrying 10% bonuses, is unlikely to exceed 1,000, the accumulation of four 10-point bonuses for Irish is to be expected, at most, in only one or two cases.

The analysis of requests for Irish-medium papers shows that they come almost exclusively from All-Irish schools, from girls more than from boys, from candidates at Higher level more than at Ordinary level, and for subjects carrying a 5% bonus or less more than for papers carrying a 10% bonus. All

of these effects are consistent with the assumption that Irish-medium papers pose an academic challenge for candidates that is additional and of the same kind as that posed by the examination itself. The gender effect is not surprising since it is well established that girls outperform boys in public examinations, including the Leaving Certificate (Elwood & Carlisle, 2003; Kellaghan & Millar, 2003; Millar, Farrell, & Kellaghan, 1998; Millar & Kelly, 1999). For the same reason, Higher level candidates request Irish-medium papers more often than Ordinary level candidates, and papers that carry a bonus of 5% or less, and thus pose less of a challenge, are more frequently requested than papers carrying a 10% bonus. The high percentage of candidates (30%) who requested an Irish-medium paper in advance of the examination, but opted for an English-medium paper in the examination hall, is further evidence of the extent of the difficulty posed, since the shortfall is smallest in the case of Mathematics, where the Irish requirement is most easily met. The subject being examined has no effect on requests for Irish-medium papers when the main effects for level (Higher or Ordinary) of examination and size of bonus are removed.

Although Irish-medium education and general academic ability, as indicated by the distinction between Ordinary and Higher papers, are clearly the major factors determining which LCE candidates take Irish-medium papers in the LCE, the relationship is obscured in our analysis because the Higher vs. Ordinary distinction does not capture ability differences between candidates in a way that is consistent over subjects. This is evident from the large differences between LCE subjects in the percentages of their candidates taking the examination at Higher level. In the 2002 LCE, 19% of Mathematics candidates took the Higher level paper, compared to 79% in Economics, 62% in History, and 42% in French. Thus we may expect that a good number of high-ability LCE candidates, as judged by the CAO points totals, will take Ordinary level papers in Mathematics and French, and that this will be less so for Economics and History.

The dependence of the terms ‘Ordinary’ and ‘Higher’, insofar as they indicate ability levels, on the subject to which they are attached has to be taken into account in any analysis of LCE data, or any proposed summary of candidate performance, that spans both levels of the examination (Mac Aogáin, 2005). Our study of the bonus for Irish is no exception. Thus, the large interaction between the level of papers (Ordinary or Higher) and the size of the bonus (5% or 10%), which dominates the model for requests for Irish-medium papers presented in Equation 4, has a simple explanation: the

subjects carrying 10% bonuses are History and Economics, a large majority of whose candidates will have taken the Higher paper, reducing the number of higher-ability candidates in the Ordinary cohort, and accordingly, the number of requests for Irish-medium papers. In a broader context, the bonus for Irish needs to be examined in conjunction with more deep-seated varieties of arbitrariness affecting the calculation of composite scores of all kinds that are based on LCE results at both levels of the examination, including the composite scores that are calculated within each examination, based on marks awarded for its separate components (see Millar, Kellaghan, & Mac Aogáin, 2006).

Although the bonus for Irish has a points value that is much smaller than the face values of 10% and 5% suggest, the question still remains whether the advantage it gives to a small group of LCE candidates is justified by the value of Irish to the state. An argument that is commonly heard against the bonus is that government support for Irish in the schools has been scaled down in recent decades in response to a general decline in public support for the language. Consequently, the bonus, which may have been defensible in earlier times, is probably now no longer so (see e.g., HEA, 1999, p. 9).

Public opinion on the position of Irish in schools, however, as revealed in successive national surveys, is complex (Ó Riagáin, 1997; Ó Riagáin & Ó Gliasáin, 1994). Different subpopulations can always be distinguished, characterized by varying degrees of acceptance of the status of Irish in schools. In effect, state policy on Irish, both inside and outside the schools, has always been an attempt to cater simultaneously for quite different levels of support for the language.

The bonus for Irish concerns only one aspect of Irish language policy, namely the teaching of other subjects through the medium of Irish in a small number of post-primary schools, and by implication, in primary schools. Although it is a policy that can be implemented fully in only a small minority of schools, it enjoys a high degree of public support. Asked if they would have sent their children to an all-Irish primary or post-primary school, had there been one near them, over 20% of parents answered 'yes' in 1993, up 4-5% from 1983 (Ó Riagáin, 1997, p. 180). Harris et al. (2006) also found that 24% of parents of primary school pupils in schools that currently teach Irish only as a subject would support the teaching of other subjects through Irish.

These findings cannot be taken in isolation from the decline of teaching through Irish in schools other than all-Irish schools (Harris et al., 2006). The disappointing results relating to proficiency in Irish in the student population

generally, wherever it is taught as a subject only, must be taken in conjunction with the steady yearly increase in the number of students receiving all-Irish or part-Irish education. In post-primary schools, the percentage of students receiving education through Irish (about 10,000 students) rose steadily between 1996 and 2005, from 2.20 to 2.76 percent. This was due almost entirely to increases recorded in All-Irish schools, in both Gaeltacht and non-Gaeltacht areas, with the latter showing the stronger growth.

This is the general context in which the bonus for Irish has to be discussed. While our results cannot make any direct contribution to the broader debate, it is hoped that they have at least removed some of the most common misunderstandings about the bonus itself, and provided evidence on the LCE candidates who avail of it most and the difference it makes to their examination results.

REFERENCES

- CAO (Central Applications Office). (2007). Irish Leaving Certificate Examination Points Calculation Grid. At http://www2.cao.ie/app_scoring/lcegrid.htm.
- Commission on the Points System. (1999). *Final report and recommendations*. Dublin: Stationery Office.
- DES (Department of Education and Science). (2003). *Tuarascáil staitistiúil. Statistical report. 2001/2002*. Dublin: Stationery Office.
- Elwood, J., & Carlisle, K. (2003). *Examining gender: Gender and achievement in the Junior and Leaving Certificate Examinations 2000/2001*. Dublin: National Council for Curriculum and Assessment.
- Harris, J., Forde, P., Archer, P., Nic Fhearaile, S., & O’Gorman, M. (2006). *Irish in primary schools: Long-term national trends in achievement*. Dublin: Stationery Office.
- HEA (Higher Education Authority). (1999). *Submission to Commission on the Points System*. Dublin: Author.
- Johnson, R. K., & Swain, M. (Eds). (1997). *Immersion education: International perspectives*. New York: Cambridge University Press.
- Kellaghan, T., & Millar, D. (2003). *Grading in the Leaving Certificate Examination: A discussion paper*. Dublin: Educational Research Centre.
- Laplante, B., & Mac Aogáin, E. (Eds). (2001). French education in Canada. *Language Culture and Curriculum*. Whole Volume 14(2).

- Mac Aogáin, E. (2005). The points system and grading of the Leaving Certificate Examination. *Irish Journal of Education*, 36, 3-24.
- Messick, S. (1989). Validity. In R. Linn (Ed.), *Educational measurement* (3rd ed.; pp. 13-103). New York: American Council on Education/Macmillan.
- Millar, D., Farrell, E., & Kellaghan, T. (1998). *From Junior to Leaving Certificate: A longitudinal study of 1994 Junior Certificate Examination candidates who took the Leaving Certificate Examination in 1997*. Dublin: National Council for Curriculum and Assessment
- Millar, D., Kellaghan, T., & Mac Aogáin, E. (2006). *A study of the intended and achieved weights of components in the Leaving Certificate Examination*. Dublin: Educational Research Centre.
- Millar, D., & Kelly, D. (1999). *From Junior to Leaving Certificate: A longitudinal study of 1994 Junior Certificate Examination candidates who took the Leaving Certificate Examination in 1997. Final Report*. Dublin: National Council for Curriculum and Assessment.
- Minister backs bonus points system for maths and science. (2006). *Irish Times*, August 17.
- Ó Riagáin, P. (1997). *Language policy and social reproduction: Ireland 1893-1993*. Oxford: Clarendon Press.
- Ó Riagáin, P., & Ó Gliasáin, M. (1994). *National survey on languages 1993: Preliminary report*. Dublin: Institiúid Teangeolaíochta Éireann.
- State Examinations Commission. (2007). Bonus marks for Irish. At <http://www.examinations.ie/index.php?l=en&mc=ca&sc=im>