



Stepping Stones: An Examination of Irish Tertiary Level Students Entrepreneurial Spirit



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Preface

GUESSS stands for Global University Entrepreneurial Spirit Students' Survey and is an international research project using a geographical and temporal comparison to investigate the entrepreneurial intention and activity of students. The results being presented here are the results of the survey conducted in Ireland on tertiary level students. This research has a number of primary and secondary goals attached to it. The primary goals are to examine the start-up process; provide an insight into the organisation of entrepreneurship within the tertiary level institutions and to examine the characteristics that impact the founding intention and activity of students. The secondary goals are to verify and establish the explanatory approaches at various levels for the investigation of the founding intent and activity of students. The project will enable researchers to reflect on their own country's entrepreneurial spirit; along with observing the quality of start-ups. Finally, the project aims to identify the hurdles and barriers faced by entrepreneurial students and to provide recommendations to overcome these hurdles.

The project is coordinated on an international level by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG) together with the KfW Endowed Chair for Entrepreneurship at European Business School (ebs). On a national level, the project was co-ordinated by Dr Naomi Birdthistle and Briga Hynes of the Centre for Entrepreneurial Studies in the Department of Management and Marketing at the Kemmy Business School, University of Limerick.

A key finding of this study is that students would prefer to begin their working life as an employee rather than as an entrepreneur. This is true for when the students immediately leave third level education. However, the findings do indicate that within five years of leaving education they would consider starting up a business and working as a self-employed person. The findings also highlight that there is a positive disposition towards entrepreneurship by third level students in Ireland and they would consider it as a career option. The findings also identify that third level students in Ireland, who want to establish their own business, do not have work experience in the industry sector they are entering. Additionally, the businesses they want to establish are not innovative as only eight percent of respondents identified that the product/service they will introduce is new to the world.

The key findings from an institutional perspective make for some interesting reading. The majority of respondents identified themselves as being in 'full-time' education however on closer examination it would appear that these

students are also in full-time employment. Awareness of entrepreneurship related services offered by their institution is quite poor. It therefore is imperative that these institutions re-examine how these services are communicated to the student population.

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1.1 Entrepreneurship in Ireland

Small and medium-sized enterprises (SMEs)¹ have played a key role in the generation of an enterprise culture in Ireland in recent decades. However Ireland has not always been an encouraging environment for the establishment of such enterprises. Prior to the early 1980's the Irish government's policy was mainly focused on attracting Foreign Direct Investment (FDI) as a means to encourage new business development and those with the initiative to establish their own enterprise had to emigrate to receive the assistance they needed (Business 2000). However, government attitudes changed dramatically once they realised that FDI was not secure in terms of investment as Multi National Corporations (MNC's) closed their subsidiaries and the government began to focus their attention on developing SME's as a key source for the development of an enterprise environment and employment in Ireland. Nowadays the government recognises the importance of SME's and their contribution to economic growth, social cohesion, regional and local development and the increasing importance of enterprise education at all educational levels (i.e. primary, secondary and tertiary level) to enhance the development of enterprise in Ireland.

According to Enterprise Ireland (2004) the small firm sector has made a substantial contribution to the economic and social infrastructure of Ireland on a national and regional basis. This contribution was evident in 2003 where it was estimated that the number of small firms in Ireland was approximately 186,114, an increase of 16,114 over a three-year period since 2000 (Revenue Commissioners Statistical Unit 2003). This figure continued to increase where the Small Business Forum (2006) suggested that there were approximately 250,000 small firms in Ireland in 2006 (inclusive of both manufacturing and service firms). Furthermore these firms accounted for more than 99 per cent of all enterprises in Ireland and contributed to 68.4% of private sector employment. According to the Small Business Forum (2006) employment in this small firm sector increased by 79% over the period 1995-2005. These figures therefore highlight the importance of the small firm sector to the Irish economy.

The Global Entrepreneurship Monitor (GEM) Report for Ireland for 2008 (Fitzsimons and O'Gorman 2009) found that 2,800 people established new businesses in Ireland every month from the beginning of 2005 to mid 2008. The report also found that 272,500 people aspired to start a business, which equates to 10% of the population, while the number of nascent entrepreneurs (i.e. those actively planning a new business) equates to 3.3% of the population

¹The SME definition encompasses three components: micro enterprises (less than 10 employees); small enterprises (10 but less than 50 employees) and medium-sized enterprises (50 but less than 250 employees).

(90,200 people) (Fitzsimons and O’Gorman 2009). This however indicates a decline in the number of people actively taking steps to start a new business (3.3% in 2008 compared to 4.2% in 2007) as is illustrated in Table 1.

Table 1 Entrepreneurial Activity in Ireland 2004-2008

Year	Future aspirations to be an entrepreneur	Nascent entrepreneurs	New firm entrepreneurs	Total stage Entrepreneurs [TEA]	early firm entrepreneurs	Established firm entrepreneurs	Closed firm entrepreneurs
2008	10%	3.3%	4.3%	7.6%	9%	1.8%	
2007	11.2%	4.2%	4.2%	8.2%	9%	1.9%	
2006	9.8%	4.5%	2.9%	7.4%	7.8%	1.8%	
2005	12.6%	5.7%	4.7%	9.8%	8.1%	2.3%	
2004	10.9%	4.4%	3.6%	7.7%	6.5%	1.3%	
Average	10.9%	4.4%	3.9%	8.1%	8.1%	1.8%	

(Fitzsimons and O’Gorman 2009, p.16)

The study being reported here is part of an international study on collegiate entrepreneurship. The study emanates from a project that was conducted in 2003 by the Swiss Research Institute of Small Business and Entrepreneurship at the University of St. Gallen (KMU-HSG) in coordination with a student initiative called ‘START’. The goal of the original study was to create a clear picture of students’ career aspirations and future goals and plans. The focus was therefore on the evaluation of a foundation which students built to assess and decide what field they were going to study. A project with similar goals was being conducted in Germany by the European Business School (EBS) during the same time. In 2004 the KMU-HSG worked together with the KfW Endowed Chair for Entrepreneurship at the European Business School (EBS) to revise and re-launch another survey. Since the same questions, scales, methods and constructs were used across different countries and universities, a tangible comparison of tendencies and trends was made.

1.2 Research Goals

Since Ireland depends on its nation being entrepreneurial for its economic growth and development, it is important to understand the career objectives of students at tertiary level in Ireland and the propensity of these students to establish a business or be self-employed sometime in the future. This therefore led to the participation in this study. The overall goal of this study is to examine, explain and discuss the behaviour and intentions of students in their decision to start entrepreneurial activities and found an enterprise. The objectives for this national report are therefore divided into primary and secondary goals:

1.2.1 Primary Goals

This project has three primary goals attached to it. Primarily the project aims to examine the start-up processes; the institution the student is attending and how '*entrepreneurial*' it is; and thirdly a focus on the individual and their characteristics. Each of these goals are further explored below.

1.2.1.1 The start up process

GUESSS helps to systematically record the founding intention and activity of students on a long-term basis, and makes a temporal and geographical comparison possible.

1.2.1.2 The University

GUESSS offers a temporal and geographical comparison providing universities with insight into the organization of entrepreneurship (e.g. in the form of entrepreneurship courses, founding climate, infrastructure, etc.).

1.2.1.3 The Individual

GUESSS allows for a temporal and geographical comparison of individual-based characteristics that impact the founding intention and activity of students.

1.2.2 Secondary Goals

There are four secondary goals attached to this project. The secondary goals are to verify and establish the explanatory approaches at various levels for the investigation of the founding intent and activity of students. The project will enable researchers to reflect on their own country's entrepreneurial spirit; along with observing the quality of start-ups. Finally, the project aims to identify the hurdles and barriers faced by entrepreneurial students and to provide recommendations to overcome these hurdles. Each of these goals are further explored below.

1.2.2.1 Founding intent

GUESSS helps with the verification and establishment of explanatory approaches at various levels of analysis (e.g. individual, process, macro-economical effectiveness) for the investigation of the founding intent and activity of students.

1.2.2.2 Reflections on entrepreneurial spirit

GUESSS enables the participating countries to reflect on their entrepreneurial spirit with regard to specific basic founding conditions that drive students to become entrepreneurs.

1.2.2.3 Start-ups by students

GUESSS can observe the quality of the start-ups created by students (e.g. jobs, turnover, etc.).

1.2.2.4 Hurdles encountered

GUESSS helps to identify the perceived hurdles and reservations in the foundation process of studying.

1.3 Methodology Adopted and Framework of the Study

As mentioned previously, the research conducted in Ireland is part of an international study to understand the entrepreneurial intent and activity of tertiary level students. This report will present the findings of the Irish results however a final report has been compiled by the University of St. Gallen and the European Business School (ebs), which reports the overall world-wide findings and can be found on the following website: www.guesssurvey.org. Nineteen countries participated in the study (see Appendix A for the list of countries that participated in the international study). The coordinators of the study – the University of St. Gallen and the European Business School (ebs) - devised a standardized questionnaire to be used by all research partners. The questionnaire was administered using an Internet-based questionnaire in three languages: German, French and English. All information was received anonymously. Figure 1 below identifies the framework of the study.

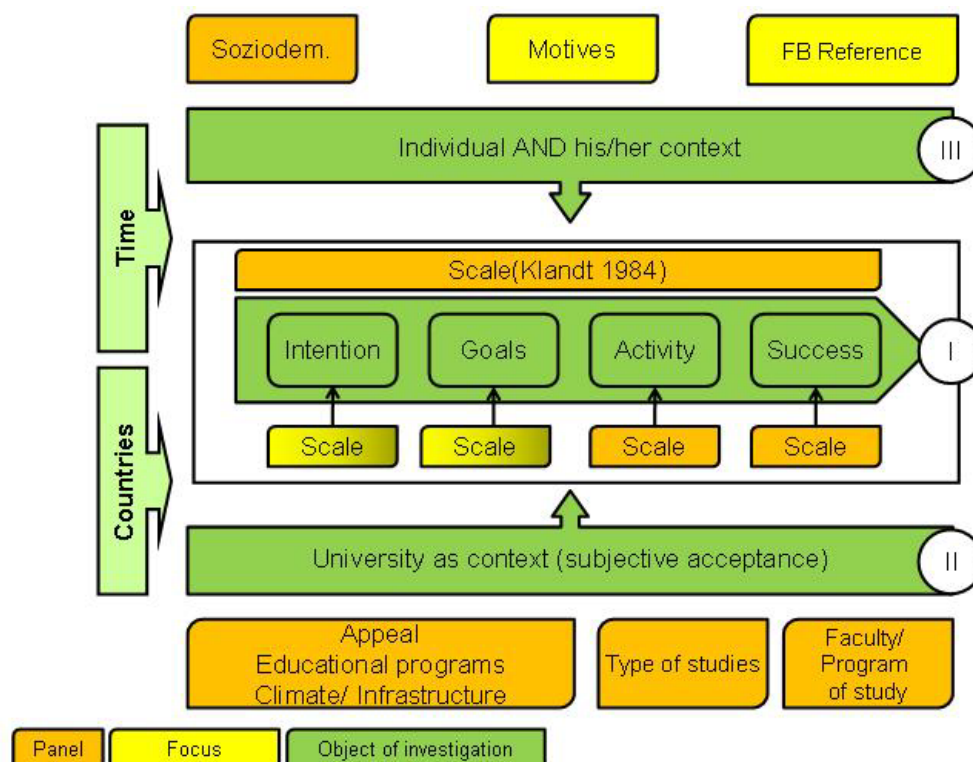


Figure 1 Framework of the study

The study involves three main stages of examination. Firstly, the study examines the '*Core process*' which seeks to investigate the respondent's intention to establish a business. Within this section, the respondent was questioned as to their 'employment' intention directly after graduation and subsequently 5 years after graduation. They were then questioned as to their desire to establish their own business. If they expressed a desire to establish a business or already have established one they were asked a series of questions about the potential/existing business i.e. industry sector, degree of innovation; experience in the industry/products or services, experience with the customer groups and distribution channels. They were then asked what steps they have taken in establishing the business. They were also questioned on the number of employees they have, the revenue the business generates and to rate the business performance in relation to its competition. Finally, respondents were asked to rate a number of statements with respect to their personal satisfaction with their business start-up.

The second stage, '*Context of the University*', sought to examine the educational institution the respondent was attending. Here the respondent was questioned as to what level they were studying at (i.e. undergraduate, Masters, PhD); how many years they have been studying; and what subject/discipline area they were pursuing. Furthermore, the respondents were questioned on how much time they spend studying and how much time they spend in paid employment.

Next the respondents were presented with a list of entrepreneurship related services. They were first asked if these services were available to them and then to rate them on their level of importance. This question sought to examine how entrepreneurial the respondent's academic institution was in terms of the suite of entrepreneurship services on offer. Services such as business plan seminars; coaching; start-up simulations; round tables for founders; incubators and financing for start-ups were included in the listing. They were then asked if they have available of any of the services listed and then if their expectations regarding the services were fulfilled.

The third stage, '*Context of the Individual*', sought to examine the importance of a number of decisions respondents have/may make in relation to work and their career choices. Examples of these include: challenging themselves; wanting to lead and motivate others; desire to develop an idea for a product and to get greater flexibility in their personal life. Next respondents were asked their age; their gender and whether their parents or grandparents were self-employed at some time.

1.4 Sample and Representativeness

Tertiary education in Ireland has a long history and an excellent reputation globally. In the academic year 2003/2004, 143,271 students were enrolled on a full-time third level course, which is one of the highest rates in the developed world (Department of Education and Science 2006). There are four elements to the system of higher education in Ireland: the university sector, the technological sector, the colleges of education and the independent colleges. The first three of these are public and funded by the state. There are seven universities in Ireland: The University of Limerick; University College Dublin; National University of Ireland, Galway; National University of Ireland, Maynooth; The University of Dublin (Trinity College); University College Cork; and Dublin City University. These universities are mainly involved in the delivery of undergraduate and post-graduate degree programmes; at undergraduate level, teaching is given in the form of lectures backed up with tutorials, practical work and the writing of a thesis. Masters degrees involve more course work and research, and doctorates are research-based. Universities in Ireland award their own degrees and the Higher Education Authority, which works on behalf of the Department of Education and Science, oversees the system.

Within the Technological Sector (also known as Institutes of Technology) the Department of Education and Science has responsibility for this sector, which comprises fourteen Institutes of Technology, some of which were upgraded from Technical Colleges in the late 90's. The qualifications offered by these institutes have international recognition. They offer a wide range of courses from certificate level up to PhD. Ireland is an important player in the high tech industry such as computer software and pharmaceuticals and its technological learning facilities reflect this status; the science, technology and business departments are central components in Institutes of Technology.

An important part of the tertiary system of education in Ireland is the private sector; this comprises a wide range of at least twenty-five colleges validated by the Higher Education and Training Awards Council (HETAC). The courses offered by these institutions include a large number in the professional fields such as law, business, medicine and accountancy, as well as those in the humanities, tourism and catering. Some independent colleges are linked with public sector institutions, which provide accreditation for the courses, and the National Qualifications Authority oversees all accreditation in Ireland.

For the purpose of this study, three sectors of the educational system were utilised for the administration of the Internet-based questionnaire, those being universities, Institutes of Technology and private educational colleges. Figure

2 below identifies the location of the respondents who completed the questionnaire. A total of 140 responses were received.

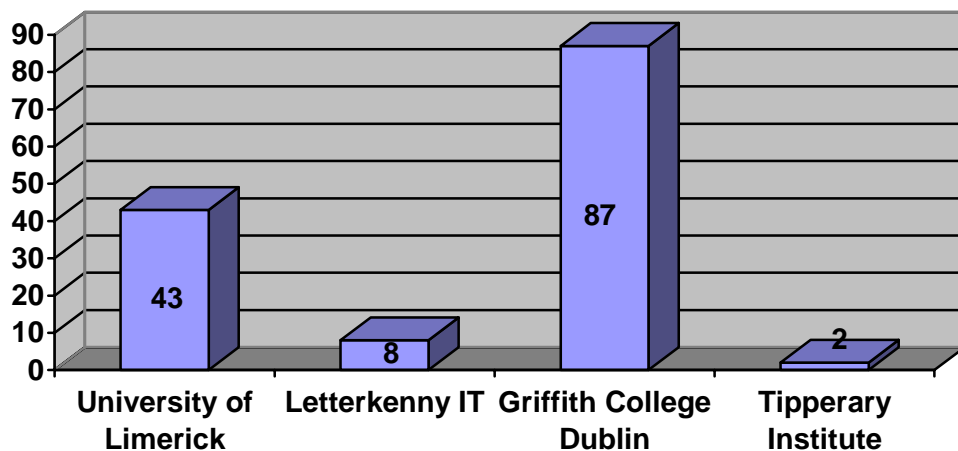


Figure 2 Institution attended by respondents

As Figure 2 illustrates above, the university sector was represented by respondents from the University of Limerick. Respondents from the technological sector were represented by respondents from Letterkenny Institute of Technology. The private/independent sector was represented by respondents from Griffith College in Dublin and Tipperary Institute.

2.1 Core Process

As mentioned previously, this section of the questionnaire questioned the respondents on their intention to establish a business. This was examined on the basis of their intention to start a business directly after graduating or 5 years later. The respondents were then questioned on their potential business and the industry they are/aim to operate in, the performance of the business, their experience with the customer groups and distribution channels.

2.1.1 Independent versus Dependent Employment

The questionnaire questioned the respondents as to which {main} activity they are striving for after they complete their studies. The options open to the respondents were dependent [paid] employment or independent employment [self-employment]. They were allowed to choose whether they hoped to achieve this directly after their studies (within 5 years) and/or 5 years or more after graduation. Table 2 below identifies the responses for those who would like to work in paid employment, with a further analysis for when they would like to achieve this. Table 3 identifies the responses for those who would like to start-up their own business and the table is further analysed based on the timeframe of within 5 years or 5 years or more after graduation.

Table 2 Dependent Employment/Paid Employment

	Directly after studies – within less than 5 years of graduation		5 years or more after graduation	
	Frequency	Percent	Frequency	Percent
Working in a micro- enterprise (1 < 10 employees)	9	9%	1	2%
Working in a small enterprise (10 <50 employees)	14	15%	4	9%
Working in a medium-sized enterprise (50 <250 employees)	24	25%	11	23%
Working in a large company (> 250 employees)	34	35%	20	43%
Working as a researcher in a university	6	6%	3	6%
Working in the civil service	10	10%	8	17%
Total	97	100%	47	100%

Table 2 above identifies that 97 respondents expect to go into paid employment directly after their studies. The majority of respondents (35%) expect to be employed within a large company, with a further 25% identifying working within a medium-sized enterprise. Table 2 further highlights graduates reluctance to work in micro to small enterprises as only 24% (15% small and 9% micro) of the total respondents would work in enterprises of this size. Some 47 respondents identified that 5 years or more after graduation they would like to go into paid employment, with again the majority of these respondents preferring to work in a large company (43%).

Table 3 Independent Employment/Self-Employment

	Directly after studies – within less than 5 years of graduation		5 years or more after graduation	
	Frequency	Percent	Frequency	Percent
Continuing the family business	5	20%	6	8%
Taking over an existing business	0	0%	2	2%
Starting up a franchise	1	4%	3	4%
Investing in/buying a stake of an existing company	1	4%	6	8%
Continuing my own already founded business	1	4%	7	9%
Starting up a business	11	44%	35	44%

Working as a self-employed person (e.g. freelance)	6	24%	20	25%
Total	25	100%	79	100%

Table 3 above makes for some interesting reading as it identifies that only 25 respondents wish to choose self-employment directly after leaving university/college. However, this figure trebles when questioned what they intend to do 5 years after graduation. For those who immediately choose independent employment, the majority have chosen self-employment as a career option, either working as a self-employed person (24%) or starting up a business (44%). What is also interesting to note from Table 3, is that 5 years after graduation the figures for taking over an existing business, starting up a franchise and/or investing in/buying a stake in an existing company all treble in terms of their responses. This table therefore indicates that graduates do consider self-employment as a career option, either directly after graduation or within a short space of time after graduation. These results are encouraging for the Irish economy.

2.1.2 The Creation of a Firm

Respondents were questioned as to their thoughts about establishing their own business and Table 4 below indicates their responses.

Table 4 Thoughts about establishing their own business

	Frequency	Percent
No, never	26	19%
Yes, briefly	50	36%
Yes, quite specifically	15	11%
Yes, but I dropped the idea	9	6%
Yes, I am determined to become self-employed in the future	34	24%
Yes, I am just starting to do so	3	2%
Yes, I am already self-employed	1	1%
Yes, I was self-employed but no longer am	2	1%
Total	140	100%

Table 4 above indicates very positive findings towards student's awareness of self-employment as a career option. As the table indicates, 11% have considered the idea of establishing their own business, 24% are determined to be self-employed and 3% are either in the throws of starting their business or are already self-employed. Respondents were then questioned as to what steps they have taken for their potential start-up and 47 respondents

identified that they have not taken any steps. Table 5 below indicates the results for those who have taken steps.

Table 5 Steps taken in establishing the enterprise

Steps taken	Percentage (n =)
Thinking through initial business idea(s)	42% (47)
Writing down initial business idea	27% (30)
Developing a business plan	23% (25)
Gathering start-up specific information	23% (26)
Visiting start-up specific events	5% (6)
Talking to potential sources of financing	7% (8)
Determining a start-up date	6% (7)
A prototype of the product/service exists	5% (5)
Other	5% (6)

Table 5 identifies the variety of steps taken by students at tertiary level. As is evident from the findings, the majority of respondents are still at the planning stage, with 42% of respondents identifying that they are still thinking about their initial business idea(s) and 23% are gathering specific information to assist them with the start-up of the enterprise. The findings further indicate that a number of respondents are seriously considering self-employment as a career option due to the fact that they are either at the stage of writing down their initial business idea (27%) and/or currently developing a business plan (23%).

When questioned on the industry their enterprise is/will be in 114 responded. Of these respondents the majority (66%) identified the services sector as the industry they are/will be operating in. The 'trade' sector was the next most common industry sector chosen with a response rate of 17%. The findings highlight a worrying fact, that being, little concentration on the manufacturing sector. Manufacturing correlates with the development of intellectual property and creativity of a nation. However, only 17% of those who responded envisage entering this industry sector. Respondents were further questioned on the practical experience they have in the industry they are/will be operating in.

Evidence has shown that new start-up businesses are more successful when the owner/manager has prior work experience in the industry sector they are entering (Kinsella and Mulvenna 1993; Birdthistle 2006). The findings identify that 61% of respondents do not have prior practical experience of the industry they are/will be operating in. The remaining 39% do. Furthermore, respondents were questioned as to their experience with the products/services

that they offer/would like to offer. Some 61% have no experience whilst 39% have some experience. Respondents were questioned as to their experience with the customer groups they currently target or would like to target and 54% identified that they have no experience whilst 46% have some experience. Finally, respondents were questioned as to their experience with the distribution channel that they target (would like to target). Some 78% indicated that they have no experience, whilst 22% indicated that they had.

These findings do question how successful the new business start-ups will be when the owner/manager does not have prior experience in the industry sector, has little to no experience of the proposed products/services; has little to no experience with the customer groups they intend to target and little to no experience with the distribution channels.

Respondents were then questioned about the degree of innovation their (planned) enterprise will have. A total of 114 respondents responded to this question. Eight percent of respondents identified that their degree of innovation will be '*new worldwide*'. This is very encouraging as it's been mentioned above; intellectual property contributes to the creativity of a nation. Furthermore, 18% identified that their innovation will be '*new to the country*', 24% identified that it will be '*new to the city/region*', with the remaining respondents, 50% identifying that the degree of innovation will be '*traditional, proven concept*'.

2.1.3 Firm objectives

Respondents were asked to indicate how important they feel each of the following objectives listed in Table 6 below were to their firm.

Table 6 Importance of firm objectives

	Not at all important	Not very important	Moderately important	Very important	Extremely important
Net profit over 5 years	2% (2)	3% (3)	25% (29)	36% (41)	34% (39)
Rate of growth	1% (1)	8% (9)	24% (28)	43% (49)	24% (27)
Market share	4% (5)	14% (16)	29% (33)	40% (45)	13% (15)
Employee rewards	3% (3)	10% (12)	37% (42)	35% (40)	15% (17)
Net profit over the coming year	4% (4)	13% (15)	33% (38)	35% (40)	15% (17)
Company prestige	4% (4)	3% (3)	17% (20)	32% (37)	44% (50)
Innovation	3% (3)	10% (12)	18% (21)	37% (42)	32% (36)

Assets and reserves	4% (4)	9% (10)	34% (39)	38% (44)	15% (17)
Dividend payout	11% (12)	20% (23)	36% (41)	28% (32)	5% (6)
Price leadership	7% (8)	14% (16)	39% (44)	29% (33)	11% (13)
Services to the community	4% (4)	9% (10)	21% (24)	32% (36)	35% (40)

Table 6 highlights some interesting results. For the majority of respondents they believe that a firm objective of ensuring having a net profit over a 5 year period is either very important (36%) or extremely important (34%). Growth appears to be at the core of the firm objectives for 43% of respondents who rated it as being very important and 24% of respondents who rated it as extremely important. Along with this, market share was of importance to them as 40% rated it as very important and 13% rating it as extremely important. Interestingly rewarding employees was important to respondents as well as 37% rated it as moderately important, 35% as very important. However, only 13% rate it as extremely important. This indicates that rewarding employees should be a firm objective but not necessarily one of the key objectives established by the firm.

Having a prestigious enterprise is of importance to respondents as 44% rated it as being of extreme importance to respondents along with a further 32% rating it as very important. Innovation appears to be at the heart of most of the respondents businesses as 37% rate it as very important with a further 32% rating it as extremely important. Maintaining assets and reserves is of great importance to the respondents since 38% rated it as very important and 32% rating it as extremely important.

Paying out dividends and maintaining price leadership appears to be of some importance to respondents, however, as with rewarding employees it does not rank as highly as the other firm objectives posed to them. The findings identify elements of corporate social responsibility in the respondents since 35% maintain that providing services to the community is extremely important with another 32% rating it as very important.

3.1 Context of the University

This section of the report aims to examine the entrepreneurial spirit of the institution that the respondents were attending. The majority of respondents identified that they were studying at undergraduate level (93%), with the remaining respondents identifying either a postgraduate degree (4%) was being completed (i.e. Graduate Diploma or Masters degree) or completing a

PhD or post doctorate studies (3%). When questioned further as to their area of specialism the majority of respondents (67%) indicated that they were studying either business, political economics or administration. The next most popular area of study was law (19%). The remaining 14% of respondents were studying either humanities related subject area; computing, engineering, architecture, teacher training or environmental studies. Respondents were questioned as to the time spent on studying and the time spent on paid employment and Table 7 below indicates the results.

Table 7 Percentage of time spent on studying and paid employment

Percentage of time	Studying	Paid employment
0 < 10%	4%	20%
10 < 20%	3%	10%
20 < 30%	14%	14%
30 < 40%	8%	16%
40 < 50%	6%	9%
50 < 60%	18%	8%
60 < 70%	20%	7%
70 < 80%	11%	7%
80 < 90 %	8%	8%
90 < 100%	8%	1%
Total	100% (140)	

The findings identified in Table 7 above indicate some worrying findings for academic institutions. It highlights the fact that 35% of the Irish respondents attending tertiary level institutions spend less than 50% of their time studying. The findings also indicate that students studying in Irish academic institutions, even though studying full-time, work part-time as well. When questioned further, 16% (n=23) indicated that they work 40 or more hours per week whilst they are studying. Some 84% (n=117) indicated that they work less than 40 hours a week.

3.1.1 Importance of entrepreneurship related courses

The respondents were then questioned on entrepreneurship related courses and their importance to entrepreneurship and start-ups and Table 8 indicates the results.

Table 8 Importance of courses to entrepreneurship and start-ups (n=140)

	Unimportant	Important
Business plan seminars	31%	69%
Start-up coaching	29%	71%
Entrepreneurship seminars and lectures	31%	69%

Start-up business games/start-up simulations	40%	60%
Regular round tables for founders (e.g. exchange of experiences)	33%	67%
Contacts for general questions	26%	74%
Start-up financing through the university	27%	73%
Incubators (service centre for early stage start-ups)	31%	69%

As is evident from Table 8 above, an overwhelming majority of respondents believe that seminars, coaching, lectures, simulations and games; round tables; points of contact; start-up capital obtained from the institution and incubators are of importance to entrepreneurship and start-ups. Respondents are of the belief that these services and/or supports should be available through the tertiary level institution. The respondents were then questioned on whether or not these services exist in their institution and Table 9 indicates the results.

Table 9 Entrepreneurship courses/services exist in the institution (n=140)

	Yes	No	Don't know
Business plan seminars	31%	10%	59%
Start-up coaching	14%	15%	71%
Entrepreneurship seminars and lectures	46%	9%	45%
Start-up business games/start-up simulations	17%	19%	64%
Regular round tables for founders (e.g. exchange of experiences)	10%	16%	74%
Contacts for general questions	37%	12%	51%
Start-up financing through the university	6%	21%	73%
Incubators (service centre for early stage start-ups)	9%	16%	75%

Table 9 provides for some worrying findings as in the majority of cases the students attending tertiary level institutions in Ireland are unaware if entrepreneurship courses/services exist within their institution. Where there was knowledge of the existence of these services, the results indicate that entrepreneurship seminars and lectures and a point of contact are the main services provided to students. Sporadically, there are coaching services, funding available to start-ups and incubation centres. Next the respondents were questioned if they had made use of the services and Table 10 below indicates the results.

Table 10 Have you made use of this service

	Yes	No
Business plan seminars	63% (27)	37% (16)
Start-up coaching	32% (6)	68% (13)
Entrepreneurship seminars and lectures	59% (38)	41% (27)
Start-up business games/start-up simulations	26% (6)	74% (17)
Regular round tables for founders (e.g. exchange of experiences)	29% (4)	71% (10)
Contacts for general questions	42% (22)	58% (30)
Start-up financing through the university	0% (0)	100% (8)
Incubators (service centre for early stage start-ups)	23% (3)	77% (10)

The findings identified in Table 10 indicate that business plan seminars and entrepreneurship seminars and lectures are the most popular services used by those who responded. Next respondents were questioned as to whether their expectations regarding the service were fulfilled and Table 11 indicates the results.

Table 11 Expectations regarding the services

	Not fulfilled	Fulfilled
Business plan seminars	4% (1)	96% (26)
Start-up coaching	0% (0)	100% (6)
Entrepreneurship seminars and lectures	16% (6)	84% (32)
Start-up business games/start-up simulations	33% (2)	67% (4)
Regular round tables for founders (e.g. exchange of experiences)	25% (1)	75% (3)
Contacts for general questions	9% (2)	91% (20)

Of those responded, Table 11 identifies that in the majority of cases, where the courses were attended or the services utilised, the respondents felt that their expectations were fulfilled. However, the table does indicate that where respondents attended the start-up business games and/or simulations 33% felt that their expectations were not fulfilled.

4.1 Context of the individual

This section of the study sought to examine the importance of a number of decisions respondents have/may make in relation to work and their career choices. A demographic profile of the respondent was also gathered along with an understanding of the entrepreneurial behaviour of family members.

Respondents were asked to rate to what extent a number of criteria had on their influencing their work and career choices and Table 12 indicates the results.

Table 12 Impact on work and career choices (n=137)

	To no extent	Little extent	Some extent	Great extent	To a very great extent
Impact on personal life					
To challenge myself	2%	6%	19%	39%	34%
To fulfil a personal vision	1%	3%	15%	42%	39%
To grow and learn as a person	0%	3%	18%	37%	42%
To lead and motivate others	4%	14%	21%	34%	27%
Power to influence an organisation	5%	14%	27%	29%	25%
Follow an example of a person I admire	33%	20%	25%	12%	10%
To be respected by my friends	23%	18%	28%	19%	12%
Achieve something, gain recognition	3%	12%	15%	37%	33%
Gain a higher position for myself	4%	12%	19%	36%	29%
Get greater flexibility in my personal life	2%	11%	19%	35%	33%
Free to adapt my approach to work	4%	7%	23%	39%	27%
Financial Impact					
Earn a larger personal income	1%	7%	24%	29%	39%
Financial security	1%	3%	19%	33%	44%
Build great wealth, high income	5%	7%	30%	27%	31%
Family Influence					
Build a business my children can inherit	26%	25%	20%	15%	14%
To continue a family tradition	51%	25%	12%	6%	6%
Innovative Impact					
Innovative, at the forefront of technology	23%	19%	34%	17%	7%
To develop an idea for a product	26%	18%	21%	23%	12%

Concerning the impact on their personal lives, respondents indicated that they want to challenge themselves to a great/very great extent (73%). Eighty one percent identified that their work/career decision was based to a great/very great extent (81%) on fulfilling a personal vision. To grow and learn as a person greatly/to a great extent was chosen by 79% of respondents, with a further 70% identifying that the decision they made concerning their work and career choices was influenced by achieving something and gaining recognition by others. In choosing their work and career choices, gaining

recognition by friends and following the example of someone they admire did not greatly influence the respondents, as only 31% and 22% respectively indicated it had a great/very great impact on their decision.

It appears from the findings that respondents believe that their work and career choices will provide them with a good financial footing. This is evidenced by the fact that 68% indicated that their choice was influenced by earning a larger personal income. Furthermore, 77% indicated that their choice was on the basis of having financial security and 51% indicating that they want to build a greater wealth for themselves.

Concerning family influence, the majority of respondents identified that their career and work choice was not influenced to any or little extent by creating a legacy for future generations (51%). Additionally, 76% identified that their career and work choice was not made on the basis of continuing a family tradition. Finally, respondents indicated that creating an innovative impact on society was not an influencing factor in their work and career choice as only 24% indicated that it has a great/very great impact on their decision with a further 35% indicating that they want to a great/very great extent develop an idea for a product.

4.1.1 Demographic profile of the respondents and entrepreneurial behaviour of family members

The gender breakdown of the respondents was 52% were male and 48% were female. An overwhelming majority of the respondents were born between 1980 and 1990 (85%) with the remaining born between 1970 and 1980 (11%) and the remaining 4% were born pre-1960. The respondents were then questioned whether their parents and/or grandparents were self-employed and Table 13 indicates the results.

Table 13 Parents and/or Grandparents employment status

	Father	Mother	Either of grandparents
He/she has always been self-employed and still is	42% (59)	15% (21)	19% (27)
He/she was an entrepreneur until I was 15, but is not any more	9% (12)	11% (15)	19% (27)
He/she has never been an entrepreneur and still isn't one today	40% (56)	71% (99)	56% (78)
He/she was not an entrepreneur until I was 15 and is still today an entrepreneur	9% (13)	4% (5)	6% (8)

Concerning the fathers' employment status of the respondents, it is evident from Table 13 above that 42% of respondents fathers are self-employed currently with a further 9% indicating that in the past he was self-employed. Thus for over half of respondents they had a parent who was an entrepreneur. Concerning mothers' employment status the majority had mothers who were not entrepreneurial (75%). However, in the case of 25% of respondents they had a mother who was self-employed. Finally, in the case of 62% of respondents neither of their grandparents were self-employed.

5.1 Discussion and Conclusions

The goal of this study is to create a clear picture of students' career aspirations; future goals and plans. The focus was therefore on the examination of the behaviours and intentions of students in their decision to start entrepreneurial activities and establish an enterprise. In order to achieve this overarching goal, primary and secondary goals were established. The primary goals were to examine the start-up process; examine the institution in which the student was completing his/her studies and to focus on the individual and their characteristics. The secondary goals were to verify and establish the explanatory approaches at various levels for the investigation of the founding intent and activity of the students.

The report identifies that SMEs are crucial to the economic and social development in Ireland. Evidence was provided within the report of the development of SMEs in Ireland over a period of time, which highlighted the importance of the small firm sector to the Irish economy. Developing a business as a career opportunity has only really emerged in the past decade as a *suitable/credible* career. In line with this government policy has somewhat changed and developed to a more pro-SME focus rather than focusing more intently on the FDI type business. This therefore lends credibility to the establishment of a SME firm.

The demographic profile of the respondents to the study was: the majority were male (52%); born between 1980 and 1990 thus the majority were under the age of 30. Fifty one percent of respondents indicated that their father is either currently self-employed or has been in the past, self-employed. The opposite is true when one examines the occupation of the mother. An overwhelming majority of respondents (75%) identified that their mother was never self-employed. In a minority of cases there is evidence to show that the respondent's grandparents were self-employed (19%). However the majority (62%) have indicated that neither of their grandparents was entrepreneurial. The remaining respondent's (19%) identified that a grandparent was self-employed but is no longer.

In the beginning of the report the students' intention to start a business was examined. This examination was based on two time frames: directly after graduation or five years later. The results indicate that a greater proportion of students would prefer to begin their working life as employees rather than as an employer. However, the findings do provide some interesting results in relation to the '5 years later' option. For '*working as a self-employed person*' or '*starting up a business*' the results for these trebled. Eleven respondents choose 'starting up a business' immediately after graduation however this went to 35 '5 years or more after graduation'. Six respondents choose 'working as a self-employed person' which then jumped to 20 respondents choosing the '5 years or more after graduation' option. This finding therefore indicates that as the time horizon broadens out there is a greater probability that graduates might establish their own business. The report identifies very positive findings towards students' awareness of self-employment as a career option. Over one quarter of the total respondents are either determined to become self-employed or have already done so. Furthermore, the results identify that a large proportion of the students have taken concrete steps in the realisation of their dream. This is evidenced by the fact that over two-fifths' of students are thinking through their initial business idea; under a third are writing their business idea; and a quarter are developing their business plan. This result and the preceding results are very positive for Ireland's future as an entrepreneurial nation.

A worrying finding of this study is that the majority of students, who want to establish their own business, do not have prior work experience in the industry sector they are entering. Similar findings were also identified for the respondent's knowledge and/or experience of the product/service they aim to offer, as well as their experience with the customer groups they would like to target and the distribution channel they will be using. It is imperative that the entrepreneurship/business lecturer in the students' institution and/or the library provides the relevant information about the industry sector they aim to penetrate or else they might not be successful.

The findings report that the level of innovation amongst the students is quite low. Only 8% of respondents identified that their product/service will have an innovation that is 'new worldwide'. For further studies of this nature it would be imperative to probe this subject area in more detail.

The next section of the report examined the context of the university, with an aim to investigate the entrepreneurial spirit of the institution that the respondent was attending. The majority of students who took part in this study were studying at undergraduate level, focusing on business related subjects. A worrying finding from this study is that even though the majority

of students classified themselves as 'full-time' students 35% spend less than 50% of their time studying. The reason for this is that they are in paid employment! An overwhelming majority of students agreed that entrepreneurial seminars/services such as seminars, coaching, lectures, simulations, and roundtables, points of contact, university funding and incubators are of importance to entrepreneurs and start-up businesses. However, when examined the majority of informants were not aware if their institution provided these services. Where knowledge did exist, only a minority of informants used the services. This leads us to the conclusion that tertiary level institutions in Ireland should offer entrepreneurial services as indicated in this report, such as seminars, roundtables, etc. However, it is imperative if they are already offering such services they need to be communicated both internally and externally, to the wider community.

The final section of the questionnaire focused on the *context of the individual*. Here, the study sought to examine the importance of decisions the respondents have made in relation to work and career choices. The findings of the study highlight that overall, to a [very] great extent their work and career choice was influenced by the financial impact it had on them. The majority of respondents perceived that earning a larger personal income, having financial security and building wealth were the reasons why they chose the career path they have taken. On a personal level, challenging oneself; fulfilling a personal vision; power to influence; achieving something, freedom and having flexibility were issues which greatly impacted their choice of career. Interestingly, following an example of someone they admired and being respected by friends didn't greatly impact their choice of work or career. What is a worrying finding from this study is the fact that innovation and developing an idea for a product had little to no impact on their choice of career or work.

6.1 Recommendations

The findings emanating from this Irish study are particularly timely, in what are very challenging economic circumstances and where increasingly Irish government policy is focusing on the development of the indigenous small firm sector. Based on the results of this research, a number of recommendations have been drawn to inform educational institutional strategies broader government education and support policy and on how best to prepare students for an ever changing workplace and for faculty charged with the task of entrepreneurship programme development and assessment.

6.1.1 Higher Educational Institutions

It is evident from the research findings that the majority of students have been introduced to entrepreneurship as a career option through their third level education. This indicates how important colleges and universities are in creating the awareness of entrepreneurship as a career option and providing a central foundation for understanding what is involved in becoming a successful entrepreneur. Given the emphasis that should be placed on entrepreneurship education, educators in higher level institutions should be encouraged to build effective entrepreneurial programmes into all of their curricula and indeed in all of the courses they offer.

The findings from the research illustrate that in some cases students have already commenced with their business (some are at final planning stage whilst others have actually started a business) whilst completing their third level education. It is recommended that *all students, across all disciplines*, should be encouraged to write a business plan throughout the completion of a degree programme - this should not be confined to business schools. By completing a business plan, students will be introduced to all aspects associated with business start-up i.e. industry and market analysis, customers, market research, production, operations, and finance.

Overall it is clear from the research that students are considering self employment as a career option either directly upon graduation or after five years work experience, which augers well for the Irish economy and it is imperative that this is improved upon. However, of note, was the lack of preference for students to work in a micro or small firm upon graduation. This may be due to a lack of understanding of the operations and potential of these types of firms. A means of addressing this issue is to increase the exposure of students to entrepreneurs, owner-managers or "role models" for students to emulate and who will bring a sense of reality and enthusiasm into what running a micro/small firm entails.

In a related manner, the results show that the majority of students who want to establish their own business do not have prior work experience. It is imperative that higher educational institutions compensate to some degree for this and provide students with practical business experience before graduating so as to ensure that they are equipped with "real hands" on experience. This has been achieved to some extent in the provision of work placements in some higher level institutions, such as co-operative placement in the University of Limerick where students in every discipline in their third year of study goes out on work experience for eight months. These work placements should be introduced in all higher educational institutions to provide students with this "real-life experience" before graduation.

Additionally, institutions must create opportunities for students to work with entrepreneurs and owner-managers through consultancy assignments or forms of internships, and/or encourage them to complete [voluntary] projects for local small firms. These initiatives will introduce students to different industry sectors, products/services, distribution channels, customer requirements and the operational aspects associated with business; all of which are elements of business start-up and business development.

Whilst the introduction of a work placement programme would be a very positive initiative for higher educational institutions to introduce in the current economic climate, alternative options for students to gain hands on experience in small firms can be achieved through practicum's. Practicum's" provide students with the opportunity for cross-disciplinary and community/industry oriented learning experiences. Such practicum's will enable students to become involved in action-based work which centres on community groups, companies, and public sector organisations. This will facilitate the development of transferable skills such as administrative skills, leadership skills, communication and presentation skills and team building skills.

Continuous effort needs to be afforded to initiatives which promote an entrepreneurial culture within the individual and educational context of the student, for examples competitions, alumni start-ups, mentoring, networking and the provision of some minor funding for students who wish to advance their business idea to prototype stage should be considered.

If the aforementioned initiatives are in place then the problems relating to the low level of innovation amongst students as recorded in the findings of this study will be addressed. Creativity should be encouraged through the existing curricula whereby students should be encouraged by faculty members to be "creative and innovative" in their thinking irrespective of the subject or discipline of study. Faculty should encourage students to start using the "left side of the brain" instead of always relying on the "right side". This can be done by encouraging discussion in lectures/tutorials, by organising brainstorming sessions for students whereby "freewheeling" is encouraged and criticism of individual ideas is disallowed.

Focus groups on various issues relating to the students courses could also be organised by faculty members thus facilitating creative thinking and boosting confidence amongst students. Innovation could be promoted amongst students by adopting an interdisciplinary approach to teaching in higher educational institutions e.g. business students should be encouraged to collaborate with students from non-business disciplines such as: engineering

students to develop business ideas. Students from all disciplines can benefit from the synergies created by this collaboration, thus strengthening innovation.

It emerged from the study that students regard entrepreneurial services (i.e. seminars, coaching, lectures, simulations, and roundtables, points of contact, funds and incubators) as being important, and thus should be provided by higher educational institutions. However, as reported, even though some institutions currently engage in such activities, students do not avail of them. It is recommended that higher educational institutions should conduct research amongst the student body to unearth the reasons why students are not using the services provided. The research should also explore the issues that students are interested in, in terms of business start-up, and what are the best ways to inform students about these services. Higher educational institutions should be mindful of the significant role that technology plays in terms of entrepreneurship education for students. Faculty members should be encouraged to adopt different communication methods with students and to encourage interactive participation i.e. blogs, Facebook, Twitter, online courses, online self assessment quizzes etc.

Additionally, “Entrepreneurship Societies” could be established in educational institutions whereby the society could be run by students as well as faculty members, allowing them to gain experience in managing a society, gaining transferable skills for future use. If students are involved in the management of the society, they will have a greater insight into what the student population as a whole is currently interested in. The entrepreneurship societies could invite guest speakers who are local entrepreneurs to provide discussions on their experience of starting up their business. Local support agencies could be invited to provide business advice to students with business ideas. The establishment of entrepreneurship societies will allow students to engage with local entrepreneurs, local support agencies and local government organisations thus opening up networking opportunities for them for the future. Furthermore the involvement of owner-managers, government agency representatives and funding institutions can play an important role as mentors and as business contacts and potential stakeholders in businesses established by students at a later stage.

Consistently the use of practice-based, action learning programmes was shown to be most favoured by students and effective in transmitting the relevant entrepreneurial knowledge and skills. This has implications for the traditional role of the lecturer in terms of delivery and assessment of module content. Faculty must be competent in the design, delivery and assessment of experiential learning and feel comfortable in its delivery by adopting multiple

roles as facilitator, adviser, guide, and mentor. Academic freedom must not be restricted by institutional budgets and operating constraints. Corresponding, the role of student changes from one of passive recipient to one of active participant and instructor of their own learning. The strategic objectives of educational institutions must recognise, reward and resource entrepreneurship education initiatives so that they become embedded in a comprehensive and long-term oriented strategy for educational, research and enterprise industry linkages, resulting in sustainable changes in structures and the behaviours of educators and students alike.

Moreover, whilst core to any entrepreneurship programme is the increase in the number of graduates starting a business, it is not exclusively so. Entrepreneurship education can provide students with the skills they require for identifying opportunities, understanding market conditions, sourcing finance, project management, risk assessment, personal and leadership skills which are beneficial by-products of this education, which will add value to existing firms through increased intrapreneurial activity.

Ultimately it is advanced that entrepreneurship education should not be a remit of one institution or agency, but rather an integrated cohesive ethos that is given emphasis and priority in government policy and educational institution strategies, as each stakeholder has a critical impact.

6.1.2 Support Agencies

Entrepreneurship must be continuously promoted as a viable career option for third level graduates in Ireland. It is promoted by the authors that government and support agencies should play an active role in this promotion. Government agencies need to ensure that the appropriate structures are in place so as to encourage entrepreneurship amongst third level graduate through the provision of an adequate infrastructure, enabling economic stability, and assisting in market and technological readiness. It is imperative that these favourable conditions exist in the Irish economy to create a competitive business environment - an environment which is attractive to graduates.

The barriers associated with business start-up (i.e. bureaucracy, "red tape", legal issues) need to be addressed by policy makers and "bottle necks" in the system need to be removed or at least reduced to encourage third level graduates to enter self-employment as an attractive and uncomplicated career option. Furthermore, policy makers need to ensure that entrepreneurs can gain access to both "hard" and "soft" supports. Access to credit and finance for entrepreneurial businesses will be essential as well as access to relevant and practical training and mentoring.

Policy makers should also determine the particular needs of entrepreneurs and evaluate the adequacy of current training programmes in meeting these needs. Having conducted an evaluation of the specific needs, training programmes should be developed by support agencies which are practical and relevant in their approach to developing entrepreneurs. Programmes should also be tailored specifically to the individual needs of entrepreneurs depending on the stage they are at in terms of the business development i.e. start up or growth phase.

6.1.3 Educational Policy Perspective

Given the results of the survey, third level entrepreneurship education would have greater meaning and could be advanced to a higher level if all students had exposure to some form of enterprise education at second level (between the ages of 12 and 18). By introducing students to entrepreneurship at an early age, it would become embedded in their mindset, thus increasing self-efficacy and heightening intentions for entrepreneurship. Educational policy makers should endeavour to include entrepreneurship in all parts of the curricula at primary and second level schools. Educational curricula should (at primary and second level) introduce students to creative thinking, opportunity identification and equip them with skills and the knowledge associated with business start-up from the earliest age possible. By creating this entrepreneurial mindset from an early age, it may reduce the “fear of failure” so commonly associated with Irish entrepreneurs and increase the number of students who will become entrepreneurs before accumulating five years work experience. Furthermore, if this education was to happen, the entrepreneurial mindset would have been created before students enter tertiary level education, thus encouraging them to pursue a third level qualification that would enable them to have self-employment as a career option.

To conclude, students view self-employment as a viable career option, thus tertiary level institutions and policy makers in Ireland must continue to actively promote entrepreneurship in order to sustain and, indeed, increase entrepreneurial activity in the future.

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Appendix A

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