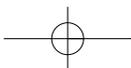
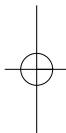
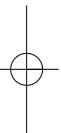


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Membership is open to those engaged in teaching, research or educational administration in accounting, finance or related disciplines and to those engaged in similar activities acceptable to the Council for membership purposes.

The Association now has members in virtually all third level colleges that employ accounting and finance academics in both Northern Ireland and the Republic of Ireland. The annual membership fee is €35/£25.

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All submissions that pass an initial editorial scrutiny will be subject to double-blind refereeing. Referees will be asked to assess papers on the basis of their relevance, originality, readability and quality (including, for empirical work, research design and execution). In determining relevance, the editors will be influenced by the Association's objectives; thus, papers reporting on empirical work will be viewed more favourably if they deal with data relevant to those working in Ireland. Similarly, papers that have previously formed the basis of a presentation at the Association's annual conference will be particularly welcomed.

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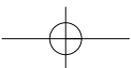
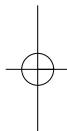
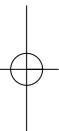
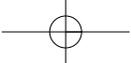
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COMMUNICATION APPREHENSION AMONG BUSINESS AND ACCOUNTING STUDENTS IN IRELAND

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and

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ABSTRACT

Communication apprehension (CA) refers to an individual's fear of oral and/or written communication. This paper explores CA among business and accounting students in Ireland, having first established the statistical validity and reliability of the measurement instruments for use in an Irish context. An analysis of the apprehension scores shows that the level of CA reported by the students in this study is lower than some research indicates elsewhere. Contrary to previous findings, the analysis fails to show any differences in the levels of CA reported by accounting compared to other business students. Gender differences are also explored.

INTRODUCTION

Good oral and written communication skills are critical for success in today's global, dynamic business world (Roebuck, Sigtler and Brush, 1995; Dearing, 1997; Messmer, 1999; Albrecht and Sack, 2000; International Federation of Accountants, 2003). Several empirical studies have highlighted the fact that employers place significant emphasis on communication skills in their hiring and promotion decisions (Deppe, Sonderegger, Stice, Clarke and Streuling, 1991; Maes, Weldy and Icenogle, 1997; Warnock and Curtis, 1997; Ulrich, Michenzi and Blouch, 2003). This has resulted in many business schools incorporating some

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form of communication skills development as part of their degree programmes (Ameen, Guffey and Jackson, 2000); however, often the desired improvement in students' communication competencies does not emerge (Fordham and Gabbin, 1996; Hassall, Joyce, Ottewill, Arquero and Donoso, 2000; Gardner, Milne, Stringer and Whiting, 2005). It is now recognised that the failure to develop appropriate communication skills may not be due to the quality of relevant education and training, but rather may result from students experiencing high levels of communication apprehension (CA). In fact, exposing students with high levels of CA to situations designed to improve their communication skills is likely to increase their anxiety and lessen their learning (Gardner et al., 2005). Consequently, Allen and Bourhis (1996) argue that it is necessary to reduce CA before communication skills can be improved.

If business and accounting academics are to be successful in designing intervention strategies that will develop students' communication capabilities, they will firstly need to gain an insight into the CA profiles of their students. Indeed, an understanding of the phenomenon of CA is fundamental to identifying appropriate strategies that will lead to a reduction in CA (Arquero, Hassall, Joyce and Donoso, 2007). While some research concerning CA of business and accounting students has been reported previously, little research of this type has been conducted in Ireland, despite the call for country-specific research which can evaluate CA within the relevant cultural context (Pryor, Butler and Boehringer, 2005; Arquero et al., 2007). Accordingly, the objective of this study is two-fold. Firstly, it tests the validity and reliability of two instruments, commonly employed to measure CA, for use in an Irish context. Secondly, it analyses the levels of oral and written CA reported among business and accounting students at a higher education institution in Ireland.

The remainder of the paper is structured as follows. The next section examines prior literature concerning communication apprehension generally and among business and accounting students specifically. The following section outlines the research objectives and the data collection process. The results are then presented and discussed and the paper concludes by presenting the limitations and considering the contribution of the study.

COMMUNICATION APPREHENSION

There are two general forms of communication apprehension, oral and written. Oral communication apprehension (OCA) is defined as an individual's level of fear or anxiety associated with either real or anticipated oral communication with another person or persons (McCroskey, 1978, 1984a). For an individual with high CA, the negative feelings about communicating outweigh the perceived benefits of communicating (Stanga and Ladd, 1990). Prior research has shown that OCA has an impact on such factors as occupational choice (Daly and McCroskey, 1975), recruitment decisions (Daly, Richmond and Leth, 1979; Ayers and Crosby, 1995; Warnock and Curtis, 1997), classroom seating decisions (Daly and Suite, 1982), job satisfaction (Falcione, McCroskey and Daly, 1977; Thomas, Tymon and Thomas, 1994) and academic performance (McCroskey and Andersen, 1976; Bourhis and Allen, 1992).

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Written communication apprehension (WCA) is described as a fear of writing (Daly, 1978). Students with high WCA tend to find the experience of writing more punishing than rewarding and thus they avoid the task (Faris, Golen and Lynch, 1999). Prior studies have reported that students with high levels of WCA are unlikely to enrol in programmes or modules requiring writing skills, perform poorly in written assignments, are likely to select careers perceived to have low writing requirements, and are also likely to have high OCA (Daly and Miller, 1975a; Daly, 1978).

Measuring Communication Apprehension

McCroskey (1984b) designed the Personal Report of Communication Apprehension (PRCA) questionnaire to measure OCA. This instrument has been described as the best available measure of OCA and has been extensively employed in a wide range of research studies (Simons, Higgins and Lowe, 1995; Richmond and McCroskey, 1998; Pitt, Berthon and Robson, 2000; Borzi and Mills, 2001). Since its original development the PRCA has been refined several times resulting in its current form, which is known as the PRCA-24. The PRCA-24 measures OCA in four communication settings: one-to-one communications (dyad), group situations, meetings and public speaking, and it is possible to derive a score for each setting as well as an overall measure of OCA. The instrument contains six statements for each of the four contexts and respondents indicate their agreement to each statement using a five-point Likert scale, from 1 = strongly agree to 5 = strongly disagree. Twelve statements are positively worded and twelve are negatively worded. The overall measure can range from 24 to 120. Prior research with 25,000 students in 52 colleges in the United States (US) has shown that this measure has a normal distribution with a mean of 65.6 (often referred to as the US national norm) and a standard deviation of 15.3 (McCroskey, 1984b). A student with a score one standard deviation beyond the mean (80.9 or higher) is regarded as highly apprehensive, while a student with a score of one standard deviation below the mean (50.3 or lower) is classified as having low OCA (Kelly and Watson, 1986).

Daly and Miller (1975b) developed the Written Communication Apprehension (WCA) questionnaire to measure anxiety towards writing. This instrument (WCA-26) consists of 26 statements, some of which are framed positively and some negatively. The responses are combined together to produce a single score for writing apprehension. In a study of 3,602 undergraduate students in the US, it was found that the mean score for WCA was 75.6 with a standard deviation of 13.35 (Daly, 1978), and these values have been considered a national norm for the US in some subsequent studies. In recent studies with accounting students in the United Kingdom (UK), Spain and New Zealand, a modified version of the instrument was used (which contains 24 items and is known as the WCA-24) (Hassall et al., 2000; Gardner et al., 2005). In completing the WCA-24 an individual responds to each statement using a five-point Likert scale, from 1 = strongly agree to 5 = strongly disagree. This results in a range of potential scores ranging from 24 to 120, with a projected mean of 72. A high score, typically over 80, indicates a high level of WCA and a score of less than 50 depicts a low level of WCA.

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Communication Apprehension among Business and Accounting Students

The increased emphasis on the importance of good communication skills in the business world has led to a number of researchers investigating the levels of CA among business students, with much of this research focusing on accounting students due to the ongoing accounting education change debate. In an early US study, Stanga and Ladd (1990) found that introductory accounting students had slightly above average levels of OCA compared to the national average. This finding was replicated by subsequent US studies and research conducted elsewhere (Simons et al., 1995 - US; Warnock and Curtis, 1997 - Ireland; Hassall et al., 2000 - UK and Spain; Gardner et al., 2005 - New Zealand; Arquero et al., 2007 - UK and Spain). However, some studies with final year accounting students showed that the students' levels of OCA were at or below the US norm (e.g. Ruchala and Hill, 1994; Fordham and Gabbin, 1996). Several researchers have also explored variations in the levels of OCA experienced by accounting students compared to those taking different business majors. In the US, Simons et al. (1995) found that accounting majors had higher OCA scores than other business majors and they had the highest scores in three of the four communication settings (group, meeting and public speaking). Similar findings have been reported with accounting students studying in the UK and Spain (Hassall et al., 2000; Arquero et al., 2007), and Ireland (Warnock, Currie and Curtis, 2005). In contrast, Borzi and Mills (2001) found that accounting majors at two US universities had significantly lower levels of OCA than non-accounting majors.

Studies exploring the impact of higher education on the levels of CA experienced by business and accounting students have yielded mixed results. In a US longitudinal study, Aly and Islam (2003) found no significant differences in the levels of OCA reported by students when beginning and completing accounting programmes. In another US study, Fordham and Gabbin (1996) concluded that the communication component of the curriculum alone was not successful in alleviating CA in students with above average levels of apprehension. Similarly, Gardner et al. (2005) found no significant differences in OCA between students in introductory, intermediate and advanced accounting courses at a New Zealand university. Hassall et al. (2000) also observed that students' OCA scores remained unchanged as they progressed through their degree programmes. In Ireland, Warnock et al. (2005) found that postgraduate accounting students exhibited very high scores for OCA at the start of their programme, but there was a significant reduction in their scores by the end of the programme, particularly in the area of public speaking.

Several studies have examined the link between levels of OCA and academic performance, but the findings have been inconclusive. Warnock and Curtis (1997) found no association between OCA and students' overall academic results. Gardner et al. (2005) also concluded that there was very little evidence of association between levels of oral apprehension and academic performance. However, the results of a study by Allen and Bourhis (1996) showed that high levels of OCA were related to lower academic achievement. Similarly, Arquero et al. (2007) reported a highly significant association between academic self-rating and OCA.

WCA has received far less attention than OCA within the business and accounting disciplines. Simons et al. (1995) found that business and accounting

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students were less apprehensive about writing than the US national norm (Daly, 1978), but that accounting majors were more apprehensive than other business majors. In another US study, Faris et al. (1999) also reported that accounting majors showed significantly greater WCA than non-accounting majors. In New Zealand, Gardner et al. (2005) found that first year accounting students reported much higher levels of WCA than other first year business students. They also identified a small but significant negative correlation between WCA and academic performance.

Communication Apprehension and Gender Differences

Prior research concerning the impact of gender on OCA has produced conflicting results. Some studies (McCroskey, 1984a; Elias, 1999) observed that female students have higher OCA than males whereas other researchers found no gender differences or, indeed, they report the opposite result (Daly and Stafford, 1984; Dwyer, 1998). This inconsistency in the findings has also been found in research with business and accounting students. Stanga and Ladd (1990) reported no differences in the levels of OCA between male and female accounting students. However, Simons et al. (1995) found that female accounting and management students were more apprehensive about oral communication (OC) than their male counterparts. Furthermore, when analysing the four communication settings they found that female students were significantly more apprehensive in meetings and public speaking situations than male students. Several other studies have also identified gender differences, with female students exhibiting significantly higher levels of OCA, especially in the areas of public speaking (presentations) and meetings (interviews) (Hassall et al., 2000; Gardner et al., 2005; Arquero et al., 2007).

In the case of WCA, some studies (Daly and Miller, 1975a; Riffe and Stacks, 1992; Elias, 1999) found that female students have lower WCA than male students, while other studies reported the opposite results or no gender differences (Cayton, 1990). Within the business and accounting disciplines, several studies have found that gender was not a significant variable in determining a student's WCA (Simons et al., 1995; Faris et al., 1999; Gardner et al., 2005; Arquero et al., 2007).

RESEARCH METHOD

Objectives of the Study

This paper explores communication apprehension among business and accounting students studying at an Irish higher education institution. Specifically, the objectives of this study are:

1. To test the validity of the PRCA-24 and the WCA-24 for use in an Irish context
2. To measure the levels of oral and written CA reported by first year business students and

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- to investigate variations in the levels of CA across the various business disciplines, with particular emphasis on accounting
- to identify any gender differences

In this study, accounting students are particularly identified as a subset of the full group of business students for two reasons. Firstly, the accounting education change debate, which has highlighted the need to enhance the non-technical skills of accounting students, has been raging for the past thirty years. Secondly, a large number of prior studies have either exclusively examined CA in accounting students or have isolated the performance of accounting students within studies concerning business students generally. Thus, there is a wide range of comparative data concerning CA of both business students (which includes accounting students) and accounting students separately.

Data Collection

To achieve the objectives of the study a questionnaire was designed consisting of three sections. The first section gathered information on gender and programme of study. Section two contained the PRCA-24 and the final section included the WCA-24. The questionnaire was distributed to first year business and accounting students at an Irish higher education institution. Prior to completing the questionnaire the purpose of the study was explained and the students were reassured that their individual responses were confidential and would only be used for research purposes.

Table 1 presents a breakdown of the sample and the usable response rate for each programme group. Of the total respondents, 57 per cent were male and 43 per cent were female. Given the high response rate, there is no reason to suspect non-response bias.

TABLE 1: POPULATION AND SAMPLE RESPONSE RATE

Programme of Study	Population	Responses	% Response
Accounting and Finance	34	34	100%
Business and Management	138	101	73%
Marketing	91	64	70%
Other Business ¹	112	83	74%
<i>Total</i>	375	282	75%

¹Students taking one of the following bachelor business degree programmes: Information Systems Development, Retail and Services Management, or Transport and Logistics.

RESULTS AND DISCUSSION

Factor Analysis and Reliability Analysis of the Instruments

Prior research has provided substantial evidence to support both the reliability and the construct validity of the PRCA-24 in the US and elsewhere (e.g. McCroskey, Beatty,

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Kearney and Plax, 1985; Levine and McCroskey, 1990). There have also been a small number of studies with business and accounting students that have confirmed the validity and the reliability of the instrument (Pitt et al., 2000; Gardner et al., 2005). Unlike the PRCA-24, the evidence on the statistical properties of the WCA instrument is mixed. Although Daly and Miller (1975a) strongly believe that it captures a single construct, several studies have provided evidence questioning the unidimensionality of the instrument (Burgoon and Hale, 1983; Shaver, 1990; Bline, Lowe, Meixner and Nouri, 2003). Studies testing the construct validity of the WCA instrument for use with accounting and business students are scarce (Bline et al., 2003). Gardner et al. (2005) is the only study conducted with business and accounting students that examined the statistical properties of the WCA-24. When a single factor model was imposed, Gardner et al. (2005) found that 20 items had loadings greater than 0.5 and that this model explained 37 per cent of the variance. Also, the Cronbach alpha value for the 24 items was 0.92.

The construct validity and the reliability of both PRCA-24 and WCA-24 have not been tested in any previous study for use in Ireland, thus it was necessary to conduct both factor analysis and tests concerning the internal consistency of scales. Initially, to ensure that it was appropriate to perform factor analysis on the data, a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was first calculated. The overall KMO for both the PRCA-24 and the WCA-24 was 0.93 and each variable had an anti-image correlation in excess of 0.82, indicating that each data set was suitable for factor analysis. The reliability of factor analysis is also dependent on an adequate sample, with a minimum of 200 cases recommended (Guilford, 1956; Gorsuch, 1983). Additionally, Bryant and Yarnold (1995) suggest that the case-to-variable ratio should be no lower than five. The sample in this study exceeds the minimum suggested by both of these criteria. Thus, factor analysis using maximum likelihood extraction was performed for both the PRCA-24 and the WCA-24. Given the anticipated correlation between the factors, the extracted factor matrix in both cases was rotated using an oblique rotation (direct oblimin) as this 'provides a more accurate and reliable representation of how constructs are likely to be related to one another' (Fabrigar, MacCallum, Wegener and Strahan, 1999, p. 282).

In the case of the PRCA-24 the factor analysis yielded four factors with an eigenvalue greater than one. The emerging four factors are those that were expected conceptually and can be clearly identified as relating to the four communication contexts: meetings, one-to-one, public speaking and groups. The full factor pattern is set out in Table 2, though only salient loadings – that is loadings in excess of 0.3 – are shown (Kline, 1994, p. 180). The four-factor solution on PRCA-24 explains 65.5 per cent of the variance, which is in line with values reported in other studies (Blue, Stratton, Donnelly, Nash and Schwartz, 1998; Pitt et al., 2000; Gardner et al., 2005). The primary loading of all 24 items is on the anticipated factors. Two items cross-load (items 6 and 9) but, as can be seen, the loading on the expected factor dominated the secondary loading for item 6, leaving item 9 as the only item which has not emerged as strongly as expected. To determine if the instrument provided one valid composite measure of OCA, a single factor solution was requested. The resulting solution explained 46.2 per cent of the variance, and all 24 items had loadings in excess of 0.50. This compares

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favourably to the findings of other studies that requested a single factor (Hutchinson, Neuliep and More, 1995; Gardner et al., 2005).

TABLE 2: FACTOR ANALYSIS OF PRCA-24 WITH FOUR EXTRACTED FACTORS

		Factor			
		I	II	III	IV
1	I dislike participating in group discussions*				0.550
2	Generally, I am comfortable while participating in group discussions				0.755
3	I am tense and nervous while participating in group discussions*				0.749
4	I like to get involved in group discussions				0.750
5	Engaging in a group discussion with new people makes me tense and nervous*				0.516
6	I am calm and relaxed while participating in group discussions	0.352			0.546
7	Generally, I am nervous when I have to participate in a meeting*	0.834			
8	Usually, I am comfortable when I have to participate in a meeting	0.897			
9	I am very calm and relaxed when I am called upon to express an opinion at a meeting	0.397		0.325	
10	I am afraid to express myself at meetings*	0.334			
11	Communicating at meetings usually makes me feel uncomfortable*	0.435			
12	I am very relaxed when answering questions at a meeting	0.476			
13	While participating in a conversation with a new acquaintance, I feel very nervous*		-0.588		
14	I have no fear of speaking up in conversations		-0.424		
15	Ordinarily I am very tense and nervous in conversations*		-0.922		
16	Ordinarily I am very calm and relaxed in conversations		-0.896		
17	While conversing with a new acquaintance, I feel very relaxed		-0.535		
18	I'm afraid to speak up in conversations*		-0.509		
19	I have no fear of giving a speech			0.712	
20	Certain parts of my body feel very tense and rigid while giving a speech*			0.672	
21	I feel relaxed while giving a speech			0.761	
22	My thoughts become confused and jumbled when I am giving a speech*			0.668	
23	I face the prospect of giving a speech with confidence			0.792	
24	While giving a speech, I get so nervous I forget facts I really know*			0.628	
<i>Cronbach Alpha Value</i>		0.90	0.87	0.87	0.88
<i>Cronbach Alpha Value for PRCA-24 (total)</i>		0.95			

* These items are reverse coded.

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Cronbach alpha values were then extracted to test the internal reliability of each of the scales associated with the four oral communication settings and the overall measure of OCA. As can be seen from Table 2, the alpha values for the four contexts range from 0.87 to 0.90 and the value for the global measure of OCA is 0.95. These values exceed the acceptable level of 0.7 (Nunnally and Berstein, 1994) and are similar to values reported in previous studies (Simons et al., 1995; Blue et al., 1998; Pitt et al., 2000; Gardner et al., 2005). Furthermore, the inter-correlations between the four communication settings range from 0.47 to 0.69, providing additional support for the internal consistency of the PRCA-24.

Given the conceptual underpinnings of the WCA instrument, a one-factor solution is commonly imposed. Table 3 shows the results for the one-factor WCA model in this study. Nineteen items have loadings greater than 0.5 and the loadings for the remaining five items ranged from 0.42 to 0.50. This model explained 39 per cent of the variance, which is slightly more than the variance explained by the one-factor model in the study by Gardner et al. (2005). The Cronbach alpha calculated on the 24 WCA items shows very high reliability with a value of 0.93,

TABLE 3: FACTOR ANALYSIS OF WCA-24 WITH ONE EXTRACTED FACTOR

		Factor I
1	I avoid writing*	0.509
2	I have no fear of my writing style being evaluated	0.498
3	I look forward to writing down my ideas	0.601
4	I prefer to answer numerical rather than essay questions*	0.421
5	I like to do written work	0.511
6	My mind seems to go blank when I start to write*	0.560
7	Expressing ideas through writing seems to be a waste of time*	0.557
8	I like to write my ideas down	0.513
9	I feel confident in my ability to clearly express my ideas in writing	0.767
10	I like to have my friends read what I have written	0.430
11	I'm nervous about writing*	0.619
12	People seem to appreciate what I write	0.603
13	I enjoy writing	0.720
14	I never seem to be able to clearly write down my ideas*	0.651
15	Writing is a lot of fun	0.499
16	I expect to do badly in courses that require written assignments*	0.709
17	I like seeing my thoughts on paper	0.556
18	Discussing my writing with others is an enjoyable experience	0.464
19	I have a terrible time organising my ideas when writing an essay*	0.589
20	When I have to write an essay I know I'm going to do poorly*	0.719
21	It's easy for me to write good essays	0.670
22	I don't think I write as well as most people*	0.667
23	I don't like my written work to be evaluated*	0.650
24	I'm no good at writing*	0.790
<i>Cronbach Alpha Value for WCA-24</i>		<i>0.93</i>

* These items are reverse coded.

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which is well above the acceptable value of 0.7 (Nunnally and Bernstein, 1994). Again, the results on the reliability of the single model are comparable to those reported by Gardner et al. (2005).

In summary, the foregoing validity and reliability analysis clearly illustrates that the PRCA-24 and WCA-24 can be confidently used to measure students' CA in an Irish setting.

Communication Apprehension Scores

Table 4 shows the overall mean scores and the standard deviations for both OCA and WCA for the full sample in comparison with the scores reported in prior studies with business students (including accounting students). Comparative data examining just the subset of accounting students are presented in Table 5. Both tables clearly show that the results for OCA and WCA for the full sample, and the accounting subset, are very similar to the findings reported in other studies. Unsurprisingly, public speaking is the oral communication context with the highest score, and students are typically most comfortable with one-to-one conversations. This pattern is consistent with the findings of most other studies (e.g. Simons et al., 1995; Gardner et al., 2005; Arquero et al., 2007)

While the findings in this study are similar to those found elsewhere, the variation in the scores of the accounting students compared to those reported in previous Irish research is noteworthy. Warnock and Curtis (1997) found that the undergraduate accounting students at an Irish university exhibited very high levels of OCA, with a score of 72.6. This is significantly higher ($p = 0.00$) than the value of 63.6 reported in the current study. This highly significant ($p = 0.00$) difference between the two studies is present for all four oral communication settings. One possible explanation for this disparity is perhaps that students today, compared to ten years earlier, have a better understanding of the importance of communication skills to a career in accounting and this is resulting in students with lower levels of CA now choosing accounting programmes, compared to previously.

One of the objectives of this study is to investigate if there is any variation in the levels of CA reported by students in different business disciplines and between males and females. Table 6 shows the mean scores for both oral and written CA by degree programme and by gender. To test for any significant differences between the programmes, and also to test for any gender differences, ANOVA (analysis of variance) tests were performed. Initially, a two-way ANOVA test was carried out to investigate any interaction between degree programme and gender on the measures of CA. No significant interaction was identified on any of the measures: group discussions ($p = 0.746$), meetings ($p = 0.815$), one-to-one ($p = 0.056$), public speaking ($p = 0.282$), OCA ($p = 0.197$) and WCA ($p = 0.366$). Thus, it was possible to explore the effects of degree programme and gender separately.

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TABLE 4: THE LEVELS OF CA FOR THE FULL SAMPLE OF BUSINESS STUDENTS

Study	Students	Country	Group	Meetings		One-to-One		Public Speaking		OCA		WCA			
				Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Current study Stanga and Ladd (1990)	Year 1 Business	Ireland		14.6	4.6	16.1	4.7	13.6	4.2	19.1	5.0	63.2	15.7	64.0	13.7
	Year 1 Business	US		15.0	4.6	16.0	4.6	14.2	4.0	18.8	5.2	64.1	15.9		
Simons et al. (1995)	Sophomores	US		15.3	5.3	16.2	5.1	14.2	4.5	19.1	5.7	64.8	16.8	67.8 ¹	18.0 ¹
Hutchison et al. (1995)	Undergrads & MBA	Australia		13.3	3.9	14.5	4.2	12.9	3.8	18.2	4.7	58.8	13.0		
Hutchison et al. (1995)	Undergrads	US		14.8	4.5	15.4	4.2	14.2	3.9	18.0	5.0	62.4	14.0		
Fordham and Gabbin (1996)	Year 1 Business	US										66.4	10.9		
Hassall et al. (2000)	Years 1–3 Business	UK		13.6		17.7 ²		13.3		19.3 ²		63.8 ²		62.4	
Hassall et al. (2000)	Years 1–3 Business	Spain		15.1		20.1 ²		13.0		19.9 ²		68.1 ²		64.2	
Gardner et al. (2005)	Year 1 Business	New Zealand		15.8	4.6	19.9 ²	4.0 ²	15.0	3.8	18.5 ²	5.0 ²	69.2 ²	14.4 ²	63.2	14.1
Arquero et al. (2007)	Non-accounting disciplines	UK		13.7		17.5 ²		13.3		19.2 ²		63.7 ²		62.5	
Arquero et al. (2007)	Non-accounting disciplines	Spain		14.6		18.6 ²		12.1		18.7 ²		64.0 ²			
US national norms	Miscellaneous	US		15.4	4.8	16.4	4.8	14.5	4.2	19.3	5.1	65.6	15.3	75.6 ¹	13.4 ¹

¹Used 26-item version of WCA instrument with a range of 26–130.

²In these studies the word 'interview' was used in place of 'meetings' and the word 'presentations' in place of 'public speaking'. Thus, the findings from these studies are not completely comparable.

TABLE 5: THE LEVELS OF CA FOR THE SUBSET OF ACCOUNTING STUDENTS

Study	Students	Country	Group		Meetings		One-to-One		Public Speaking		OCA		WCA	
			Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Current study Stanga and Ladd (1990)	Year 1	Ireland	14.6	4.3	16.5	4.2	13.9	4.2	18.6	4.6	63.6	14.4	66.1	14.6
Ruchala and Hill (1994)	Year 1	US	16.0	4.8	17.0	4.8	15.0	3.9	19.6	5.4	67.5	16.0		
Ruchala and Hill (1994)	Year 3 (pre-test)	US	14.7	2.5	16.5	3.3	14.1	4.5	17.8	5.8	63.0	14.1		
Simons et al. (1995)	Year 3 (post-test)	US	14.1	3.3	15.2	3.6	12.1	4.7	14.7	6.1	56.1	14.8		
Fordham and Gabbin (1996)	Sophomores	US	16.3	5.6	17.0	5.3	14.7	4.5	20.0	5.8	68.1	17.4	70.7 ¹	18.2 ¹
Fordham and Gabbin (1996)	Year 1	US									64.2	12.2		
Warnock and Curtis (1997)	Year 3	US									64.0	13.8		
Hassall et al. (2000)	Year 3	Ireland	18.1	5.3	18.9	4.7	14.6	3.6	21.0	4.3	72.6	15.5		
Gardner et al. (2005)	Years 1-3	UK	14.7		18.8 ²		15.0		19.0 ²		67.5 ²		67.7	
Gardner et al. (2005)	Year 1	New Zealand	15.8	4.1	18.2 ²	4.7 ²	15.0	4.7	19.5 ²	4.8 ²	68.5 ²	14.4 ²	68.5	13.3
Gardner et al. (2005)	Year 3	New Zealand	15.1	3.6	20.2 ²	4.2 ²	13.9	3.2	18.2 ²	5.2 ²	67.4 ²	11.4 ²	62.3	14.1
Arquero et al. (2007)	Years 1-3	New Zealand	15.7	4.0	19.2 ²	4.8 ²	15.0	4.0	19.2 ²	4.8 ²	68.4 ²	13.7 ²	68.0	13.4
Arquero et al. (2007)		UK	14.8	3.8	18.9 ²	4.7 ²	15.0	4.3	19.1 ²	4.7 ²	67.8 ²	13.4 ²	67.7	12.1
Arquero et al. (2007)		Spain	15.2	4.1	19.9 ²	4.4 ²	13.1	4.2	19.7 ²	4.6 ²	67.8 ²	12.6 ²	64.2	11.4
US national norms	Miscellaneous	US	15.4	4.8	16.4	4.8	14.5	4.2	19.3	5.1	65.6	15.3	75.6 ¹	13.4 ¹

¹Used 26-item version of WCA instrument with a range of 26-130.

²In these studies the word 'interview' was used in place of 'meetings' and the word 'presentations' in place of 'public speaking'. Thus, the findings from these studies are not completely comparable.

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The only significant difference between the scores for students on the various degree programmes was in the level of WCA. Tukey's post-hoc test revealed that the marketing students had a significantly lower score on WCA ($p = 0.03$) than the students on the other degree programmes. The low level of variation between the different groups is contrary to the results reported in most studies with business students (Stanga and Ladd, 1990; Arquero et al., 2007). In particular, prior studies have typically shown that accounting students are significantly more apprehensive than other business students (Stanga and Ladd, 1990; Simons et al., 1995; Arquero et al., 2007), but this was not found in the current study. While at first this surprised us, when we extracted and examined the grades achieved by the students in their Leaving Certificate English examination, which gives some measure of their previous communication competence, it was clear that the scores of the accounting students were not significantly different to the grades achieved by the students on the other programmes. It is also possible that there are other reasons which explain why the accounting students in this study have lower apprehension than accounting students in other studies. For example, the accounting students in this study take most of their classes separately from the other business students. The small class size of just 34 students may result in a more relaxed and supportive environment, thereby generating lower levels of apprehension than if they were in a larger class, which may have been the case in previous studies. Furthermore, in recent years the accounting profession in Ireland has noticeably

TABLE 6: MEAN CA SCORES BY DEGREE PROGRAMME AND BY GENDER

Programme	Gender	Group	Meetings	One-to-One	Public Speaking	OCA	WCA
Full Sample	Male	14.63	15.75	13.38	18.23	62.03	62.56
	Female	14.60	16.65	13.97	20.34	64.85	65.80
	Total	14.62	16.14	13.63	19.13	63.19	63.96
Accounting and Finance	Male	13.89	15.53	12.16	17.11	58.68	62.95
	Female	15.53	17.73	16.00	20.53	69.80	70.13
	Total	14.62	16.50	13.85	18.62	63.59	66.12
Business and Management	Male	15.10	15.93	13.42	17.85	62.05	60.61
	Female	15.18	16.67	14.67	21.18	67.63	66.72
	Total	15.13	16.22	13.90	19.15	64.21	62.99
Marketing	Male	13.76	15.03	13.03	18.45	61.18	60.79
	Female	13.69	15.45	12.48	19.00	59.76	60.23
	Total	13.72	15.25	12.75	18.74	60.46	60.50
Other Business ¹	Male	14.84	16.04	14.02	19.00	63.81	66.18
	Female	14.38	17.33	13.70	20.59	63.67	68.06
	Total	14.65	16.56	13.90	19.63	63.76	66.96

¹Students taking one of the following bachelor business degree programmes: Information Systems Development, Retail and Services Management, or Transport and Logistics.

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increased its level and type of advertising for the purposes of encouraging school leavers and graduates to consider accounting careers. There has been considerable emphasis on eliminating the traditional accountant's stereotype and portraying accounting as offering a business-focused career with great opportunity for success across sectors (e.g. Chartered Accountants Ireland (CAI) are using innovative radio and cinema advertisements). This may have resulted in attracting a broader set of students into accounting programmes.

With regard to gender differences, the analysis revealed significant differences in public speaking ($p = 0.000$). Consistent with the findings of other studies, female students exhibit significantly higher levels of anxiety in formal oral communication settings than their male counterparts (Simons et al., 1995; Hassall et al., 2000; Gardner et al., 2005; Arquero et al., 2007). There were no gender differences relating to WCA, which is also consistent with several prior studies (Simons et al., 1995; Faris et al., 1999; Gardner et al., 2005; Arquero et al., 2007).

To enrich the findings of the study, the data were analysed further by deriving a grouped frequency distribution for OCA and WCA scores (Table 7). Students were allocated to the high group if their CA score was greater than 80 and to the low group if their score was less than 50 (approximately 1 standard deviation above and below the widely accepted average norms for both 24-item versions of the instruments). The remaining students were classified as having average CA scores.

TABLE 7: FREQUENCY DISTRIBUTION OF THE OCA AND WCA SCORES

Programme	Level of CA	OCA		WCA	
		Number	%	Number	%
Full Sample	High >80	40	15	33	12
	Average 50–80	176	67	203	75
	Low <50	48	18	35	13
Accounting and Finance	High >80	5	15	5	15
	Average 50–80	22	64	25	73
	Low <50	7	21	4	12
Business and Management	High >80	18	18	10	10
	Average 50–80	63	65	75	76
	Low <50	17	17	14	14
Marketing	High >80	7	12	4	7
	Average 50–80	36	63	43	71
	Low <50	14	25	13	22
Other Business ¹	High >80	10	13	14	18
	Average 50–80	55	74	59	77
	Low <50	10	13	4	5

¹Students taking one of the following bachelor business degree programmes: Information Systems Development, Retail and Services Management, or Transport and Logistics.

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Table 7 shows that 15 per cent of the full sample report high OCA and 18 per cent report low OCA. These percentages are better than those anticipated by McCroskey (1984b), who stated that normally 16 per cent of the population are highly apprehensive and 16 per cent report very low apprehension. The percentage of students experiencing high OCA is also considerably lower than the percentage reported by Stanga and Ladd (1990), who found that 19 per cent of accounting students in their study were highly apprehensive. In the case of WCA, 12 per cent of the full sample experience high apprehension and 13 per cent report low apprehension. Interestingly, when the frequency analysis is examined by class group, the accounting students do not have the largest percentage in the high OCA or high WCA categories. This may indicate that, as contended previously when comparing the accounting students in this study to the earlier Irish research, the communication confidence of students attracted to accounting programmes may be changing.

It is reasonable to contend that this study has contributed to enhancing business educators' understanding of communication apprehension. Nonetheless, further research is needed to aid the development of appropriate strategies to address CA among students. In particular, there is a clear need to conduct qualitative research with students who have varying levels of CA in order to gain insights into the antecedents and facets of CA. Such qualitative studies could explore students' educational and social background, their prior communication experiences and their perceptions of communication situations and activities, and could also monitor their reactions to skills training and interventions.

CONCLUSIONS

This study has confirmed the validity and reliability of the PRCA-24 and the WCA-24 for the purposes of measuring both oral and written CA in an Irish setting. Additionally, the study has provided evidence of the level of both oral and written CA reported by students from a variety of business programmes at a higher education institution in Ireland. In terms of the interpretation of the results in comparison to those conducted in other countries, it is interesting to note that accounting students in this study did not report significantly different levels of apprehension compared to other business students and, indeed, reported scores that were typically lower than those of accounting students in other studies. This may mean that accounting educators and the profession in Ireland have successfully conveyed the message that a career in accounting involves high levels of both written and oral communication and is not a career for those who wish to avoid communication situations. In terms of exploring gender differences, this study, like many previous studies, reported higher levels of fear among female students regarding public speaking.

As with all research, this study has certain limitations. Firstly, the data were collected from only one higher education institution and thus care must be taken in drawing any general conclusions. Secondly, the study used self-report instruments to gather data on students' levels of CA. Although such instruments are very widely used they do suffer from the possibility that respondents may not accurately report their true views.

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In conclusion, this study has rigorously tested the validity and reliability of two common apprehension instruments for use in an Irish context. Furthermore, it has provided a useful insight into Irish students' levels of communication apprehension. In so doing, it provides a relevant benchmark for further Irish studies and for comparisons with studies conducted in other countries.

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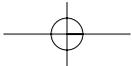
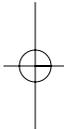
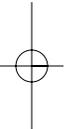
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AN EXPLORATION OF PERSONALITY EFFECTS IN RISK DECISION MAKING

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ABSTRACT

The notion of risk aversion provides an important starting point for mainstream theories relating to portfolio management and insurance purchasing. The current study uses prospect theory as a starting point for examining the role of personality effects, specifically risk propensity, in decision making. This personality construct emerges as an influencing factor on decisions when individuals are faced with potential gains. Conversely, the expectation of potential losses in a decision-making scenario reduces the influence of risk propensity in decision making.

INTRODUCTION

Conventional financial theory, as it relates to asset pricing and market efficiency, is concerned with aggregate responses to new information. Key theoretical developments such as modern portfolio theory and the capital asset pricing model (CAPM) rely on the assumption of a risk-averse investor who has the facility to rank assets according to a clearly defined risk–return tradeoff. As a result, individual personality differences have been largely ignored in mainstream financial theory. Over the past twenty years the effects of globalisation, improved technology and increasing leverage means that individual decisions and attitudes to risk can have major ripple effects. This is evidenced by several notable loss events that were initiated or aggravated by the characteristics of individual actors.¹ These events subsequently eliminated or crippled organisations and in some cases produced significant market volatility.

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The role of personality on risk decision making has been neglected in favour of the assumption that individuals exhibit a diminishing marginal utility associated with wealth. This changed somewhat when the doctrine of traditional utility theory was challenged in the experimental work carried out by Kahneman and Tversky (1974, 1979, 1981). They demonstrated that individuals very often preferred probable losses to certain losses. This behaviour was observed even though the expected magnitude of these losses exceeded certain losses. Individuals thus revealed a tendency to be risk seeking when presented with choices that would lead to losses. This experimental work clearly demonstrates the deficiencies of utility theory as a descriptive model of decision making under risk and encouraged further exploration of apparent violations of this traditional framework (Kahneman, Knetsch and Thaler, 1990; Rabin, 2000; Rabin and Thaler, 2001). Kahnemann and Tversky (1979) show that individuals exhibit 'the reflection effect', that is, they respond differently to the same problem depending on how it is framed.

An implicit assumption of prospect theory is that it is the positive or negative prospect that is presented to individuals that defines their subsequent choices. Individual differences in the form of personality characteristics are not considered as factors in the decision-making process. Furnham (1992) recognises that personality has different meanings that are dependent on the user's background or training. Psychologists take personality to mean the 'structure and dynamic inner processes' that individuals undertake as well as the 'stylistic consistencies in social behaviour' that emerge from an inner process (Furnham, 1992, p. 15). Within organisational behaviour research, Weiss and Adler (1984) note that variables such as self-esteem, self-actualisation and the fear of failure are identifiable personality factors on which theories of job motivation and performance rely. The use of psychometrics centres on the concept of trait theory, which proposes that people will usually behave in a certain manner dependant on their personality characteristics. According to trait theory, people behave consistently across situations and therefore it is possible to measure individuals' personality traits in myriad circumstances (Herriott, 1989). Social psychologists, such as Mischel (1968) and Schoemaker (1990), argue against this approach and propose that it is the situation that determines an individual's behaviour and not their personality. Slovic (1972) hypothesised that risk-taking propensity is discerned from a person's previous experiences, while Cho and Lee suggest that it be viewed as a 'behavioural tendency rather than a pure personality trait' (2006, p. 114).

By applying psychometric analysis, this study updates prospect theory to show that inherent traits influence decision making and these traits become dominant in certain external conditions. We show that when the prospect of positive outcomes is available, risk-taking behaviour becomes dominant. This supports empirical evidence for existing behavioural biases that contribute to asset price 'bubbles' as well as potentially risky strategies within credit rating agencies and investment banks regarding credit risk.

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METHODOLOGY AND RESULTS

In this paper, we adopt the experimental framework used by Kahneman and Tversky (1981), which presents individuals with economic outcomes and associated probabilities, framed in positive and negative contexts. Participants in our study also completed a psychometric test that evaluates their self-attributed risk propensity. The probability questions will provide an indication of the individual's risk propensity in an actual decision-making process and the results are overlaid with the responses to the psychometric questionnaire. This approach elicits the individual's self-reported risk preferences and allows comparison against their actual behaviour. The data reported were collected from a sample of 521 participants in an online simulated trading game.²

For the probability based questions a total of five problems were used. Three problems were positively framed and two were negatively framed. An example of a positively framed problem was the following:

Positive Prospect

For the following set of problems, please select which option you would prefer to take:

Take a bet that pays \$4,000 80 per cent of the time and \$0 20 per cent of the time?

Or

Take a bet that pays \$3,000 all the time?

Responses to a positively framed problem of this type provide an indication of the utility decisions of individuals when faced with potentially positive outcomes. The notion of diminishing marginal utility associated with wealth would predict that individuals are risk averse and will select the certain \$3,000 in all cases. The negatively framed probability questions explore decisions relating to loss aversion as defined by Kahnemann and Tversky (1981). An example of a negatively framed prospect is captured as follows:

Negative Prospect

For the following set of problems, please select which option you would prefer to take:

Take a bet in which you lose \$4,000 80 per cent of the time and \$0 20 per cent of the time?

Or

Take a bet in which you lose \$3,000 all the time?

The responses to all five prospect questions are reported in Table 1. We can see that the framing of the problem had a significant impact on the subjects' preferences. For all positive prospect problems, a substantial majority of respondents favoured the certain or more probable response. For Problem 1 56 per cent preferred the certain outcome, compared to a 44 per cent preference for the uncertain outcome. This compares to Kahnemann and Tversky's (1979) results of 80 per cent

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TABLE 1: RESPONSE TO POSITIVE AND NEGATIVE PROSPECTS

Positive Prospects		Negative Prospects	
Problem 1:	$(£4,000, 0.80) < (£3,000)^{\dagger}$	Problem 2:	$(-£4,000, 0.80) > (-£3,000)$
% Response	[44; 20] [56; 80] [‡]	% Response	[65; 92] [35; 8]
Problem 3:	$(£3,000, 0.90) >$ $(£6,000, 0.45)$	Problem 4:	$(-£3,000, 0.90) < (-£6,000, 0.45)$
% Response	[72; 86] [28; 14]	% Response	[32; 8] [68; 92]
Problem 5:	$(£3,000, 0.0002) <$ $(£6,000, 0.0001)$		
% Response	[35; 27] [65; 73]		

[†] This shows the responses in favour of the certain option (£3,000) over the uncertain option (80 per cent probability of winning £4,000).

[‡] Responses are summarised in percentage form. The first number in each bracket represents the results found in this study. The numbers in bold represent Kahneman and Tversky's (1979) original findings.

and 20 per cent respectively. Responses to Problems 2, 3, 4 and 5 match Kahneman and Tversky's (1979) findings more closely. That is, participants demonstrate risk aversion in the positive domain accompanied by risk seeking in the negative domain. Kahneman (2003, p. 702) suggests that although there is no substantial difference between the versions (positive or negative), 'they evidently evoke different associations and evaluations'. This reference to the inner processes of individual actions or behaviour recognises that there are individual differences. However, prospect theory relegates the influence of personality factors in decision making in favour of environment. McMartin (1995, p. 5) defines personality 'as a developing system of those distinctive emotional, cognitive and spiritual attributes that manifest themselves in the individual's characteristic behaviour at any point in the life course'. This interpretation of personality recognises that people's judgements and choices are not static but are developing and evolving through and in response to changing external conditions. The role of personality in decision making thus presents an ideal avenue to explore and extend the results originally proposed in prospect theory, which presented a more static and aggregated view of decision making.

Recognising that personality is an evolving, living process, participants in our study completed a psychometric test that consisted of a series of thirty-one questions. The test assessed five different personality constructs, namely, *Risk Taking*, *Risk Avoidance*, *Education*, *Math Ability* and *Competitiveness*.³ The two relevant constructs, *risk taking* and *risk avoidance*, were interspersed amongst the other constructs and both scales had ten associated questions. Table 2 summarises the descriptive statistics for *risk taking* and *risk aversion* scores.

Respondents were asked to consider a statement like 'Seek adventure' or 'Am willing to try anything once'. They were then required to assess, on a Likert-type scale, the appropriateness of this statement as a description of their own personality. Table 3 details the questions relating to risk propensity. The questions relating to *risk taking/risk aversion* personality constructs were drawn from the Jackson Personality Inventory and Tellegen's Multidimensional Personality

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TABLE 2: DESCRIPTIVE STATISTICS FOR RISK AVERSION AND RISK TAKING

	N	Minimum	Maximum	Mean	Standard Deviation
Risk Aversion	521	10	46	26.34	6.883
Risk Taking	521	14	48	34.14	6.188

Questionnaire (MPQ). The response to the two risk-related personality constructs, *risk taking* and *risk aversion*, are significantly negatively correlated ($p = -0.95$). The strong inverse relationship demonstrates the consistency of the responses produced by the questionnaire. Individual results on self-attributed risk propensity were overlaid on the 'prospect-style' risk choices that were separately selected by participants. Participants' scores for *risk taking* and *risk aversion* are respectively categorised into low, medium and high levels. For *risk aversion*, low scores ($N = 162$) ranged 10–22, medium scores ($N = 166$) 23–28 and high scores ($N = 193$) 29–46. For *risk taking*, low scores ($N = 181$) ranged 14–31, medium scores ($N = 174$) 32–37 and high scores ($N = 166$) 38–48. This method of sub-grouping was decided upon so as to split the groups as evenly as possible.

Furthermore, the actual risk choices undertaken by respondents are categorised as consistent with prospect theory and are labelled '*For*'. Conversely, responses that contradict prospect theory are categorised as '*Against*'. The results for Problem 1 are summarised in Table 3. Respondents identified as high-level risk takers exhibit low risk aversion in economic decisions that are positively framed. This result is statistically significant ($\chi^2 = 12.590$; $p < 0.01$) and it supports the notion of personality effects emerging under specific conditions. In the positive domain, those cautious participants in our sample more closely adhere to the risk-averse individual described in previous studies. Participants who score highly on the *risk aversion* construct will prefer the certain option in a positive prospect situation.

TABLE 3: A CROSS-TABULATION OF PROBLEM 1, A POSITIVE PROSPECT PROBLEM, WITH RISK TAKING

Positive Prospect Problem			Risk-Taking Propensity			
			Low	Medium	High	Total
Prob_1	Against	Count	61	82	86	229
		% within RT	33.7%	47.1%	51.8%	44.0%
	For	Count	120	92	80	292
		% within RT	66.3%	52.9%	48.2%	56.0%
Total		Count	181	174	166	521
		% within RT	100.0%	100.0%	100.0%	100.0%

* The value of Pearson's chi-square for this cross-tabulation is 12.590, with a 2-tailed significance level of $p = 0.002$.

** The weighting for this problem is 56 per cent *For* for the original findings and 44 per cent *Against*.

*** '% within RT' means for those participants who ranked their risk-taking propensity (RT) the percentage of those whose responses are consistent (*For*)/not consistent (*Against*) with prospect theory.

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The results from Problem 1 are reinforced by the results produced in Problem 3.⁴ These findings are distinct from the generalised results provided by Kahnemann and Tversky (1979, 1981), who note that all individuals, irrespective of their risk preferences, demonstrate a tendency towards risk aversion in the positive domain. These findings show that individuals are influenced by their risk preferences, thus creating a more nuanced interpretation of decision-making behaviour than that put forward by prospect theory.

The influence of personality effects in decision making is inconclusive when individuals are presented with potentially negative outcomes. The results for Problem 2 are not statistically significant ($X^2 = 1.209$; $p = 0.546$), thus indicating that the response selection does not consistently increase or decrease in accordance with a greater level of *risk taking*. According to prospect theory, individuals will demonstrate a tendency to seek risk in the negative domain. This indicates that when faced with the choice of a certain or a probable outcome, individuals tend to assume greater risk and choose the probable option, which offers the higher return. The results, reported in Table 4, indicate that this tendency will prevail irrespective of an individual's level of *risk taking*.

This is similarly evident in the *risk aversion* results, where the trend is also non-significant ($X^2 = 1.642$; $p = 0.440$). These results suggest that in the negative domain, an individual's personality is less of a factor in their decision making. This might imply that in the negative domain, situational factors are more prevalent than personality preferences. The results for Problem 4 are similar to the results for Problem 2.⁵ For Problems 1 and 3, the subjects' responses were significantly impacted by their risk preferences, evidence which supports a trait approach. For Problems 2 and 4, the results showed that instead of being influenced by their risk propensity, subjects showed a greater sensitivity to the presentation, thus supporting a state approach (one that identifies the external environment as the primary influence on decision making). The presence of *loss aversion* supports the results found for these problems, where it is considered that

TABLE 4: A CROSS-TABULATION OF PROBLEM 2, A NEGATIVE PROSPECT PROBLEM, WITH RISK TAKING

Negative Prospect Problem			Risk-Taking Propensity			
			Low	Medium	High	Total
Prob_2	Against	Count	68	56	56	180
		% within RT	37.6%	32.2%	33.7%	34.5%
	For	Count	113	118	110	341
		% within RT	62.4%	67.8%	66.3%	65.5%
Total		Count	181	174	166	521
		% within RT	100.0%	100.0%	100.0%	100.0%

* The value of Pearson's chi-square for this cross-tabulation is 1.209, at a non-significant level of $p = 0.546$.

** The weighting for this problem is 65% For the original findings and 34% Against.

*** '% within RT' means for those participants who ranked their risk-taking propensity (RT) the percentage of those whose responses are consistent (For)/not consistent (Against) with prospect theory.

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losses 'loomed larger' and, as a result, caused greater interference with the subject's decision making process.

Problem 5 is framed as a positive prospect problem that is designed to elicit participants' ability to rank low probability outcomes. In this context we find little relationship between the choices undertaken by participants and their self-attributed risk propensity ($X^2 = 3.013$; $p = 0.222$). Kahneman and Tversky (1979) proposed that in the situation where individuals are presented with the possibility of winning, but where it is not very probable, then they will be likely to choose the prospect that offers the larger gain. This is similar to Problems 2 and 4 (where the larger gain is more preferable), and might explain why there is not a significant influence exerted by risk preferences.

CONCLUSIONS

The success of prospect theory in exploring behaviour under alternating conditions has encouraged a move away from a rigid adherence to the traditional theoretical assumption of a risk-averse economic actor. Prospect theory presents the external context as a key driver in risk decision making. It thus provides an unexpected springboard for an examination of individual differences or traits in decision making.

In this paper, prospect theory provides a framework for the exploration of self-attributed risk propensity. The focus of this paper is the internal processes of individuals when required to undertake a choice with alternating prospects. Although the paper concerns itself with subjective interpretations of risk, we propose that it is appropriate 'to talk of individuals without individualising' (Loffe, 1999, p. 8). That is, our analysis of subjectivity is stable and can be extended beyond the sample population considered here.

The results shown in this paper support the notion that decision making is context-dependant, as demonstrated in prospect theory. However the new insight offered here is that it is not simply the framing of a problem that influences choice. Under specific conditions the inner processes of an individual are activated and become evident in the choices they make. We show that the positive framing of a problem allows high-level risk takers to be identified in their choices. Furthermore, personality effects become muted and difficult to observe in the choices made under negatively framed problems.

NOTES

- ¹ Some of the well-documented loss events that fall within this category include the \$7.2 billion loss at Société Générale (Jerome Kerviel), the £827 million loss at Barings Bank (Nick Leeson), the £557 million loss at Resona Holdings (Toshihide Iguchi), the \$2.6 billion loss at Sumitomo Corporation (Yasuo Hamanaka), the £350 million loss at Allied Irish Banks (John Rusnak) and the AU\$360 million loss at National Australia Bank (Luke Duffy).

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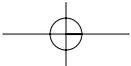
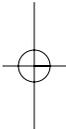
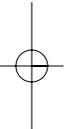
- ² Participants used in this study were registered traders on <www.bullbearings.co.uk>. Of the 521 sample, 459 were male with an average age of 27.93 years, while 62 were female with an average age of 29.03 years.
- ³ The psychometric questionnaire used in this research is validated by Goldberg et al. (2006) and is publicly available on <http://pip.ori.org/>.
- ⁴ Problem 3 is also a positive prospect problem and the results are similarly found to be statistically significant ($X^2 = 6.535$; $p < 0.05$). The results for *risk aversion* also return a significant trend ($X^2 = 6.727$; $p = 0.035$). Participants' propensity to select *For* is observed to increase as their *risk aversion* score increases.
- ⁵ The results for Problem 4 (also a negatively framed prospect) are not significant ($X^2 = 0.482$; $p = 0.786$). There is thus no observable trend in risk choices being related to the *risk taking* personality construct. The results for the *risk aversion* construct are similarly not significant ($X^2 = 0.972$; $p = 0.615$).

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HOW INFLUENTIAL ARE ACCOUNTANTS IN THE IMPLEMENTATION OF AN INTEGRATED SYSTEM? A CASE STUDY IN AN IRISH PUBLIC SECTOR ORGANISATION

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ABSTRACT

There is a dearth of literature on the implementation of integrated computerised systems in the public sector and the role of accountants in the implementation process. This paper explores the influence of accountants in the implementation of a centralised debtors system in an Irish public sector organisation. It reveals accountants as instrumental figures in the implementation and a strong contributing factor to its success. Their traditional skills in accounting and analysis, combined with their modern softer skills of communication, team-playing and leadership, their strong business acumen and their knowledge of technology, made them valuable members of the implementation team.

INTRODUCTION

An integrated system is one of the modern information technology approaches an organisation can use to improve its competitiveness by improving efficiency and delivering a better service to customers. Integrated systems have been widely adopted by organisations in the private sector and a mass of literature is available describing the different factors required to successfully implement integrated systems in that sector. However, their implementation is still a new phenomenon in the public sector, with very little written in academic journals (Kumar, Maheshwari and Kumar, 2002; Kavanagh and Hoekstra, 2004; Botta-Genoulaz

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and Millet, 2006). To quote Botta-Genoulaz and Millet, this is a 'new area' in the service sector and 'there is little theoretical research on the topic' (2006, p. 203).

Also very little has been written on the influence of accountants in the implementation of integrated systems. There is a limited amount of existing research on 'how opportunities are opened up' (Scapens and Jazayeri, 2003, p. 201) to accounting by the implementation of integrated systems. Granlund and Malmi (2002) examined the impacts which the introduction of integrated systems can be expected to have on management accounting. Subsequently, others have called for further research on the relationship between integrated systems and accountants' expertise (Hunton, 2002; Bhimani, 2003; Granlund and Mouritsen, 2003; El Sayed, 2006). O'Mahony and Doran describe integrated systems as 'one of the major contributors to the change in the role of the management accountant' (2008, p. 114). As well as this, Scapens and Jazayeri (2003) call for more case study research on the implementation of integrated systems. This study aims to instigate a discussion on the influence of accountants in the implementation of an integrated system in the public sector. The case study chosen is the implementation of an integrated centralised debtors system for the water service of a local authority in Ireland.

The format of the paper is as follows: the first section examines existing literature relating to this research. The main outcome of this section was the formation, from the available literature, of a critical success factors framework which is required to ensure the satisfactory implementation of an integrated system. The research design is then discussed. This is followed by a profile of the case study, namely the introduction of a new centralised debtors system for the water service of a county council. It depicts the tendering, development and implementation processes and the people involved at each stage. The final section analyses the information gathered and highlights the importance of the accountants' influence in each of the ten critical success factors as outlined in the study. It concludes that the influence of accountants in the implementation of an integrated system is as the role of leader, champion, team player, communicator and provider of information and business knowledge.

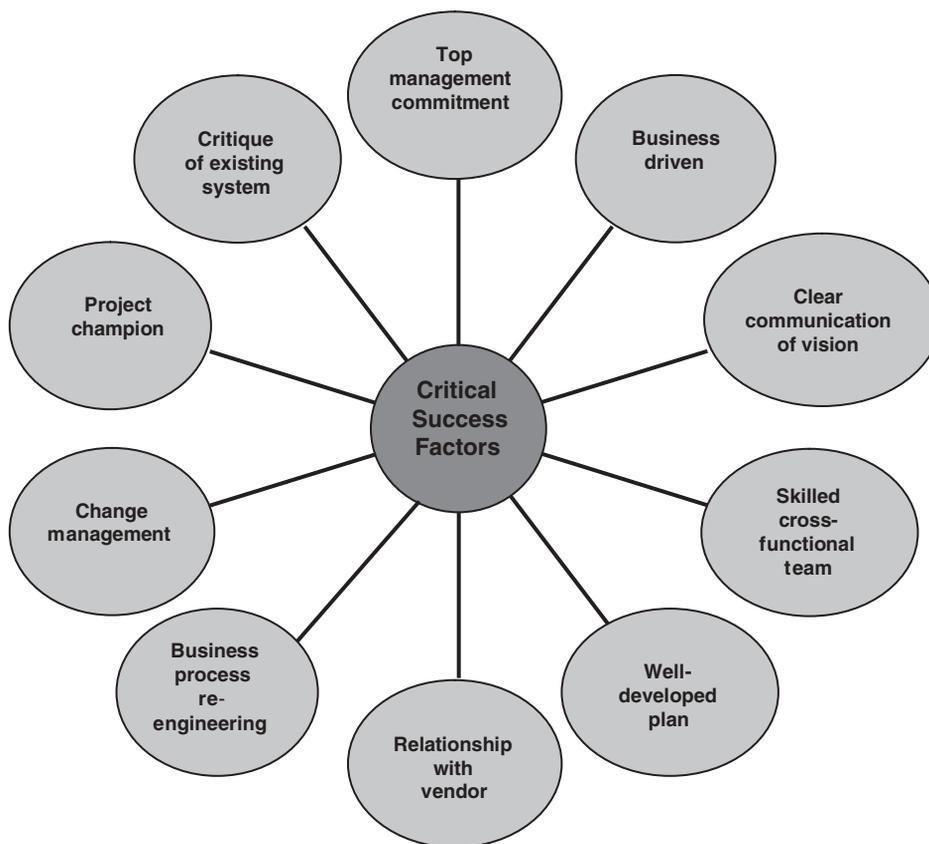
LITERATURE REVIEW

The information system of an organisation is integrated if the systems and databases used in the various units of an organisation are tied together into one overall system. Governments are wary of the risks and challenges that come with implementing integrated systems (Madden and Miranda, 1998). The Irish government spent millions on a health service payroll and personnel system (called PPARS) only to have it halted due to systems errors and huge escalating costs (Hunter, 2005). The Comptroller and Auditor General claimed that part of the reason for the failed system implementation was due to not properly defining the business needs of the health sector organisation. It is imperative that the organisation is aware of the risks and implications of implementing an integrated system. Some of the risks cited in existing literature are user acceptance, soaring costs, organisational change, project scope change, availability and retention of skilled people, integration with other legacy systems and the capability of the organisational infrastructure to contend with the new technology

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(Miranda, 1999; Umble and Umble, 2002; Botta-Genoulaz and Millet, 2006). Ten success factors, critical for the attainment of the benefits of an integrated system and the minimisation of the identified risks, were synthesised from the prior literature. They are outlined in the model presented in Figure 1. This model provides a useful framework to explore the main findings from this empirical research.

FIGURE 1: CRITICAL SUCCESS FACTORS FOR A SUCCESSFUL IMPLEMENTATION OF AN INTEGRATED SYSTEM



Top Management Commitment

The enormous process of integration can only be achieved if top management give the project priority. This top management support strengthens the commitment of all employees in the enterprise (Bingi, Sharma and Godla, 1999; Gurd, Smith and Swaffer, 2002; Nah, Zuckweiler and Lee-Shang Lau, 2003). As a demonstration of this commitment, top management must be seen to allocate the necessary resources, such as time, money and personnel, to the project (Gurd et al., 2002;

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Nah et al., 2003; Nah and Delgado, 2006). The commitment of top 'finance' management is not very well researched. However, it is recognised that in organisations where the accountants and the rest of the management team share a view of the importance of the involvement of the accountants, the role of the accountants in change management is maximised. These organisations should ensure that they recruit accountants with a broad base of business and technical skills (Chenhall and Langfield-Smith, 1998; Caglio, 2003; Dempsey and Vance, 2006).

Business Driven

If an organisation installs an enterprise resource system (ERP) system without looking at its impact on the way the business operates, 'the dream of integration can quickly turn into a nightmare', according to Davenport (1998, p. 122). Therefore, as well as being technology driven, it is essential to the success of the project that it is business driven (Shanks, Parr, Hu, Thanasankit and Seddon, 2000; Nah and Delgado, 2006). The physical location of the accountants comes into play here as well. If accountants are located out in the units that they service then they have a better chance of acquiring both 'a good understanding of the business' and 'the confidence of managers' (Pierce and O'Dea, 2003, p. 279). This allows the accountants to become a key part of the team required to drive change.

Clear Communication of the Vision

Clear communication of the business vision is critical to ensuring all individuals within the organisation understand how their activities support the organisational goals, or else they will not understand why the integrated system is being implemented (Legare, 2002; Nah and Delgado, 2006). Communication should be open and honest with employees knowing that any feedback they provide regarding the integrated system will be managed and acted upon (Nah et al., 2003; Loh and Koh, 2004; Nah and Delgado, 2006). Accountants are often seen as the best people to present analytical information and update users and management on the plans for how the organisation will function in the future.

Skilled Cross-Functional Team

The project team should be a skilled cross-functional team with a healthy balance of involvement by top management, technologists and users (Kumar et al., 2002). They should be familiar with the business functions and products, so that they have the ability to make decisions and to rethink business processes in order to improve the current system (Umble and Umble, 2002; Loh and Koh, 2004). When new systems are introduced, accountants play a very important role liaising between the users and the computer specialists (Tsay, 1992). Accountants today need skills and knowledge that allow them to work as multi-disciplined

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managers across organisations, communicating winning strategies and controlling implementation and performance (Allott, Weymouth and Claret, 2001). If they have these skills they will be an important part of a 'change' team.

Well-Developed Plan

If a well-developed work and resource plan does not precede a new system's implementation, the implementation costs can soar and the implementation period can run on for much longer than anticipated (Miranda, 1999; Davenport, 2000; Legare, 2002; Scapens and Jazayeri, 2003). Research has found that implementation times can vary from six months to four years (Motwani, Subramanian and Gopalakrishna, 2005). The accountants' knowledge of planning and control, along with their positioning on-site with the users, means that the accountants can help progress the project, meet deadlines and finally assist in training.

Close Working Relationship with the Vendor

A close working relationship between the vendors, consultants and project teams is also vital for information sharing and the successful implementation of an integrated system (Holland and Light, 1999; Nah et al., 2003; Nah and Delgado, 2006). The project team should include a good mix of internal staff and external consultants. The accountants can liaise with the vendor in an effective manner. They are often the people who can best express to the vendor the requirements of the end users (Carswell, 2002).

Business Process Re-Engineering

The business process re-engineering factor involves identifying the organisation's business processes that add value to the organisation's activities (Manganelli and Klein, 1994; Halachmi and Bovaird, 1997). According to some researchers, a company that implements an integrated system must largely accept the suppliers' assumptions about management philosophy and business practices and the company must reengineer existing processes and procedures to conform to those assumptions (Umble and Umble, 2002; Scapens and Jazayeri, 2003). However, other researchers argue that if all competitors adopt the same integrated systems they will theoretically have the same business processes and best business practices (Davenport, 1998; Doran and Walsh, 2004; Rikhardsson and Kraemmergaard, 2006).

Change Management

It has been found that change management is essential during a systems implementation and that during the change period formal training and education

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should be provided to help users understand how their job roles may be changed with the new integrated system (Umble and Umble, 2002; Loh and Koh, 2004; Nah and Delgado, 2006). Also, a help desk or online user manual should be available (Nah et al., 2003; Loh and Koh, 2004; Nah and Delgado, 2006). According to the extant literature, accountants play a key role in ensuring that the users understand their job roles and get a system they need (Allott et al., 2001).

Project Champion

The project champion is critical to drive consensus and to oversee the entire life cycle of the implementation (Loh and Koh, 2004; Motwani et al., 2005; Nah and Delgado, 2006). Some accountants do not view championing projects as part of their role; they consider their role to be that of managing traditional finance functions (Chenhall and Langfield-Smith, 1998). However, others wish to move away from the traditional accounting roles and start 'leading the agenda' (Dempsey and Vance, 2006, p. 37). Adam and O'Doherty (2000) found that out of fourteen firms they surveyed that were implementing ERP systems, nine were headed and championed by either a financial director, a controller or an accountant. In a survey carried out by Doran and Walsh (2004), over 70 per cent of respondents held the title of Financial Controller/Financial Accountant, who, in line with other researchers' suggestions, 'may have been the ERP project champions in their organisations' (Doran and Walsh, 2004, p. 31). Other case studies also indicated that the finance department was the main initiator of new information systems (Bingi et al., 1999; Hyvonen, 2003; Motwani et al., 2005).

Critique of Existing System

The more complex the current information technology (IT) architecture, the more organisational and technological change required for the new integrated system. By examining the existing legacy systems of an organisation, some of the potential problems of the new system can be predetermined. This feed forward information will minimise any reconfiguration at a later stage (Holland and Light, 1999; Nah and Delgado, 2006). The accountants can play an influential role in documenting and highlighting the problems of the existing systems and in providing business solutions to overcome these problems. These ten 'critical success factors' were used as the framework for the case study examined in this paper.

RESEARCH APPROACH

One of the researchers was working in the council when the need to implement a new integrated system was announced. The researchers decided to use this opportunity to carry out an extensive exploratory piece of research on the influence of accountants in the implementation of an integrated system in the public

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sector. Multiple sources of evidence were gathered by participation, observation, interview and document review. Both semi-structured and unstructured interviews were carried out. The unstructured interviews involved meetings with various people throughout the organisation, while the four semi-structured interviews were carried out with those directly involved in the project: the head of finance, the senior executive officer (SEO) of finance, the SEO of information communication technology (ICT) and the financial accountant. Throughout the interviews open-ended questions were used, allowing the interviewees to expand their opinions about events. These interviews were taped and transcribed in full. The researchers had access to internal documents, such as tender documents, e-mails, minutes of meetings, proposals, progress reports, presentations, CD-ROMs and training manuals.

CASE STUDY

The remit of the county councils and city councils in Ireland is to supply water and sewage facilities, housing, roads, planning, public libraries and fire services in their area. Each county council and city council is headed by the county or city manager. The county council used as a case in this study is divided into three divisions: north, south and west. These are supported by service directorates: personnel, finance, ICT, corporate affairs, and estates and economic development. Each of these service directorates has a head of department to which a senior executive officer (SEO) reports. This case study focuses on the implementation of a centralised debtors system for the water service of a county council. Prior to the centralisation of the council's debtors, the council operated the debtors legacy systems and JD Edwards (JDE) financial management system. The debtors legacy systems held all the customers' details while JDE was used to produce the annual financial statements. Despite JDE being an ERP system, the debtors legacy systems were not interfaced with the JDE Accounts Receivable (AR) module. The reason given for this was the limited functionality of JDE AR.

The finance department completed a needs assessment at the end of 2005. It revealed three major deficiencies. Firstly, the existing debtors legacy systems were becoming dated and no longer provided enough information for management or customers' purposes. Secondly, the lack of integration led to information reconciliation problems at month-end. Thirdly, the debtors legacy systems operated at a divisional level as opposed to an overall organisational level. To prepare a county-wide report, the reports from the three individual divisions would also have to be collated by the financial accountants. All of these issues drove the need for a new integrated centralised system.

The needs assessment provided the council with a clearer vision of what it required from a new system. The next step was to identify and evaluate possible solutions. Four solutions were identified. The first possible solution identified was to outsource all the billing and receipting of water to an external contractor. This was rejected as the council was anxious to modernise its debtors systems for all streams of income and by doing it in-house for one stream of income this would

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make it easier and cheaper to subsequently include the other streams. The second option was to transfer the water debtors legacy systems over to the accounts receivable (AR) module of JDE. However, the functionality of the JDE AR module was inferior to that of the current debtors legacy systems. The financial accountant stated that:

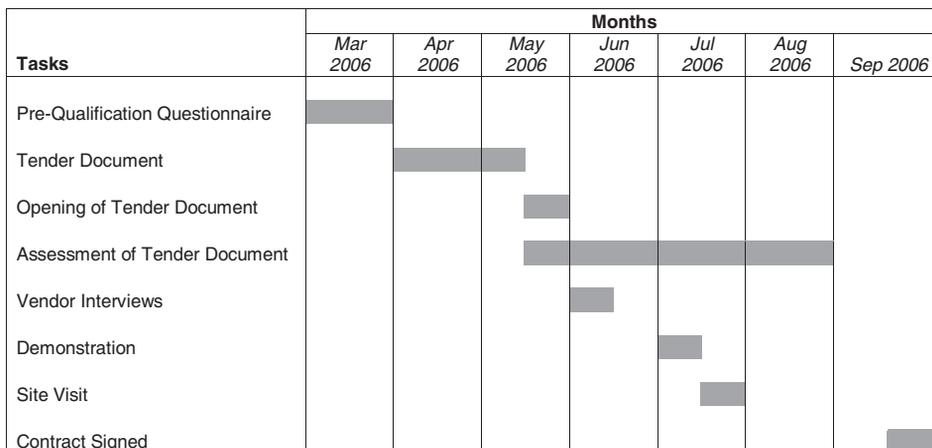
The JDE AR module was not selected because it was not appropriate; the functionality of AR was not sufficient or robust enough to support an Irish local authority without considerable and costly modifications. It was more suited to routine billing of a private company.

The third option identified was to interface the existing debtors legacy systems with the JDE General Ledger (GL). However, this would not address the inadequacies in the debtors legacy systems that would need to be addressed. Interfaces would also have to be built into the JDE GL. It was felt that this investment would not be worth the cost involved and other options might have better functionality. The fourth option, and the solution which was decided upon, was to implement a centralised billing and receipting system known as the centralised debtors system. This would replace the three existing debtors legacy systems and would be interfaced with the JDE financial management system. As well as being the most efficient and cost effective solution, it was also seen as part of a modernisation agenda for the council.

The council then had to tender, procure and implement a robust centralised debtors system. A timeline (set out in Figure 2) was established for the tender and procurement process.

The formal tenders were assessed by the tender assessment team, consisting of a finance officer, three accountants and two IT specialists. Upon completion of this assessment the decision was made to award the contract to "A". The centralised debtors system was to be up and running eight months later.

FIGURE 2: THE COUNTY COUNCIL'S TENDERING PROCESS TIMELINE CHART



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Once the contract with "A" was finalised, a steering committee and a project team were established. The steering committee, comprising of the head of finance, the head of ICT and the general manager of "A", agreed project schedules and also agreed to resolve any critical issues that arose during the lifetime of the project. The project team was headed by two project leaders – the SEO (Finance) and SEO (ICT) – and was a multi-functional team consisting of ICT staff, a financial accountant, a contract accountant and a user of the debtors legacy systems. According to the SEO (ICT), 'the experience of each of these project members was required'. The remit of the project team was to liaise with the implementation and development team from "A". It would manage the project on a day-to-day basis and report regularly to the steering committee.

"A" created the project initiation document, which it distributed to the steering committee and the project leaders. This document described the proposed centralised debtors system as a centralised system comprising the following software modules: sales ledger, cash management, e-receipts and a water billing system. These modules would be fully integrated and interfaced with the JDE GL module. The water billing system would be tailored specifically for the complexity of water billing in the council. This document was approved by the head of finance before the detailed project plan covering all the projects activities was produced by "A". This outlined the project's key stages as system design, interfaces, configuration, training, functionality and user acceptance testing, data conversion testing and live build, and go live system. It also presented a timeline for these key stages (see Figure 3).

Familiarisation meetings were held between the "A" team and the relevant members of the council's project team. "A" specifically requested to meet the accountants to get an understanding of the JDE chart of accounts and water service accounting procedures. The council's ICT department ordered the required servers. "A" commenced server configuration and installed the server operating system. "A" did all the testing required and once it and the project team were satisfied that there were no problems, the hardware and software were put in place and the training commenced.

FIGURE 3: THE COUNTY COUNCIL'S IMPLEMENTATION TIMELINE CHART

Stages	Months										
	Sep 2006	Oct 2006	Nov 2006	Dec 2006	Jan 2007	Feb 2007	Mar 2007	Apr 2007	May 2007		
System Design & Interfaces	[Bar spanning from Sep 2006 to May 2007]										
System Configuration			[Bar spanning from Nov 2006 to Feb 2007]								
Training				[Bar]		[Bar]			[Bar]		
Functionality and User Testing								[Bar]	[Bar]		
Conversion Testing and Live Build						[Bar]	[Bar]	[Bar]	[Bar]		
Go Live										[Bar]	

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User training in the council was based on 'train-the-trainers'. The SEO (Finance) selected two people – the manager of the new centralised debtors system and a finance clerk – to be trained as trainers. "A" came on-site over eight weeks and trained the project team members and the two trainers. The trainers, with the assistance of the accountants, subsequently trained the users in the finance department and divisions. "A" provided end-user training materials during the training sessions. The trainers and the accountants also produced their own user manual, which was placed on the council's shared server. After training was completed, functionality and user acceptance testing commenced. The accountant and the centralised debtors system users carried out a number of tests on the system to ensure it met the council's requirements for billing and receipting procedures. The accountant subsequently tested the interface between the centralised debtors system and JDE GL. The results were all found to be satisfactory.

When the debtors legacy systems were closed for the year ended 2006, the accountants gave the closing debtors' balances to "A", who transferred them into the live centralised debtors system. The accountants confirmed that the figures in the live centralised debtors system agreed with the closing figures recorded on the annual financial statements for 2006. The receipts for early 2007 were recorded on the old debtors legacy system initially and transferred to the centralised debtors system in March 2007. This transfer was again done once the accountants had agreed that the receipts recorded on the debtors legacy system agreed with the receipts recorded on the JDE GL. Eventually all the data were converted to the live centralised debtors system. The council's accountants, ICT personnel and key users tested the functionality, accuracy and interfaces of the centralised debtors system. They were satisfied that the system met the organisation's needs and was ready to 'go live'. The system went live and issued its first set of water bills in May 2007. The future vision of the council is to consolidate the multiple debtors legacy systems that exist for its other services into the single centralised debtors system and also to allow the public to view their accounts and pay their water bills online.

FINDINGS FROM THE CASE RESEARCH

The main findings described below from the empirical research are examined with respect to the ten critical success factors in Figure 1, focusing mainly on where and how the accountants influenced each of these factors.

Amongst others, Nah et al. (2003) and Nah and Delgado (2006) stress the importance of top management commitment in the process of integration. In this case study, top management commitment was evident throughout the implementation process. The interviewees talked about the availability of monetary support; more importantly, they saw the provision of human resources from ICT and finance as the ultimate confirmation of the commitment of management to this project:

Top management supported the project and assisted by making key ICT and finance staff available. This project was always given priority.
(Financial accountant)

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This provision of key personnel, particularly from ICT and finance, helped build and maintain the priority of the project throughout the organisation.

In their research, Davenport (1998), Miranda (1999) and Motwani et al. (2005) emphasise the need for integrated systems implementations to be business driven. It is clear from this research that the case for this new centralised debtors system was not just 'technology' or 'accounting' driven, it was 'business' driven. The head of finance described the project as part of 'the modernisation phase within the council'. He believed it was critical to improving customer service and becoming more efficient. The council, in its wish to be viewed as a modern service provider, wanted its customers to be able to make payments online and view their accounts online. As a result, collection levels and customer credit ratings would be improved. The head of finance was responsible for developing the business case for the new system and communicating it to the various management levels within the organisation. Pierce and O'Dea (2003) note that moving the accountants out of the back office and into the business units improves the business acumen of the accountants. One of the significant advantages for the council in the implementation process was the physical relocation of the accounting team out of the finance office and into the business divisions for a portion of each week. The accountants assisted the divisions with financial accounting queries and in return gained valuable knowledge of the business, its problems and its information requirements. The head of finance claims that the council's accountants successfully 'used this business acumen to establish where the project should be going and they were and are viewed within the council as being business-oriented'.

According to Legare (2002), clear communication of any new vision or plan is needed from the beginning and throughout the implementation period. Communication of the business vision of the new centralised debtors system was ongoing in the council and it was mainly carried out through meetings, e-mails, presentations and training of key users. Clear communication of individuals' roles and responsibilities were communicated by the SEO (Finance) and SEO (ICT) to the specific individuals concerned. This ensured that each individual clearly understood their tasks in order to achieve the project's objective of a successfully implemented centralised debtors system. It was the responsibility of the head of finance to communicate the vision of the project to management at regular management meetings. He explained why the council was implementing the new system, described the solution that was selected and its benefits and explained how the council was going to implement it. These presentations won and maintained the support of the management team throughout the systems implementation. The users of the debtors legacy systems were initially resistant to change. According to the SEO (Finance), 'they were quite happy with the systems they had, as they did what they wanted them to do'. The head of finance was instrumental in overcoming this resistance. He explained that the debtors legacy systems did not meet organisational objectives and that the new centralised debtors system would actually free up some of their time to focus on other aspects of their jobs. The business vision was further successfully communicated to users by the accountants during the set-up and training of the new system. It was also the accountants who communicated to the vendors, in a way that they understood,

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the requirements of the new system. This was especially apparent during the systems design and interface implementation stage of the project where the accountants described the billing, receipting and financial reporting requirements of the new system. The need for interpersonal skills, communication skills and knowledge of technological terminology and capability by the accountants were a necessity in doing this and, according to the head of finance:

Communicating to the vendors, in an understandable manner, meant that the excellent communication skills of the accountants were essential to ensuring the success of this project.

The business vision was communicated clearly to the organisation's staff and vendor by the head of finance, the SEO (Finance) and the accountants. The accountants, using their communication skills and close working relationship with the clerical officers in the council, were a vital force in communicating the council's new business vision.

Prior research findings have clearly indicated that successful integrated systems have been implemented by cross-functional and multi-skilled teams (Davenport, 2000; Kumar et al., 2002). The council's project leaders and members were selected because their range of skills and history as strong players in previous 'change' projects made them valuable assets. To quote the head of finance:

The individuals involved had the skills and vision to be able to deliver the integrated billing and receipting system. They were highly motivated and goals- and objectives-focused. They had also delivered in the past on previous county council projects.

The accountants provided the other members of the team with all the financial requirements, such as GL codes on JDE for debtors, bank and income. To do this they had to understand the technology issues. As trainers of the new system, the accountants were also required to have good communication and technological skills. The head of finance said:

The accountants were not expected to be programming gurus but they needed to understand how the systems could work and what they could and could not do.

When the original JDE financial management system was implemented the accountants were not involved, as it was seen to be a purely technological driven project. The consequence of this, according to the head of finance, was that the council spent 'many years having to backtrack, having to balance accounts and making it do what the accountants needed it to do'.

Legare (2002) believes that a well-developed work and resource plan is essential. In this study, the project initiation document was prepared by the vendors and signed by the head of finance. A detailed project plan was prepared by the project team and the vendor. It clearly outlined individuals' roles and time deadlines. According to the head of finance:

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It outlined the key objectives and goals and the realistic but challenging time scales which to date were met throughout the project.

Progress on the project was reviewed by the project team at weekly meetings and through e-mails and phone calls. The weekly meetings were chaired by the SEO (Finance) and SEO (ICT). They highlighted where individual departments were not meeting their targets. Immediate resolution of any unmet targets was required. Without this process it may not have been a success. The accountants provided the opening water debtors figure for the new centralised debtors system. To do this the accountants worked closely with the three divisions (north, south and west), setting up weekly timetables to be adhered to and carrying out site visits to ensure the debtors legacy systems at the previous year end were closed in a timely manner for the transfer of the water debtors data to the new centralised debtors system. This highlights the importance of the accountants' planning and control skills, along with their position within the organisation, in preparing project plans and monitoring progress. The project team followed well-developed work and resource plans that were drawn up by the project leaders, the accountants and the vendor. They met weekly to ensure these plans were being adhered to. The accountants were key players in the planning and control of the time and money invested in this project.

Holland and Light (1999), Nah et al. (2003) and Nah and Delgado (2006) emphasise the value of a good working relationship with the vendor of the new system. The council recognised this in its tendering and selection process. It required a vendor that could deliver the proposed complex solution. The financial accountant said:

It was crucial for us that it wasn't an 'us and them' solution, it had to be a partnership.

Due to the selected vendor's unique local authority expertise, the level of cooperation throughout the project was first class. Any key requirements that were not specified in the beginning were incorporated into the solution by the vendor at no extra cost within the scope of the original agreement. The vendor viewed the council as an important customer, not just for this project, but also potentially for the future. It saw this as an opportunity to improve its reputation as a systems specialist in the public sector market. The vendor was available to the council by telephone or e-mail when required. It carried out on-site visits and provided on-site training. It was also present to help the accountants with the testing of the new centralised debtors system. According to the financial accountant:

The close working relationship was evident from the availability of vendor personnel during specification/workshop days, together with their availability to answer any concerns on a daily basis to personnel of the council where necessary.

Carswell (2002) stated that accountants are often best positioned to liaise with the vendor. This study confirms this statement as the accountants and the SEO

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(Finance) played a major role in passing the information requirements of the key users onto the vendor. According to the head of finance:

If the accountants have a business sense and know the business requirement from the project, then they can be fantastic middlemen explaining to both the vendor and users in layman's terms the solution to the problem.

The accountants clearly explained the water billing and receipting rules to the vendor. It is clear that the close working relationship built by the accountants with the vendor had an impact on the success of the implementation of the system. The head of finance said:

The council needed to look at the ways in which a centralised debtors system could improve its processes. An external vendor could not do this on their own, so it was vital that the accountants, because of their knowledge of the legacy systems, created and maintained a good relationship with the vendor.

Manganelli and Klein (1994) and Halachmi and Bovaird (1997) believe that in order to implement a new integrated system the organisation needs to clearly identify the business processes that add value to its activities. In this study, the accountants' review of the billing and receipting procedures brought to light the non-value-adding activities. By designing a centralised debtors system within the finance department, separate billing and receipting processes carried out in the divisions were eliminated. One standardised method of billing and a set number of standard payment method options were established. The accountants played a major role in the redesign of business processes due to the knowledge and expertise they had acquired from working on-site with the council staff.

All of the literature examined stressed the need for adequate change management (for example, Umble and Umble, 2002; Loh and Koh, 2004; Nah and Delgado, 2006). The changes that came about with the implementation of the new centralised debtors system in the council were managed by the project team. The SEO (ICT) and SEO (Finance) documented the possible risks that could have occurred during the implementation of the system on the centralised debtors system risk register. Some of the risks identified were member(s) of the project team leaving the project team, internal staff resources not being available, a reduction in senior level commitment to the project, delays in developing interfaces, a failure to communicate effectively with local offices, inaccurate information being exchanged between the old system and the new system, user acceptance, testing delays and ICT issues. They then identified possible courses of action, should any of these events occur. A wide range of staff were also trained. This reduced the risk of losing key knowledge if key staff members were to leave. The SEO (Finance) said the users 'grew enthusiastic about the new system' during training when its user friendliness was pointed out to them by the accountants. The user screens are self-explanatory and the manual reconciliations between the different systems were no longer required. These all helped to foster a positive attitude among the users towards learning how to use the new system. The accountants

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also coordinated and managed the testing of the centralised debtors system. This was evident during the functionality and user acceptance testing, data conversion testing and live build phases. The accountants ensured that the centralised debtors system could do what it was supposed to do and they ensured that the testing of the new system was carried out in line with timescales outlined in the project implementation time chart. The accountants' technological skills, soft skills, position within the organisation and role in change programmes all facilitated the change management of this project.

It is essential to any project's success that a suitable project champion is appointed. The potential of the accountants for this role has been identified (Adam and O'Doherty, 2000; Doran and Walsh, 2004). The project champion in this case study was the head of finance. His status as a well-respected high-ranking in-house official, along with his excellent communication skills and solid accounting, budgeting and technology skills, made him an ideal project champion. It was important that the champion had this status. The SEO (Finance) confirmed this, stating that:

It was necessary to have the head of finance as project champion as he is the only person within Finance to achieve the resources for the project and influence top management support.

The project champion, as the advocate for change, must have status and strong business, communication and technology skills. It is evident from this case study that the head of finance within the council was a good fit for this role.

The existing literature highlights the requirement of an in-depth critique of the existing system (for example, Holland and Light, 1999; Nah and Delgado, 2006). In the council, the finance department played a key role in highlighting the problems with the debtors legacy systems and the need for a new integrated system. It carried out an analysis of the existing debtors legacy systems and the JDE AR module by speaking with key users, the ICT department and the other staff of the finance department. This helped highlight the problems of the legacy systems which were then documented by the SEO (Finance) and the accountants. Without this information the same problems with regards to the debtors legacy systems may have been repeated. This information helped provide the council with a clear vision of what the centralised debtors system should and should not do.

CONCLUSION

This case study finds that the ten critical success factors identified in the literature were present in this successful implementation. More importantly, this study demonstrates the substantial impact the accountants had in each of these factors. The obvious influence of the accountants in the implementation of an integrated system is to assist by the provision of information on the accounts layout, financial accounting requirements and customer account details. If this did not exist, the new system would not meet the financial reporting requirements and would

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have to be adapted to meet these requirements later. However, this research explored the need for a much more comprehensive involvement by the accountants. The researchers thought they would have to delve to find how the accountants fit into each of these criteria. Interestingly, they did not have to dig too far; the accountants initiated, led or championed every step of the implementation process. More interestingly, their involvement was very much supported by top management and other members of the implementation team.

Top management support was present from the beginning to the end as the project was given priority by the heads of finance and ICT. It was the commitment of the head of finance that was most evident throughout the case study. He supported the project by providing his own commitment and was always willing to give it the human and financial resources required. This feeling of importance encouraged the dedication of all of the staff to give it the time and attention necessary to make it a success. The head of finance justified the investment as part of a modernisation phase within the council. He believed it was critical to improve the efficiency and customer focus of the organisation.

Armed with business knowledge and communication and presentation skills, the accountants prepared and communicated the business vision to all the stakeholders of the project. Skilled cross-functional teams were set up, comprised of top management members, members of the finance department and ICT department, key users and members of the vendor development and implementation team. It was their ability to work as part of a multi-skilled team, to bring their financial and analytical expertise to the team and to represent the team when necessary, that made the accountants crucial members of each of the teams. Also, their absence in another system's implementation in the council, two years earlier, had resulted in costly and time-consuming modifications to the system after its implementation.

It was their knowledge and appreciation of the importance of planning and control that gave accountants the strength to be an important influence in implementing well-developed work and resource plans. The accountants, in particular, had an excellent working relationship with the vendor. This relationship was made possible by the business and technological knowledge of the accounting team. They knew what was required of the new system and they had the terminology to inform the vendor of these requirements.

The council carried out business process re-engineering prior to and during the systems implementation. The SEO (Finance) and the accountants were the key figures involved in examining these processes. The accountants were in a position to highlight the value-adding activities and the non-value-adding activities due to their close working relationship with the business units and their experience in correcting the mistakes of a previous system's implementation.

The change within the council due to the implementation of the new centralised debtors system was well managed and the accountants played a valuable role in managing that change. The accountants were instrumental in providing back-up support to the trainers. They assisted in training the users and in answering any questions they had. Again, their knowledge of accounting and the business gave the accountants the capability to achieve this.

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The project was championed by the head of finance. As the council had failed on a previous system's implementation due to lack of 'finance' input, it was strongly felt that the new centralised debtors system would be best championed by a finance person with both authority and accounting skills.

A critique of the old legacy systems, carried out by the finance department, highlighted all of the problems and shortfalls of the old systems. Due to the accountants' close working relationship with the users they had a clear knowledge of what the new centralised debtors system should be able to do, leaving the problems of the debtors legacy systems behind.

This case study highlighted the considerable impact the accountants had in each of the ten critical success factors. The involvement of the accountants in each of the ten critical success factors meant that their financial, analytical, communication, team-playing, leadership and technological skills, and business acumen, could be utilised to make the implementation of the new system a success. Of course the accountants on their own could not be responsible for the implementation of an integrated system, but their involvement as champions and team players was vital to the successful implementation of this new system.

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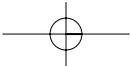
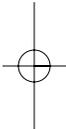
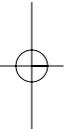
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'DROPS OF WATER TURN A MILL' - THE FUTURE OF IRISH ACADEMIC ACCOUNTING RESEARCH

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Drops of water turn a mill, singly none, singly none

US traditional folk song, from the preamble to the constitution of the United Mineworkers of America.

ABSTRACT

This paper uses the journal of the Irish Accounting and Finance Association (IAFA), the Irish Accounting Review (IAR), as a lens through which to look back at the development of accounting research and accounting researchers in Ireland. The paper also, looking forward, discusses some of the challenges and opportunities facing the accounting academy in Ireland. It finds that papers published in the journal are increasingly from a mix of Irish- and non-Irish-based authors, and utilise a range of Irish and non-Irish settings. In addition, it finds progressively more eclectic fields of investigation being pursued and increasingly collaborative projects. Each of these features suggests a local and vibrant accounting academic community in Ireland that has become gradually more confident and more integrated with its international neighbours. In terms of the IAR, it finds that this has played a particular role in encouraging new Irish researchers by publishing their work, and, for these individuals, this is often the prelude to a productive engagement with a much wider range of journals. This is viewed as consistent with the IAR's objective of supporting the IAFA in advancing accounting and related disciplines in the education and research fields in the Republic of Ireland and Northern Ireland. The overall theme of the paper is that the IAR is part of a framework of support for research and researchers in Ireland and more generally that, together, such frameworks lend weight to the wheels of individual and collective progress in research and scholarship; they give momentum to the mill.

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INTRODUCTION

2009 marks the twentieth anniversary of the formation of the Irish Accounting and Finance Association (IAFA). At this coming of age, this paper employs the journal of the Association, the *Irish Accounting Review (IAR)*, as a lens through which to look back at the development of accounting research (including finance research as a closely related discipline) and accounting researchers in Ireland. The paper also, looking forward, discusses some of the challenges and opportunities facing the accounting academy.

The paper is structured as follows. Following this brief introduction, the next section explores some of the prior literature, which similarly reviews the development of accounting research and the community of accounting educators in Ireland and, for example, in the UK and the USA. Aspects of this (for example, Dyckman and Zeff, 1984) focus on a journal or journals as one artefact whose elements help us to explore the geography and archaeology of an academic community. Subsequent to this, the paper draws on this prior literature to gain a perspective on the development of the accounting academic community in Ireland through the *IAR*, reviewing the mission of the *IAR* and then providing some empirical evidence of its role in accounting research in Ireland. In this context, the paper then reviews some trends in publication in the *IAR* and discusses whether these may or may not be indicative of trends in accounting research both in Ireland and wider afield. The paper closes with a brief discussion of the main findings of the paper, particularly with regard to some of the challenges and opportunities facing Irish accounting research and the *IAR*. It argues that developments in accounting research and of accounting researchers in Ireland are characterised by an increased tendency towards collaboration and that it appears the development of networks resulting from such trends will be a mainstay of accounting research – and accounting researchers – in Ireland in the future. The overall theme of the paper is that the *IAR* is part of a framework of support for research and researchers in Ireland and more generally that, together, such frameworks lend weight to the wheels of individual and collective progress in research and scholarship; they give momentum to the mill.

PRIOR RESEARCH

The history of the IAFA has been thoughtfully reviewed by Warnock and Pierce (2006) in a special issue of the *IAR* produced to coincide with the hosting of the European Accounting Association Annual Congress at University College Dublin that year. In this paper, they set out the background to the establishment of the *IAR* in 1993–1994. On the same occasion, Hyndman, Ó hÓgartaigh and Warnock (2006) mapped the contours of the changing landscape of academic accounting in the Irish university sector between 1988–1989 and 2002–2003. Using data from the British Accounting Association Research Register during that period, they find that over time there was ‘greater publication activity; an increasing proportion of accounting and finance academics involved in publishing academic papers; and more focus on

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“quality” accounting journals’ (Hyndman et al., 2006, p. 45). Similar research in the UK by Brown, Jones and Steele (2007) also used the British Accounting Association Research Register (but from an earlier period) and concluded that:

First, the overall level of publications [by UK-based accounting academics] reached a peak in 2000 and declined thereafter. Since 1982–1983 there has been a distinct downward trend in the number of journal articles published each period per head, although from year to year the changes are more uneven. Second, very few UK academics publish in the journals, which are identified (by published ranking surveys) as being top international journals, with the exception of *Accounting, Organizations and Society*. Third, very few UK academics publish in the set of journals which they themselves rate the most highly in terms of quality and which are published primarily in the US. Fourth, the contribution made by UK academics to the international literature also increased, in terms of volume, up to the year 2000 and declined thereafter. Fifth, there has been a move away from publishing in mainstream accounting journals and professional journals (Brown et al., 2007, p. 125).

Other studies in the accounting literature have assessed the impact of journals, individuals, articles, departments and other disciplines on research in accounting (for example, McRae, 1974; Cox, Hamelman and Wilcox, 1976; Dyckman and Zeff, 1984; Brown and Gardner, 1985; Brown, Gardner and Vasarhelyi, 1987; Beattie and Ryan, 1989; Heck, Jensen and Cooley, 1990; Beattie and Goodacre, 2004; Beattie and Emmanuel, 2008a, 2008b). This research has been extended in various directions and through various perspectives. For example, Beattie and Ryan (1989) analysed thirteen leading peer reviewed journals in 1987–1988 and examined the influence of books and official publications in accounting and finance research, reporting the characteristics of such non-serial materials used by authors to support research. Borokhovich, Bricker, Brunarski and Simkins (1998), Holder, Langrehr and Schroeder (2000), and Acedo, Barroso, Casanueva and Galan (2006) assessed trends in authorship, particularly in collaboration in and between disciplines.

The present paper extends this research to the *IAR* by using the journal as a lens through which to see developments in accounting research in Ireland. In doing so, it also adds a perspective to the literature by discussing the contribution of the *IAR*, as a journal of a relatively small academic community, to such developments, and delineating some of the challenges and opportunities which arise in that context. In addition, it also updates a much earlier publication by Hyndman and Warnock (1997), which ‘reviewed the *Review*’ up until that date. The paper finds its origins in the sense that it is useful from time to time to take stock, review progress and, from such a review, map out some future directions for both the journal and the community which it serves.

In that sense, the paper is similar to, and draws upon, a comparable examination of the *Journal of Accounting Research* conducted by Dyckman and Zeff (1984) and which gauged ‘the contribution of the *Journal of Accounting Research* (*JAR*) during its first 20 years, 1963–82’ (p. 225). In their review, they comment on

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the challenges of such a task as one which 'can be viewed as one of assessing the impact of a new information system on an already existing information structure' (Dyckman and Zeff, 1984, p. 226). The structure of their paper follows what they articulate as a 'mosaic against which the contributions of [the] *JAR* can be assessed' (Dyckman and Zeff, 1984, p. 226). While not necessarily suggesting a comparison between the development of the *JAR* and the *IAR*, Dyckman and Zeff's (1984) structure is useful in framing the following discussion, in characterising prior studies in this context and in clarifying the contribution of the current study.

In their paper, Dyckman and Zeff (1984) begin by discussing the 'climate prior to [the] *JAR*' (pp. 226–234). The climate in which the *IAR* was established is explored by Warnock and Pierce (2006). By the time the Irish Accounting Association (as the IAFA was known initially) was established, many academic associations published a peer reviewed journal. For example, the American Accounting Association's *The Accounting Review* was established as far back as 1926 and the *British Accounting Review* (known initially as the *AUTA Review*) in 1968. Hence, while the establishment of a peer reviewed journal was in one sense a natural agenda item for an academic association such as the IAFA, it also signals an early awareness of the research and other imperatives facing the community of academic accountants in Ireland. The *IAR* has played an important role in the life of the IAFA. Warnock and Pierce (2006) comment that 'much of the Council's time at this stage was spent on two topics: ensuring the successful continuation of the annual conference, the cornerstone of the IAFA's activities, and discussing the introduction of a journal' (pp. 32–33). Following the publication of the IAFA conference proceedings from 1989, the first issue of the *IAR* was published in 1994 (significantly only two years after the *European Accounting Review* and a mere six years after the IAFA's establishment in 1988). The *IAR* published a variable number of papers in its early years (for example fourteen papers in 1994 and twelve papers in both 1996 and 1997). From 1999 onwards four papers per issue (or eight per year) were published. One special issue of the *IAR* has been published to coincide with the hosting of the Annual Congress of the European Accounting Association in 2006. This special issue had six papers: as a consequence fourteen papers were published in 2006, eight in each of the two regular issues and six in the special issue.

Dyckman and Zeff (1984) discuss the 'early evolution' (p. 226) of the *JAR*, including the themes and origins of papers in the journal. Hyndman and Warnock (1997) provide an early survey of the work published in the *IAR* up to 1997. In doing so, they also discussed 'the role of the *Review* in fulfilling the objectives' of the IAFA (Hyndman and Warnock, 1997, p. 41), commenting inter alia on the challenges in internationalising a journal which has local roots and responsibilities. As part of their paper, Dyckman and Zeff (1984, pp. 250–270) set out to measure both quantitatively and qualitatively the contribution of the *JAR* to the accounting community. While updating the survey work in the Hyndman and Warnock (1997) paper, this current paper also attempts to assess in broad terms the contribution of the *IAR* to the achievement of its mission and to the development of academic research in accounting in and from Ireland.

THE *IRISH ACCOUNTING REVIEW*: MEASURES OF MISSION

The mission of the *IAR* is stated in its editorial policy as follows (emphasis added):

The *Irish Accounting Review* is published by the Irish Accounting and Finance Association as part of the process of fulfilling its objective to advance accounting and related disciplines in the education and research fields in the Republic of Ireland and Northern Ireland. The *Review's* policy is to publish suitable papers in any of the areas of accounting, finance and their related disciplines. Papers in all categories of scholarly activity will be considered, including (but not limited to) reports on empirical research, analytical papers, review articles, papers dealing with pedagogical issues, and critical essays.

All submissions that pass an initial editorial scrutiny will be subject to double-blind refereeing. Referees will be asked to assess papers on the basis of their relevance, originality, readability and quality (including, for empirical work, research design and execution). In determining relevance, the editors will be influenced by the Association's objectives; thus, **papers reporting on empirical work will be viewed more favourably if they deal with data relevant to those working in Ireland.** Similarly, papers that have previously formed the basis of a presentation at the Association's annual conference will be particularly welcomed.

Three particular aspects of the *IAR's* policy are worth noting. First, the *IAR* is quintessentially the journal of the IAFA and serves the community of scholars which is embodied by the Association. Second, and of specific interest in this regard, it is the stated objective of the IAFA to 'advance accounting and related disciplines in the education and research fields in the Republic of Ireland and Northern Ireland' and the *Review's* role as 'part of the process' of fulfilling this objective is clear. The *IAR* is therefore part of a latticework of support for the IAFA's objectives: other strands of such support include, for example, the Association's annual conference, its research seminars and its doctoral colloquium. In this broader context, the work of the IAFA from the tone of its conference to the extent of its support for young scholars reflects the needs and demographics of the population of accounting scholars in Ireland. As such, as well as having wider responsibilities, the *IAR* has a specific role to play in the peer review and publication of high-quality work, particularly from new scholars and first-time authors. Third, the *Review* serves the objectives of the IAFA by publishing papers drawn on data relevant to those working in Ireland. This does not mean that only papers containing Irish data are considered for publication (indeed it would be a sorry state, and exclude the work of many Irish academics, if such was the case), but work based on Irish data is likely to find a more attentive audience in the *IAR* than in other peer reviewed publications (which can also sometimes have preferences, whether explicit or implicit, for data from particular jurisdictions).

Based on these three underlying considerations relating to the context of the *IAR*, the next section analyses and discusses the content of the *Review* using a variety of descriptive metrics for the period from 1994 to the present. These include acceptance and submission rates by origin (Irish and other), papers published by

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setting (Irish data and other) and first-time authors in the *IAR*. Consistent with the work of Dyckman and Zeff (1984), the paper also reviews the topics of papers published in the *Review* as one manifestation of the trends in accounting research. One further issue that is explored is the extent to which levels of collaboration have changed in the period under review; such collaboration being one indicator of internationalisation and the propensity of researchers publishing in Ireland to collaborate with colleagues in Ireland and abroad as a means of progressing their research.

PUBLICATION TRENDS IN THE *IRISH ACCOUNTING REVIEW*

The overall acceptance rate for the *IAR* is 56 per cent. We include in the 'accepted' category all papers accepted regardless of whether a major rewrite is required (it is therefore difficult to compare acceptance rates between journals because of this, especially as some journals use very different bases of calculation, occasionally, it seems, as grounds for claims relating to 'quality'). In addition, a number of papers are eventually 'accepted' after several rounds of revision, this particularly the case with new researchers as the editors believe that it is part of the mission of the *IAR* to encourage young researchers where a paper may potentially have merit but require a fair amount of additional work to be undertaken. The acceptance rate of 56 per cent has been relatively consistent over the fifteen years being considered here.¹

Notwithstanding caveats about the basis of calculation, this acceptance rate contrasts with, for example, the *British Accounting Review* (*BAR*), where acceptance rates in the period between 1997 and 2006 were 21.5 per cent (Beattie and Emmanuel, 2008a, 2008b). Interestingly in this context, Beattie and Emmanuel's analysis (2008b, p. 200) illustrates that acceptance rates for Irish authors were highest in the *BAR* at 47.4 per cent (albeit based on a relatively small number of submissions - 19), and at 57.1 per cent in the last five years of the period reviewed. With respect to the *IAR*, acceptance rates are higher for Irish and UK papers compared to those submitted from elsewhere (acceptance rates for these were only 18 per cent). In the authors' opinion (who are also the current editors of the *Review*), this reflects a smaller number of speculative, poor submissions from Irish and UK authors compared to those from other sources. However, as a percentage of total submissions, the *BAR* receives far more submissions than the *IAR* from outside the UK and Ireland (see below), which, in the *BAR* as well, have a much lower acceptance rate than UK and Irish submissions, and this impacts considerably on the overall acceptance rate for the *BAR* (British Accounting Association, 1996; Beattie and Emmanuel, 2008a, 2008b) and makes comparisons with the acceptance rate for the *IAR* problematic.

Each paper submitted to the *Review* is double-blind refereed after an initial editorial review. There can be - and there usually are - a number of rounds of revision before a paper is accepted; almost no papers are accepted as first submitted. In general, the editors see it as part of their role to work with authors - particularly young Irish authors - in developing their papers for publication and this can result in many more rounds of revision than other journals.

Table 1 sets out acceptance and submission rates for the *IAR* by origin. Between 1994 and 2009 (16 full years), 149 papers were published in the *Review*. Sixty-nine

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TABLE 1: SUBMISSION AND ACCEPTANCE RATES BY ORIGIN, 1994 TO 2009

Origin of Author(s)	Submitted to Journal (%)	Accepted for Publication (%)
Ireland	66%	69%
Britain	14%	16%
Other	20%	15%
Total	100%	100%

per cent (about 103) of these were by Irish-based authors, 16 per cent (24) from Great Britain and 15 per cent (23) from other countries (mainly the US, Canada, Australia and other European countries). Notwithstanding the explicit welcome for papers from Irish-based authors or based on Irish data, over 30 per cent of the papers published in the *IAR* since its establishment are by non-Irish-based authors.

This compares with the *BAR*, where Beattie and Emmanuel (2008a) report that:

[O]ver the full ten year period [from 1996 to 2007], only 53% of submissions came from the UK & Ireland, with 17% from Australia & New Zealand, 8% from continental Europe, 6% from North America and 15% from the rest of the world. This demographic has changed slightly over the period. During the later five year period, the proportions of submissions from Australia & New Zealand and from Europe increased, while the UK & Ireland and from North America decreased (p. 199).

The *IAR* experience, when set against what has happened with the *BAR*, represents a moderate degree of internationalisation compared with other journals, and it is a balance with which the editors and the IAFA are comfortable, and one which serves the mission of the *Review* well.

Table 2 shows the number of papers published in the *IAR* in an Irish setting or with data from Ireland. As can be seen, over the period since its inception 42 per cent of the papers published in the *Review* were based on an Irish setting and/or on Irish data with a consistent proportion across the period under consideration. The proportion of papers from Irish-based authors (as seen in Table 1 – 69 per cent) is greater than the proportion of papers drawing on Ireland as a research setting (see Table 2 – 42 per cent), suggesting that accounting and finance researchers in Ireland have a wider canvass than the local ‘half a rood of rock’ referred to in Patrick Kavanagh’s famous poem ‘Epic’ (Kavanagh, 1938). For the most part, much non-Irish research from Irish-based authors draws on data from the UK, reflecting both the proximity of the UK setting and the levels of collaboration and affinity between Irish- and UK-based academics.

As indicated earlier, a key theme for the *Review* and the IAFA, particularly in the early years, was to encourage young Irish researchers (although not to the exclusion of young researchers from elsewhere). Figure 1 illustrates the numbers of papers published in the *IAR* with at least one first-time author. In the early years, from 1994 to 1999, 38 per cent (24 of 63 papers) of the papers in the *Review* included authors who were first-time authors. This number declined from 2000

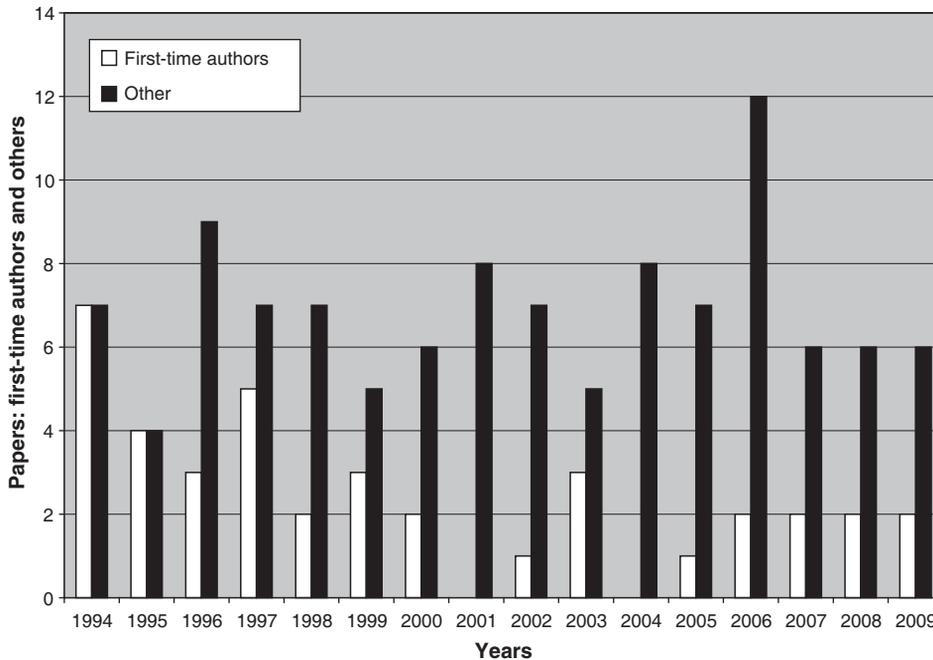
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TABLE 2: PAPERS PUBLISHING WITH AN IRISH (OR OTHER) SETTING OR WITH IRISH (OR OTHER) DATA

Year	Irish Context/Data	Other Context/Data
1994	5	9
1995	5	3
1996	4	8
1997	3	9
1998	4	5
1999	6	2
2000	3	5
2001	4	4
2002	1	7
2003	4	4
2004	4	4
2005	4	4
2006	7	7
2007	2	6
2008	4	4
2009	3	5
<i>Total</i>	63 (42%)	86 (58%)

onwards, reflecting in part at least the demographics of the population of Irish accounting academics. However, the number of first-time authors remains steady with two papers (or 25 per cent) in each of the last three years, reflecting both the breakthroughs of first-time authors and, it is hoped, the support of the *Review* through the process of peer reviewed publication. Comparison of first-time authorship with the experience in other journals is difficult as such evidence is not often compiled or provided for other journals. It is provided here both as an expression of and evidence of the *IAR*'s support for first-time authors as part of its objective to 'advance accounting and related disciplines in the education and research fields in the Republic of Ireland and Northern Ireland'. In the authors' own experience, one's first peer reviewed publication is an important breakthrough in any academic career by, for example, instructing with regard to the process and initiating routines of publication. It is clear that the *IAR* has served a supportive purpose in this regard. In addition, it is also apparent that a number of well-known and influential academics, who have gone on to publish widely in a range of top-ranked international journals, have commenced their academic publishing careers with the *IAR*. It is a source of some pride, and indicative of a strongly collegial culture within the Irish academic accounting community, that many of these have continued to support the *Review* over many years, helping to improve its quality and reputation.

Table 3 tracks the broad topic area of papers published in the *IAR* during the period under review. Reflecting the 'F' in IAFA, by far the greatest number of papers published in the *IAR* are in Finance (viewed in this paper as a closely related

FIGURE I: PAPERS PUBLISHED WITH AT LEAST ONE FIRST-TIME AUTHOR

discipline to Accounting), broadly defined (35 papers or 23 per cent of all papers published). Finance papers have been a healthily persistent part of the portfolio of papers published in the *Review* since its establishment, reflecting the continuing interests of Irish academics in this area and the continued openness of the *Review* to papers in this area. Many of these papers are based on UK data, with a small number exploring other European or US data.

As one would expect, papers in Management Accounting (23 papers or 15 per cent of all papers published) and Financial Reporting (21 papers or 14 per cent of all papers published) also comprise a substantive element. However, it is interesting to note that, over time, the trend on such areas as a focus for research is different. Whereas interest in Management Accounting as a research area has been fairly consistent, papers in Financial Reporting have been in decline, with many more being included in the *Review* in the period up to 2000. Conversely, there is a particular and increasing interest in Not-for-Profit and Government Accounting, reflected in the publication of eighteen papers (12 per cent of all papers published), although of late this proportion has increased considerably (being over 25 per cent of the papers published in the last five years). This probably reflects the fact that in a relatively small academic community particular clusters concentrating on specific areas of accounting research can emerge quickly.

The number of papers in Accounting Education (fourteen or 9 per cent) reflects a steady interest in this area since the establishment of the *IAR* and recent

TABLE 3: IAR PAPERS PUBLISHED – BY TOPIC

Year	Accounting			Management		NFP & Govt		Social & Environmental			Accounting			Other	
	Education	Financial Reporting	Auditing	Accounting	Finance	Accounting*	Accounting	Accounting	Analysis	History	Tax	Profession	Accounting	Other	
1994	2	4	2	3					1					1	
1995	2	2	2	1	1							1			
1996				2	5	1	1						1		
1997	1	3	1	2	2	1								2	
1998		2	2	1	2	1									
1999	2			2	3	1									
2000		4		2	2	1			1					1	
2001	1	1		2	2	1							1		
2002		1	1	2	4	1								1	
2003	1	1	2	2	2	1							2		
2004				4	2	2							2		
2005	1		1	2	2	2	2								
2006		1	1	1	1	3	3		1				3	2	
2007		1	2	1	3	3	3						1		
2008	2	1		2	2	3	3								
2009	2			2	2	1	1							1	
Total	14	21	14	23	35	18	18	2	3	7	2	2	8	5%	
	9%	14%	9%	15%	23%	12%	12%	1%	2%	5%	1%	1%	1%	5%	

*Not-for-Profit and Government Accounting.

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submissions are indicative of the continuing popularity and strength of this field of research in Ireland. It is also consistent with the observations of Paisey and Paisey (2005) who, in a review of accounting education research submitted as part of the Research Assessment Exercise in the UK, comment that 'only one-third of papers were published in accounting education journals. That so many journals are willing to publish accounting education research shows considerable acceptance of the credibility of the research area' (Paisey and Paisey, 2005, p. 423). Auditing also constitutes an area of research interest (with fourteen papers published; 9 per cent of all papers), although submissions in this area have declined in more recent years. While Accounting History is an area of interest for a number of active researchers in Ireland, this is not necessarily reflected in the *IAR* with the publication of only seven accounting history papers (5 per cent of all papers published since 1994), two of which were published in the EAA 2006 Special Issue. Perhaps this reflects the fact that there is only a small number of active scholars in this area and there exist a number of specialised international accounting history journals available as publication outlets. Other areas of research have flickered briefly but have not taken significant hold in the corpus of literature published in the *IAR*. These include, for example, Tax (two papers published, the last in 1995) and Social and Environmental Accounting (two papers published, the last in 1998). Surprisingly, given the apparent strong interest and links with the accounting profession in Ireland, there have been very few papers either submitted or published (two) relating to the accounting profession.

Allowing for some differences in classification, the above trends are, in general, consistent with those reported by Beattie and Emmanuel (2008b) for the *BAR*. This is broadly so in the cases of Financial Reporting, Management Accounting, Not-for-Profit and Government Accounting, Accounting Education and Accounting History. However, the *BAR* publishes (and receives) fewer papers than the *IAR* in the Finance-related areas and more papers in Social and Environmental Accounting and in areas relating to the accounting profession.

A particular trend commented upon by, for example, Paisey and Paisey (2005) and Beattie and Emmanuel (2008b) is that of increasing collaboration in accounting and finance research. Table 4 outlines such trends in the *IAR*. As can be seen, over its history, 62 per cent of the papers published in the *IAR* were by more than one author and 14 per cent of these were by authors from different national settings. However, levels of co-authorship have increased dramatically in the *IAR* since its early days, in particular since 2005. Up to 2005, 48 per cent of papers were by a single author (with 52 per cent having more than one author); from 2005 onwards only 11 per cent of papers had a single author (with 89 per cent having multiple authors). This is consistent with the experience of other journals. For example, more than 60 per cent of papers submitted to the *BAR* in the period 1997–2006 were by more than one author (Beattie and Emmanuel, 2008a).

Collaboration is a hallmark of any community and these trends, in part at least, reflect the development of the community of accounting academics submitting to the *Review*. However, an additional influence promoting collaboration in some papers may have been the way in which the Research Assessment Exercise has operated in the UK. This has incentivised UK academics to engage in collaboration,

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TABLE 4: IAR PAPERS PUBLISHED – LEVELS OF COLLABORATION

Year	Single Authored Papers	Collaborative Papers – One Country	Collaborative Papers – Cross-National
1994	8	5	1
1995	5	2	1
1996	6	3	3
1997	6	5	1
1998	6	1	2
1999	3	5	0
2000	3	4	1
2001	5	3	0
2002	2	5	1
2003	1	5	2
2004	4	2	2
2005	0	7	1
2006	2	8	4
2007	2	6	0
2008	2	5	1
2009	2	5	1
<i>Total</i>	57 (38%)	71 (48%)	21 (14%)

particularly between academics in different institutions (where joint papers could be returned for each institution). The levels of collaboration evident here take many forms: between colleagues in the one institution or in different institutions, as well as between supervisor and postgraduate research student. It is also undoubtedly a very strong catalyst for research and publication. Beattie and Emmanuel (2008a) support this view and express it clearly:

It is noticeable, however, that the incidence of co-authorship is rising – a trend that has been well documented Survey evidence suggests that co-authorship is believed to increase the overall quality of a paper, by combining complementary skills In particular, the addition of a co-author from another country can overcome geographic barriers associated with language and/or differences in institutional settings Increasingly, we research in a global community (pp. 205–206).

Hence, trends in the *IAR* – in so far as they reflect trends in the Irish academic accounting community – suggest that the IAFA is developing increasing practices of community which are at one with developments elsewhere (albeit they may have started later and moved more quickly). The habit of collaboration is not only potentially more efficient in bringing research to publication, but also opens up a wider range of complementary skills with which – and settings in which – to undertake research. If anything, this has been the most powerful trend in Irish accounting research as manifest in the sixteen volumes of the *IAR*. If there is any

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lesson here for new researchers it is that collaboration is a potent enabler of publication, whether nationally or internationally.

CONCLUDING OBSERVATIONS: MANY DROPS DO TURN THE MILL

This paper reviews trends in the papers published in the *IAR* since its establishment in 1994. As such, the paper updates Hyndman and Warnock (1997) and complements, in an Irish context, several other such reviews of other academic journals such as those carried out by, for example, Dyckman and Zeff (1984), Beattie and Goodacre (2004) and Beattie and Emmanuel (2008a, 2008b). The paper finds that the *IAR* serves its mission as the journal of the IAFA through peer reviewed publication of papers by Irish accounting and finance academics. This is evidenced, for example, in the fact that 69 per cent of papers published are by Irish authors and 42 per cent of papers are based in an Irish setting and/or on Irish data. However, the *Review* – in meeting its objectives – receives and accepts a substantive number of papers from outside Ireland: over 30 per cent of the papers published in the *Review* since its establishment are from academics based outside Ireland and 58 per cent concern settings and/or data which are non-Irish.

Topics published in the *IAR* reflect a broad church of research and, to an extent, are consistent with other journals of academic associations (such as, for example, the *BAR*). However, the level of eclecticism of papers in the *Review* could be extended if it included more papers on, for example, wider areas of interest such as social and environmental accounting and/or wider social/critical paradigms. However, the *Review* reflects the interests of its constituency it serves. The editors themselves would welcome such contributions, while realising that submissions to the *IAR* from Irish academics are likely to be less broad than for some other journals purely because the Irish accounting academic community is relatively small.

The *IAR* is particularly challenged by the increased hegemony of journal rankings, which potentially draw research away from a journal such as the *IAR* towards journals that ‘count’ more heavily in the research metrics of business schools. While accounting academics have good reason to be ambitious, and are rightly encouraged to be so, the presence and profile among a particular readership offered by a journal such as the *IAR* also has an important role in the development and promulgation of research. When it comes to the proliferation and impact of journal rankings, academics do well to remember the words of the poet Patrick Kavanagh in his poem ‘Epic’ (also referred to above):

Homer’s ghost came whispering to my mind.
He said: I made the Iliad from such
A local row. Gods make their own importance.
(Kavanagh, 1938, p. 238)

Two particular trends in accounting research published in the *IAR* were discussed in this paper. First, the journal has provided sustained support for first-time

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authors, many of whom went on to become prolific authors both nationally and internationally: they got their 'first break' in the *IAR*. A second and not unrelated trend is that the *IAR* has seen an increased trend toward collaboration in the papers published in the journal. Such collaboration is found between colleagues, between institutions and between national settings, and has many elements to it which provide support for and an impetus to publication both in the *IAR* and in other peer reviewed journals. The editors suggest that experienced researchers – as a measure of leadership of the discipline – have an obligation to continue to support colleagues by nurturing new researchers in this context and to strengthen the community of academics to which they belong through the journal that plays a role in developing that community. By such means is momentum maintained: drops of water turn a mill, singly none.

NOTES

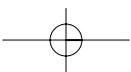
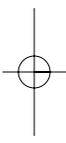
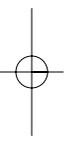
- ¹ The acceptance rates split between papers received between 1994 and 2001 and those since 2002 rate is 57 per cent and 56 per cent respectively (excluding papers still in process at the time of writing).

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**PAPERS PRESENTED AT THE TWENTY-SECOND ANNUAL
CONFERENCE**

The titles of papers presented at the twenty-second Annual Conference of the Irish Accounting and Finance Association (7–8 May 2009, University College Dublin) were as follows:

Author(s)	Paper Title
Ballantine, J. <i>University of Ulster</i> Brignall, S. <i>Aston University</i>	Strategic Performance Measurement and Strategic Enterprise Management Systems
Brennan, N. <i>University College Dublin</i> Daly, C. <i>Deloitte</i> Harrington, C. <i>Deloitte</i>	Rhetoric, Argument and Impression Management in Hostile Takeover Defence Documents
Byrne, M. <i>Dublin City University</i> Willis, P. <i>Dublin City University</i> Burke, J. <i>University of Otago, New Zealand</i>	Influences on School Students' Career Decisions: Implications for the Accounting Profession
Callaghan, G. <i>PriceWaterhouseCoopers</i> Burke, A. <i>Letterkenny Institute of Technology</i>	The Effects of the Sarbanes-Oxley Act on Companies in Ireland
Carroll, A. <i>University of Limerick</i> Ryan, J. <i>University of Limerick</i>	An Empirical Examination of the Exchange Rate Exposure of Irish Firms and the Determinants of their Foreign Currency Derivative Usage
Clarke, P. <i>University College Dublin</i>	Charles Hubert Oldham: A Man of Many 'Firsts', Including the First Dean of the UCD Faculty of Commerce

Papers Presented at the Twenty-Second Annual Conference

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| Connolly, C.
<i>Queen's University, Belfast</i>
Wall, T.
<i>University of Ulster</i> | Public-Private Partnerships in Ireland:
Benefits, Problems and Critical Success
Factors |
| Crombie, N.
<i>University of Canterbury, New Zealand</i> | Institutionalising the Discourse of
Executive Remuneration: An Analysis of
Corporate Governance Codes and
Annual Reports from Australia, New
Zealand and the United Kingdom |
| Cui, W.
<i>University College Dublin</i>
Brabazon, A.
<i>University College Dublin</i>
O'Neill, M.
<i>University College Dublin</i> | Evolutionary Computation and Trade
Execution |
| Cullen, M.
<i>University College Dublin</i>
Brennan, N.
<i>University College Dublin</i> | Understanding Effective Boards:
Grounded Theory Methodology and
Mutual Fund Governance |
| Donnelly, R.
<i>University College Cork</i>
Hajbaba, A.
<i>University College Cork</i> | Earnings Surprises, Forecast Revisions
and Acquirer's Long-Run Post-
Acquisition Performance |
| Egan, A.
<i>Dublin Institute of Technology</i>
Maughan, R.
<i>Dublin Institute of Technology</i>
Coughlan, J.
<i>Dublin Institute of Technology</i> | The Nomination and Motivation of Irish
Non-Executive Directors of Listed
Companies |
| Fan, K.
<i>University College Dublin</i>
Brabazon, A.
<i>University College Dublin</i>
O'Sullivan, C.
<i>University College Dublin</i>
O'Neill, M.
<i>University College Dublin</i> | Introduction to Agent-Based Modelling
and Its Application in Finance |

Papers Presented at the Twenty-Second Annual Conference

- | | |
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| Flood, B.
<i>Dublin City University</i> | Management Accounting Change and
the Continued Use of Standard Costing |
| Lynch, B.
<i>Dublin City University</i> | |
| Quinn, M.
<i>Dublin City University</i> | |
| Garvey, J.
<i>University of Limerick</i> | An Investigation into Risk Propensity in
Bull and Bear Markets |
| Lee, L.
<i>University of Limerick</i> | |
| Grey, C.
<i>University of Limerick</i> | Accruals Management and the Structure
of Executive Compensation |
| Stathopoulos, K.
<i>Manchester Business School</i> | |
| Walker, M.
<i>Manchester Business School</i> | |
| Griffin, J.
<i>Dublin City University</i> | How Influential Are Accountants in the
Implementation of an Integrated
System? A Case Study in the Public
Sector |
| Dempsey, S.
<i>Cork Institute of Technology</i> | |
| Healy, M.
<i>University College Cork</i> | Accounting Online: The Design and
Implementation of an Online Learning
Support Mechanism for Students
Studying Accounting and Finance |
| McCutcheon, M.
<i>University College Cork</i> | |
| Carr, M.
<i>University College Cork</i> | |
| O'Sullivan-Rochford, C.
<i>University College Cork</i> | |
| Hillery, J.
<i>Stewart's Hospital, Dublin</i> | Health and Wealth: A Study in
Regulatory Contrast |
| Ó hÓgartaigh, C.
<i>University College Dublin</i> | |
| Hyndman, N.
<i>Queen's University, Belfast</i> | The Implementation of Accruals
Accounting in the Irish Public Sector: A
Comparative Study of Northern Ireland
(NI) and the Republic of Ireland (RoI) |
| Connolly, C.
<i>Queen's University, Belfast</i> | |
| Maher, J.
<i>Waterford Institute of Technology</i> | Consumer Financial Risk: Appetite,
Acceptance and Avoidance? |

Papers Presented at the Twenty-Second Annual Conference

- Burke, R.
Waterford Institute of Technology
- Maughan, R.
Dublin Institute of Technology
O'Dwyer, B.
University of Amsterdam
- McAree, D.
University of Ulster
Green, J.P.
University of Ulster
- McNally, B.
NUI Maynooth
- McCullagh, O.
University of Limerick
- Murphy, S.
Deloitte
Flood, B.
Dublin City University
- Nurunnabi, M.
Cardiff University
Chandler, R.
Cardiff University
Norton, S.
Cardiff University
Karim, W.
Brunel University
- O'Brien, F.
University of Limerick
Shackleton, M.
Lancaster University
- O'Carroll, G.
University College Cork
Healy, M.
University College Cork
- Exploring Sustainability Practices and Reporting at Musgrave Group: A Case Study of an Irish Private Company
- The Information Content of Dividends and the Interaction Effects of Earnings and Dividend Signals: Some Empirical Evidence Using International Companies Classified as 'Delisted'
- Actuarial Valuations of Pension Schemes: Only a Matter for the Actuary?
- A Stochastic Correlation Framework Incorporating Predictive Indicators for the Modelling of Securitised Portfolios
- Measuring Burnout, Engagement and Proactive Coping among Accounting Students: An Exploratory Study
- The Perceived Need for and Impediments in Achieving Accounting Transparency in Developing Countries: A Field Investigation
- Historical, Implied and Forward-Looking Betas and the Cross Section of FTSE 100 ESX Index Option Returns
- Management Accounting and Strategy: A Desk-Based Review of Evidence from the Profession

Papers Presented at the Twenty-Second Annual Conference

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| O'Donohue, S.
<i>Waterford Institute of Technology</i>
Gregory, A.
<i>University of Exeter</i> | The Wealth Effects from UK
Acquisitions for Domestic and
International Acquirers: Some Recent
Evidence |
| O'Neill, J.
<i>University of Limerick</i>
O'Regan, P.
<i>University of Limerick</i> | An Examination of Corporate Use of the
Global Reporting Initiative's Guidelines
in France and the UK: A Note on
Scepticism and Legitimacy |
| O'Regan, P.
<i>University of Limerick</i> | Joined in a Mazy Dance: Public and
Private Actors and the Contestable
Nature of the Self-Regulatory Form |
| O'Regan, P.
<i>University of Limerick</i> | Social Stratification and Elite Groups:
Accountants and the Accountancy
Profession in Edwardian Dublin |
| Palcic, D.
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Reeves, E.
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Exchequer Finances in Ireland |
| Prapha, A.
<i>Ernst & Young, New Zealand</i>
Dunstan, K.
<i>Victoria University of Wellington</i>
Ó hÓgartaigh, C.
<i>University College Dublin</i> | Determinants of Corporate Governance
Quality in an Emerging Economy: The
Case of Thailand |
| Rasaratnam, S.
<i>University College Dublin</i> | Stock Market Reaction to the Non-
Executive Directors' Appointment
Announcements in the UK Corporate
Board: 1989-2006 |
| Russell, J.
<i>KPMG</i>
McCluskey, T.
<i>Dublin City University</i>
Willis, P.
<i>Dublin City University</i> | Preliminary Evidence on the
Relationship between Perceptions of
Dimensions of Tax Fairness and
Attitudes to Tax Compliance of
Employees in Ireland |
| Ryan, B.
<i>Royal Holloway, University of London</i>
Delgado-Sanchez, A.
<i>Triometric</i> | Outsourcing Relationships: A Case of
Accounting Surveillance |

Papers Presented at the Twenty-Second Annual Conference

Sandt, J. <i>International University of Applied Sciences Bad Honnef · Bonn (Currently Visiting UCD)</i>	Management Control Systems as a Package: The Relationship of Financial Measurement Systems and Six Sigma
Vasile, C.M. <i>Academy of Economic Studies, Bucharest</i>	Quality Management and Labour Efficiency: ISO 9001 for Quality Management Systems vs Employee Democracy and Employers

Ruth Mattimoe of Dublin City University presented the CIMA presentation, entitled 'The Role of the Management Accountant and the Identification of the Best Management Accounting Practices in the Hospitality Industry: Preliminary Findings'.

Plenary Session

The plenary address, entitled 'Accounting Issues Raised by the Subprime Crisis and Credit Crunch', was given by Stephen G. Ryan of the Stern School of Business, New York University.

THE IRISH ACCOUNTANCY EDUCATIONAL TRUST

The Trust was established in 1981 by the Institute of Chartered Accountants, from which it receives annual funding, to enable it to fulfil the objectives for which it was formed.

GRANT AID FOR ACCOUNTANCY RESEARCH AND PROJECTS

The role of the Irish Accountancy Educational Trust (IAET) is to provide grants for accountancy-related research and other relevant projects. In doing so the objective is:

1. To further and develop the science of accountancy in all its branches and
2. To promote educational facilities for the teaching of accountancy, auditing, finance and other related subjects

AMOUNT OF GRANTS

There is no specific limit to the level of grant support that may be provided by the IAET. Normally, the amount of funding provided is likely to be between €1,000 and €15,000. The exact amount will depend on the nature of the research or project and the level of related expenditure expected to be incurred by the grant applicant.

ACKNOWLEDGMENT OF GRANTS

Recipients of funding will be expected to acknowledge the support provided by the Trust in any publications (or in the publicity associated with other projects) that benefit from such assistance.

SUITABLE AREAS FOR GRANTS

The areas that the Trustees have established in the past as appropriate for grant aid include:

1. Development work and the provision of equipment necessary for research dealing particularly with the impact of information technology on the role of the accountant
2. Research into accountancy education
3. Scholarships or sponsored fellowships
4. New education structures and needs
5. Publication of text books or guidance booklets on specific topics

The Irish Accountancy Educational Trust

While the Trustees welcome academic publications and papers, for such work to receive grant aid support the content ideally should be of *practical relevance* to the accountancy profession and/or business.

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Since the IAET was formed in 1981 it has supported a wide range of projects, either involving practical research or other initiatives, to promote the interests of the accountancy profession.

Projects that have been supported by grants include:

- Survey of Irish Published Accounts
- *The Irish Accounting Review*
- Development of CBT Courseware for Accountancy Students
- Accountability in the Credit Union Sector
- IT and the Professional Accountant (an assessment of the skills gap and proposed solutions)

HOW TO MAKE A GRANT APPLICATION

Grant applicants should provide the following information:

1. Title of project
2. Details of project
3. Duration of project and expected completion date
4. A budget of anticipated outlay
5. Relevant career details of applicant(s)

Grant applications should be submitted in writing to:

Jacinta Conway
The Irish Accountancy Educational Trust
Chartered Accountants House
47-49 Pearse Street
Dublin 2

To obtain further information on any matter relating to the Irish Accountancy Educational Trust, please see <http://www.charteredaccountants.ie/General/About-Us/Irish-Accountancy-Educational-Trust-IAET/> or contact Jacinta Conway in writing or using Tel (01) 637 7200 or Fax (01) 668 0842 or by email: iaet@icai.ie.

NOTES FOR CONTRIBUTORS

1. Papers should be submitted electronically. Papers should not normally exceed 8,000 words.
2. There should be a separate file containing the title, author(s), affiliation(s) and one address to which correspondence regarding the paper (including proofs) should be sent. An abstract of not more than 100 words should be given at the beginning of the paper.
3. Citations in the text should be by author's name and year of publication, for example, Black (1972) or (Brown, 1972). In the case of citations of books or specific quotations, page numbers should be given, for example, (White, 1992, pp. 10-11). Where more than one publication by the same author in a given year is cited, they should be distinguished by lowercase letters after the year, for example, (Green, 1987a; Green, 1987b). Where there are more than two authors, all names should be given in the first citation with 'et al.' used subsequently.
4. References should be listed alphabetically at the end of the manuscript in the following style:

- DeAngelo, L.E. (1981). Auditor Size and Audit Quality, *Journal of Accounting and Economics*, Vol. 3, No. 3, pp. 183-199.
- European Commission (1996). *Green Paper on the Role, the Position and the Liability of the Statutory Auditor Within the European Union*, October, Brussels: European Commission.
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Only works referred to in the text should be listed, and a general bibliography should not be included.

5. Essential notes should be included as endnotes rather than footnotes.
6. In initial submissions, tables and diagrams may be either included at the appropriate point in the text or after the references with their positions indicated in the text. Do not submit any separate Excel documents. Any exceptional costs of artwork for diagrams will be charged to authors.
7. Mathematics should be used only if they contribute to clarity or economy of presentation. The conclusions of mathematical papers or elements of papers should be made intelligible to readers who are not mathematicians.
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