

THE SMALL FIRM - SET AT THE START

CRANFIELD INSTITUTE
OF TECHNOLOGY
MANAGEMENT LIBRARY

ACC NO

121299

CLASS

19-286

SUE BIRLEY
Research Professor in Entrepreneurship
Cranfield School of Management
Cranfield Institute of Technology
Cranfield, Bedford MK43 0AL
England

Tel: 0234 751122

To be presented at the Sixth Annual Babson Entrepreneurship
Research Conference 1986

Working paper 85.10

Copyright Sue Birley

October 1985



3 8006 10074 5416

ABSTRACT

The research studied extent to which the employment size of the new firm is set at the start, how many subsequently grow, and whether those which survive AND grow have any identifiable characteristics.

The primary measure of growth used was that of employment. For both the start of the firm and at the time the questionnaire was administered (1983), data was collected on the number of owners, part-time and full-time, and on the number of employees both part-time and full-time and by level of skill. Financial data included sales level, profits level and forecast sales trend. Indicators of possible change were either an altered legal structure or a move of premises. Control variables included incubator characteristics, industry, and supplier and customer geographic base.

The results of the study show that, for the majority of the firms, employment size was set at the start. No aggregate growth occurred in either full-time or part-time jobs, nor was there any apparent age-effect. During the six years studied, firms which had increased the number of employees were of all ages. Those firms which grew sales during the early years did so by increasing the customer base, and without generating further jobs.

The major inference from this study is that growth would appear NOT to be a primary objective of the entrepreneur. Further research to test these results is clearly necessary. Should they be replicated elsewhere, future strategies to improve the job generation capabilities of the small firm would be most fruitful if directed at building a solid foundation for all firms rather than trying the impossible task of 'picking winners'. The study concludes that this implies making decisions about all aspects of the firm in order to create a balanced entity. This can only take place at the time that the resources are being assembled and so requires an individual, specific service at the local level. In such an environment, the role of State and Federal Government is in guiding, encouraging and sponsoring rather than legislating.

THE SMALL FIRM - SET AT THE START

In recent years much political attention has been focused upon the small firm sector. Following the landmark study by Birch [1979], there is now a general acceptance that small firms have made a significant net contribution to the job generation process on a nationwide basis. With unemployment rising to politically unacceptable levels as large companies close down or contract operations, a healthy and growing small and NEW firm sector is seen as critical. Strategies have been designed, legislation enacted, and schemes introduced in an attempt to improve economic performance and increase employment. Unfortunately, since detailed demographic data has been unavailable, many of the strategies have had to follow an expensive 'shot-gun' approach. Fundamental to these strategies, however, has been an assumption that firms need not only to survive but also to grow. Despite this, the little data which has been collected suggests that in the past most firms have either grown very little or not at all. Further, many stumble and fail in the first few formative years. The question which arises, therefore, is to what extent the size of the firm is set at the start, how many subsequently grow, and whether those which survive AND grow have any identifiable characteristics.

PREVIOUS RESEARCH

Literature pertinent to this topic spans the disciplines of Economics, Corporate Strategy and Organisational Behaviour, within which emerge three main developing themes. First, as

Robinson and Pearce [1984] comment, much of the strategy literature assumes growth as a prime objective of the firm. This is echoed in traditional economic theory which assumes that "the small business enterprise is a profit-oriented organisation" (McGuire [1976]), driven by forces from the market place through a series of stages which have been variously described as based upon managerial skill (Liao [1975], Strauss []) or a predestined set of 'barriers' such as the crises of leadership, autonomy, control, and red tape, (Churchill and Lewis [1983]). Indeed, McKenna and Oritt [1980] take this further and conclude that 'society exerts external pressure on the business to grow.....no growth, or "wait and see" is frowned on'. Moreover, much of the prescriptive literature aimed at the small firm owner exhorts him to plan and thus control his growth (Gilmore [1971], Charan, Hofer and Mahon [1980]). This is in conflict with the view propounded by Gibb and Scott [1983] that small firms learn by solving problems rather than by anticipating them. Nevertheless, the underlying assumption of most literature is that companies which do not grow will eventually fail.

Recently, there has emerged a second theme, a body of literature which challenges the two assumptions - that growth is essential, and that it is the main goal of all entrepreneurs. Indeed, as Stanworth and Curran [1976] point out, most firms do not apparently grow nor do they fail. There is 'no single, simple pattern of growth' 'whether any dramatic take-off into sustained growth is likely....is a matter for debate and even scepticism.' Their view is that growth is much more likely to be

a function of the individual, his personal goals, needs and inclinations than any environmental pressures. Thus they delineate the artisan, who requires personal independence, from the manager who seeks recognition for managerial excellence, from the classic or growth oriented entrepreneur who is entirely profit oriented. This view is echoed by Carland, Hoy, Boulton and Carland [1984] in a later conceptual paper which distinguishes the 'small business owner' or life-style activity from the classic, profit-oriented entrepreneur. Indeed, the 1985 Report of the President on The State of Small Business comments '...more establishments owned by the smallest enterprises [fewer than 20 employees] show constant employment and fewer show contracting employment.' Whilst the definitions may vary, the basic assumption here is that people who chose self-employment do not adopt automatically the goal of creating an empire; many take the attitude expressed by Hodgson and Parker [] that 'big is not necessarily best'. McGuire [1976] widens this debate in his proposition that whatever the goal of the entrepreneur, there are limits to the extent to which growth is possible. These limits are defined by two factors - the particular characteristics of both the market (see also Engwall [1978]) and the geographic environment, and the 'entrepreneurs expertise' in adapting his managerial style to the changing needs of the firm [Birley 1982/3].

The third theme pertinent to this study is the extent to which the eventual fate of the firm is determined at the start, since previous studies suggest that a majority of firms which

eventually fail do so in the first few years (Churchill [1955], Hoad and Roscoe [1964], Siropolis [1977], Massel [1978], Birch [1979]). Parallel with this, recent research has found a relationship between the size of the firm at birth and its chances of survival. For example, Star and Massel [1981] found a direct relationship between these two factors when annual sales revenue was used to define company size - the smaller the organisation, the higher the chances of failure. Using employment to define company size, Teitz, Glasmeier and Svensson [1981] found the four year survival rates of firms employing less than 20 people to be 49.9%. In their study of the dissolution rates of newspapers and of unions Freeman, Carroll and Hannan [1983] concluded that their sample firms were faced with two major liabilities - newness and smallness.

In summary, the research outlined above suggests the following two apparently conflicting conclusions. First, whereas the entrepreneur may be exhorted to grow by both his environment and by his advisors, in the majority of cases, this may not be his inclination. Second, should he choose to follow his own inclinations and not grow, his chances of failure during the first few years are increased. However, the major limitation of the studies concerned with the growth of the firm in the first few years is that most of them relate current size to failure rates, and from this infer lack of growth. Thus no account is taken of the extent to which growth actually takes place between the start of the firm and the point at which the data is collected. Moreover, the measures of growth used tend to be

single measures - either sales or total employment. Evidence therefore exists that further research into the multiple dimensions of growth during the first few formative years of the firm is well overdue.

THIS RESEARCH

This study was conducted in St. Joseph County, Indiana, as part of a research project which investigated the characteristics of the NEW firm population during the years 1976 - 1982. The research was part of community effort, named Project Future, and would form the basis of a strategy for industrial regeneration in the County. Results reported in previous papers have examined the size of the new firm population [Birley 1984], the role of networks during the start-up process [Birley 1985], and the relationship between new firms, those which ceased trading, and job generation [Birley 1986]. Two results from these earlier publications are pertinent to this paper. The first supports previous findings which relate failure rate to size; within St. Joseph County, 92% of those firms which ceased trading during the first two years employed less than 20 people. Secondly, the entrepreneur in the County tended to use only informal networks of family and friends when gathering the resources of the firm rather than the formal networks of accountants, lawyers, realtors and banks. The strategy which emerged from these results involved the creation of an Enterprise Office, a clearing house or advice centre focussed upon helping the emerging firm. The question which remained and which forms the basis of this paper was the

extent to which it was possible to identify, and thus focus the strategy upon those firms or sectors which exhibited growth characteristics. Three research questions were posed:

1. How many companies tended to grow during the first few formative years?
2. What was the rate of growth and on what dimensions did it occur?
3. When did growth occur - were there differences in the growth of firms of different ages?

In the Spring of 1983, a questionnaire was sent to all those firms in the County which had started between the second quarters of 1976 and 1982. The population covered the industrial sectors of agriculture, manufacturing, service and transport being those sectors judged by the Board of Project Future to be fundamental to economic recovery. Of the 703 firms surveyed 160 useable replies were received giving a response rate of 25%. The actual response rate was probably higher than that, however, since a number of firms would have ceased trading in the year from 1982 and 1983 when the survey was launched. For a full discussion of the research design see Birley [1985]. The data which was collected and which is relevant to this study is listed below;

*Size

Sales level

Profits level - perceived performance

relative to competition

***Growth** Forecast Sales Trend - expectations
relative to
competition

***Size and Growth** For both the start of the firm and at the
time the questionnaire was administered -

Number of Owners or Shareholders

Number of Owners; Full-time
Part-time

Number of Employees; Full-Time
Part-time

Number of Employees; Skilled
Semi-skilled
Unskilled
Managerial
Clerical

***Changes** Moved Premises?
Changed Legal Structure?

***Control Variables** Incubator Size
Incubator Relationship
Age of Firm
Industry by SIC Classification
Supplier Geographic Base
Customer Geographic Base

The 'growth' measure of forecast sales trend and the profits level were measures of perception and, as a result, the data was

less robust than fact. However, it was not possible to gather useable historic sales trends or profits since it was unlikely that annual comparative data for those companies less than three years old would be reliable, even assuming that respondents were prepared to divulge the data. Moreover, such a short time period did not allow for the valid measurement of trends. The 'change' measures were included since they may be indicators of the firm preparing to grow in the future. Incubator characteristics refer to the company for which the respondent had worked immediately prior to starting the firm. The incubator size was measured by number of employees, and the incubator relationship as either customer, supplier, competitor, related or unrelated.

RESULTS

a. Financial Performance

Respondents were asked to indicate the level of sales, their view of profits for the previous financial year, and their forecast of future sales. The aggregate results are shown below;

Sales Level

Mean Sales Level = \$425,000

Mean Sales Level, excluding the four companies with sales in excess of \$2.5m = \$302,000

Median Sales Level = \$175,000

Forecast Sales

The percentage of the sample which forecast sales to -

Grow = 68%

Stay about the same =20%

Decline = 12%

Profits Level

The percentage of the sample which viewed their profits relative to competition as -

High or very high = 17%

Average or poor = 53%

Very poor = 30%

Whilst this self-reported data should be viewed with a certain amount of scepticism, it is clear that many had achieved significant size in the first few years of trading. Moreover, there was, as expected, a statistically significant difference between the level of sales and age, the larger firms tending to be the older ones. However, analysis of the other two control variables indicated no apparent relationship between attitudes to either profits or future sales, and the age of the firm. The very young were just as likely to be optimistic or pessimistic as the more mature in the sample. No relationship existed between the level of sales and either the incubator size or the subsequent incubator relationship.

b. Employment Measures - Size and Growth

Analysis of the change variables indicated that at least half the firms had changed their nature. Thus 42% had moved location and

68% had changed their legal structure, mainly from a sole proprietorship to a Sub-chapter S. However, concurrent with this, little growth in employment had apparently taken place. Table 1 illustrates the mean and median values for each of the size and growth measures. A two-tailed 't'-test was conducted to test for any significant difference between the mean values. The 'z' scores for this test are shown.

Insert table 1 about here

As can be seen from this table, the only dimension on which any apparent significant aggregate growth had taken place in the sector was that of clerical employees, a result counter to the common view that small firms do not invest in fixed cost 'managerial' skills in their early days. There is also an indication that some of the firms had increased the level of skilled employees, although this had no effect on the overall number of jobs created. Therefore, it would appear from these results that -

For the majority of the firms, employment size was set at the start.

More detailed examination of the employment data further supports this statement (see table 2 below).

Insert Table 2 about here

From this data, a number of points emerge to form a more focused profile of this new firm sample -

- * Some 19% of the firms were clearly either marginal, part-time, self-employed activities or convenience, paper companies without full-time owners.
- * Approximately 70% had chosen to start their business by employing at least one person full-time. Of these, 71% employed at least one person other than the owners. Moreover, more than 50% of the jobs created tended to be in the skilled category.
- * Very few had reduced the level of employment since the start of the firm.
- * More than 60% of the firms had seen no change in the employment profile since the start of the firm.
- * Where growth had taken place, this had included both full-time and part-time employees, mostly in the skilled category.

c. The Effects of Age and of Industry

For all the results reported in section b. above, two questions remain. To what extent are they a function of the age of the

firm, and to what extent a function of the industry? In the case of the employment measures, an index was constructed which compared the level at the start of the firm with the level in 1983. An index of 1.0 would indicate no change, greater than 1.0 would indicate growth and less than 1.0 decline.

Chi-squared test were first conducted to highlight any possible univariate relationships. Subsequent to this, discriminant analysis was conducted in order to check initial results. In the event the latter results are not reported since in only one case did any significant or contradictory result emerge. Moreover, some 50% of the data was omitted from the analysis due to missing values in one of the variables and the results were therefore judged to be potentially misleading.

1. Age Effect

Firms in the sample included those started between 1976 and 1982, and since the data was collected in 1983, age ranged from one to six years. The results are shown in table 3.

Insert table 3 about here

In all but one case these results indicate no age effect. During the six years studied firms which had increased the number of employees were of all ages. However, one significant result did emerge. Older firms with greater sales revenue had developed a wider customer base than the smaller, younger firms. Whilst this

last result is based upon data which, due to the small cell values requires cautious interpretation, it does build a profile of the new firm which forms the basis for future hypotheses, namely:

Those firms which grow sales during the early years do so by increasing the customer base, and without generating further jobs.

2. Industry Effect

With only one exception, no significant industrial bias emerged in either the size and growth or change measures. Collapsing the groups in order to take account of small cell values, there was a significant difference between the growth rates for skilled employees. Thus, in this category a smaller number of service companies tended to grow, whilst the reverse applied for manufacturing.

Table 4 illustrates the results of the incubator control variables, size and growth measures.

Insert Table 4 about here

Surprisingly, there was no apparent industry effect from either the incubator size or the subsequent relationship. One interesting result did emerge, however.

Entrepreneurs from smaller companies tended to set up in competition with their incubator firm, whilst those from larger firms tended to start firms with no apparent relationship to previous employment.

The industry effects of both size and growth measures were significant. Thus, manufacturing companies tended to show sales levels higher than those in the service sector. Transport companies were very optimistic about profit performance; owners of companies in the other three sectors considered their performance either average or below average. By contrast, sales were forecast to decrease by those in the agricultural sector, whilst the rest were more optimistic. These results reflect exactly those forecast by the larger firms in each sector and by the Strategy Group of Project Future.

CONCLUSIONS

A major strand of the current economic strategies of Federal, State and Local Government is the role of both the NEW and the small firm which are seen as significant future generators of both wealth and employment. Inherent in these strategies is the need to help firms to survive and to encourage them to grow, an issue which applies particularly to the firm in its early, formative years when the chances of failure are highest. In St. Joseph County, earlier studies in this series had shown that failure rates were highest in the first few years and it had been decided to focus strategies on this part of the small firm sector. The question which continued to exercise policy-makers,

however, was how many firms actually did grow and on what dimensions. The corollary of this - how many did not grow post start-up - would give some indication of the extent to which the start-up period was fundamental in determining the nature of the firm.

The results of this study suggest that growth in sales in the early years is not an indicator of growth in employment, but rather of a widening of the customer base. Indeed, no aggregate employment growth occurred at all in either full-time or part-time employment. Moreover, within this, there was no apparent industry or age effect. Clearly, from the data some firms had grown considerably but they were few in number; the vast majority appeared to have remained at the same employment level as when they started. The major conclusion of this paper, therefore, is that in employment terms, THE SIZE OF THE FIRM WAS SET AT THE START. In this sense, growth would appear NOT to be a major objective of the entrepreneur.

Should these results be replicated elsewhere, the implication for practitioners and policy-makers is clear. If the objective of future strategies is to increase the job creation capabilities of the small firm, then effort would be most fruitful if focussed upon improving the foundations of all firms rather than trying the almost impossible task of picking the few 'winners'. Further, if in doing so each new firm created one extra job, this would have a significant impact on employment levels. The task is clear, the methods less clear. Improving the base of the firm

implies making decisions about all aspects - the market, the marketing strategy, the resources necessary, the production strategy - in order to create a balanced entity. Clearly, the answer will vary according to the individual, his skills, goals, and experience, the product/market chosen, and the economic environment. The logical conclusion of this argument is for individual, specific help - at the local level. Thus appropriate strategies include counselling schemes, secondments from local large firms, small business clubs, evening classes in the local college, small business columns in the local newspaper, all of which depend upon the goodwill of the local community. In such an environment, the role of Federal and State Government is in guiding and encouraging, rather than legislating.

Table 1; Number of Participants in the new Firm - Mean and Median Values

	Mean			Median	
	Start	Now	'z' score	Start	Now
Owners/Shareholders	1.83	1.87	0.125	2	2
Owners - Full-time	1.08	1.23	1.12	1	1
Part-time	0.44	0.29	1.13	0	0
Employees - Full-time	5.29	9.61	0.59	3	3
(a) Part-time	2.87	2.83	0.14	0	0
Employees - Skilled	2.08	3.93	1.27	1	2
(b) Semi-skilled	1.45	2.20	0.78	0	0
Unskilled	1.28	2.31	1.00	0	0
Managerial	0.56	0.88	1.42	0	0
Clerical	0.27	1.77	1.67*	0	0

* Significant at 5%

a) Excluding the owners

a) Including the owners

Table 2: Characteristics of Change (Percentage of Total in Sample)

	Change between Start and 1983				
	Zero at Start (%)	Zero in 1983 (%)	Reduced (%)	No Change (%)	Grown (%)
Owners/Shareholders	NA	NA	11	72	17
Owners - Full-time	19	19	4	85	12
Part-time	78	82	4	96	1
Employees - Full-time	30	13	2	61	39
(a) Part-time	0	0	6	68	25
Employees - Skilled	48	30	5	62	33
(b) Semi-skilled	82	70	0	86	13
Unskilled	85	83	0	93	7
Managerial	70	65	4	85	11
Clerical	95	80	1	82	17

NA = Not appropriate

a) Excluding the owners

b) Including the owners

Table 3; The Effect of the Age of the Firm

	Chi-Squared	Degrees of Freedom	Significance
Change Factors			
Moved Premises	8.79	5	NS
Legal Structure	16.0	5	NS
Control Variables			
Suppliers	23.65	15	NS
Customers	31.62	20	5% SL
Growth Measures			
Owners/Shareholders	8.20	5	NS
Owners - Full-time	5.19	5	NS
Part-time	(a)	5	NS
Employees - Full-time	3.03	5	NS
Part-time	1.39	5	NS
Employees - Skilled	1.27	5	NS
Semi-skilled	3.30	5	NS
Unskilled	5.50	5	NS
Managerial	3.86	5	NS
Clerical	3.70	5	NS

NS = Not Significant
(a) Insufficient Data

Table 4; Industry Effect

	Chi-Squared	D.F.	Significance
Incubator Relationship by Industry	10.81	12	NS
Incubator Size by Industry	25.18	21	NS
Incubator Size by Incubator Relationship	50.40	9	1% SL
Sales Level by Industry	36.30	9	1% SL
Profits Level by Industry	13.80	6	5% SL
Sales Trend by Industry	16.79	6	5% SL

NS = Not Significant

REFERENCES

- Birch D. 'The Job Generation Process' MIT Program on Neighbourhood and Regional Change Cambridge, Mass. 1979
- Birley S.J. 'Corporate Strategy and the Small Firm' Journal of General Management Vol. 8, No. 2, Winter 1982/3, 82-86
- Birley S.J. 'Finding the New Firm' Proceedings of the 44th Academy of Management Conference Boston, Mass., 1984
- Birley S.J. 'The Role of Networks in the Entrepreneurial Process' Journal of Business Venturing Vol. 1, No. 1, Winter 1985
- Birley S.J. 'New Firms and Job Generation' Forthcoming, Strategic Management Journal 1986
- Freeman J., Carroll G. and Hannan M. 'The Liability of Newness and Age Dependence in Organizational Death Rates' American Sociological Review 1985, 48, 5, October 692-710
- Charan R., Hofer C.W. and Mahon J.F. 'From Entrepreneurial to Professional Management' Journal of Small Business Management 1980, Vol.18, No.1, 1-10
- Carland J.W., Hoy F., Boulton W.R. and Carland J.C. 'Differentiating Entrepreneurs from Small Business Owners: A Conceptualisation' Academy of Management Review Vol. 9, No. 2, April 1984 354-359
- Churchill B.C. 'Age and Life Expectancy of Business Firms' Survey of Current Business Vol. 35, No. 12, Dec. 1955
- Churchill N.C. and Lewis V.L. 'The Five stages of Small Business Growth' Harvard Business Review 1983, May-June, 30-50
- Engwall L. 'The Pressure for Growth as an Organisational Problem' Omega 1978, Vol.6, No.6, 485-492
- Freeman J., Carroll G. and Hannan M. 'The Liability of Newness and Age Dependence in Organizational Death Rates' American Sociological Review 1983, 48, 5, October, 692-710
- Galbraith J. 'The Stages of Growth' Journal of Business Strategy 70-79
- Gibb A.A. and Scott M.G. 'Understanding Small Firm Growth' Proceedings of the 6th National Small Firms Policy and Research Conference Durham, England, 1983
- Hoad W. and Roscoe P. Management Factors Contributing to the Success or Failure of New Small Manufacturers University of Michigan, Ann Arbor, 1964

- Hodgson D. and Parker D. 'Why bigness isn't always best' Industrial Management May.....19-23
- Link A.N. 'Firm Size and Efficient Entrepreneurial Activity: A Reformulation of the Schumpeter Hypothesis' Journal of Political Economy 1980 Vol. 88, No.41,771-782
- Massel M.Z. 'It's Easier to Slay a Dragon than Kill a Myth' Journal of Small Business Management 16, No.3, 1978
- McGuire J.W. 'The Small Enterprise in Economics and Organisation Theory' Journal of Contemporary Business Spring 1976, 115-138
- McKenna J.F. and Oritt P.L. 'Small Business Growth: Making a Conscious Decision' S.A.M. Advanced Management Journal Spring 1980, 45-53
- Robinson R.B. and Pearce J.A. 'Research Thrusts in Small Firm Strategic Planning' Academy of Management Review 1984, Vol. 9, No. 1, 128-137
- SBA A Report of the President Small Business Administration, Washington D.C. 1985 p.27
- Siropolis N.C. Small Business Management Houghton Mifflin, Boston, Mass., 1982
- Star A. and Massel M. 'Survival Rates for Retailers' Journal of Retailing 1981, 57, 2, Summer, 87-99
- Stanworth M.J.K. and Curran J. 'Growth and the Small Firm - An Alternative View' Journal of Management Studies 1976 Vol.13, No.2, May, 95-110
- Strauss G. 'Adolescence in Organizational Growth' Organizational Dynamics 1974 3-17
- Teitz M., Glasmeir A., and Svensson D., 'Small Business and Employment Growth in California' Institute of Urban and Regional Development University of California, Berkeley, Working Paper No. 348, March 1981
- Timmons J.A. 'Goal Setting and the Entrepreneur' ?Journal of Small Business Management