

SWP 15/91 DO WE NEED ENTERPRISING GRADUATES ?

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Lecturer and Researcher in Small Business Development

ABSTRACT

The future of the Graduate Enterprise Programme (G.E.P.) from the end of 1990 is under review. This paper builds upon previous Conference papers (Milton Keynes, London) to comment upon:

1. the possible contribution of G.E.P. to graduate entrepreneurship in the U.K.
2. actual outcomes of G.E.P. businesses to date from one provider institution.

The research into (1), the contribution of G.E.P. to graduate entrepreneurship, is based on analysis of University and Department of Education and Science employment statistics. In addition a postal questionnaire survey, and analysis, was undertaken of G.E.P. applicants who were not successful in securing places on the programme.

The research basis for (2), actual outcomes, is the Cranfield Data Base, which using financial and qualitative data from six monthly questionnaire responses, tracks the business profiles over 3 years of participants in Cranfield G.E.P. programmes from 1985 onwards.

The outcome of this survey, combined with data base analyses, provides data and insights for policy makers (and academic providers) in reviewing the future need and form of training for graduate entrepreneurs.

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The Graduate Enterprise Programme, described and commented upon in earlier Small Firms Policy and Research Conferences¹, was conceived in 1983/4 as a response to high graduate unemployment in the early 1980's and to the concern that British graduates were less enterprising than their American equivalents². Two continuing sources of inspiration for the programme might also be noted:

- (1) A study by Professor Sue Birley³, commented widely upon in the press, showed that one of the most striking differences between British and American entrepreneurs was in the British entrepreneur's lack of educational achievement.⁴
- (2) In view of the above, the not surprising tendency amongst British entrepreneurs to denigrate the potential of educated persons to start their own businesses. For example: "Dull people cannot run a good business and neither can "over-educated" people: over-educated people get employed - they don't employ other people".⁵

To respond to these concerns, it is the purpose of this paper to:

- (1) Comment on the contribution of G.E.P. to helping graduate entrepreneurship in the U.K. In particular to comment upon the subsequent careers of graduate applicants who did not secure G.E.P. training places; the source material for this analysis has come from a postal questionnaire survey to unsuccessful programme applicants.

- (2) Provide the results of actual business outcomes produced by graduates from one of the training provider universities involved in G.E.P.; the source material for this analysis is from the Cranfield Data Base.⁶

It is intended that the paper should give pause for thought to those who maintain that educated British people are unable to start their own businesses, as well as giving some guidance (and inspiration?) to policy makers responsible for graduate training in the U.K.

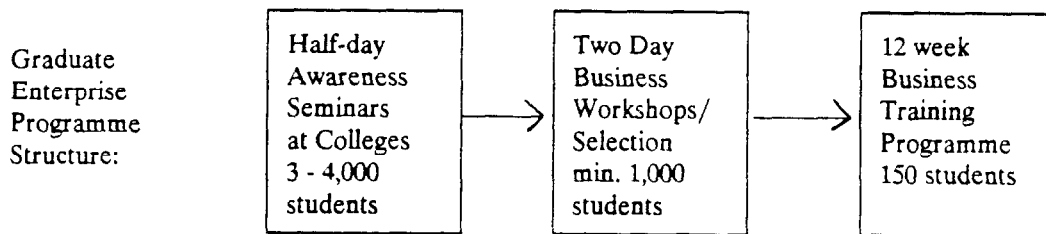
(1) CONTRIBUTION OF G.E.P. TO GRADUATE ENTREPRENEURSHIP

With U.K. graduate unemployment falling through the 1980's, the first issue to address is whether the Graduate Enterprise Programme has been able to assist with the earlier government concern that U.K. graduates were less enterprising than their American counterparts. Through analysis of University Statistical Records and Department of Education and Science statistics for Polytechnics and Colleges of Further Education, it has been possible to establish that the number of U.K. graduates entering self-employment in the early 1980's was somewhat higher than earlier estimated (1.1% of total graduates entering employment). Nonetheless, over the subsequent five year period (1983-88), the number of graduates entering self-employment has increased by 73% in total number, or from 1.1% to 1.5% of graduates entering employment (Exhibit 1). This brings the English Graduate percentage closer to the claimed 2% equivalent for American graduates.²

This positive increase is, of course, the result of a number of disparate factors; the encouragement of enterprise by specific measures such as the Enterprise Allowance Scheme, the development of Enterprise Agencies and support networks, by both government and private agencies. Previous research¹ has shown, nonetheless, that

G.E.P. has been a positive factor in this process, if only by encouraging trainees to bring forward (by up to five years) their plans to become self-employed.

In turn, it could be argued that by limiting training places (maximum 250 nationally in any one year, currently only 150 per annum) and by not selecting the nearly 1,000 other students who attended 2 day selection workshops, (see Programme structure, below), G.E.P. may have actually reduced the number of graduates seeking to enter



self-employment. To this end a survey was conducted of nearly 200 graduates at Cranfield who had been rejected for training places; the results are summarised in Exhibit 2. Nearly one-third of the 76 respondents actually proceeded to set up in business, despite the negative selection decision, without any further small business training, after graduation. Three-quarters of those in business (18 in all) reported that they were trading profitably! More importantly, from the negative point of view of G.E.P., of the majority who had not yet set up in business, nine out of ten reported that they still intended to do so, within 5 or 10 years.

Nearly all workshop participants had found the small business teaching helpful, with 80% finding favourably the negative selection decision. It would be hard to conclude, therefore, that the selection process had deterred potential entrepreneurs, while it has been shown that attendance on the programme accelerated the process of most graduates in entering self-employment. G.E.P. can be considered to have played its part, therefore, in the trend to increasing the number of graduates entering small business.

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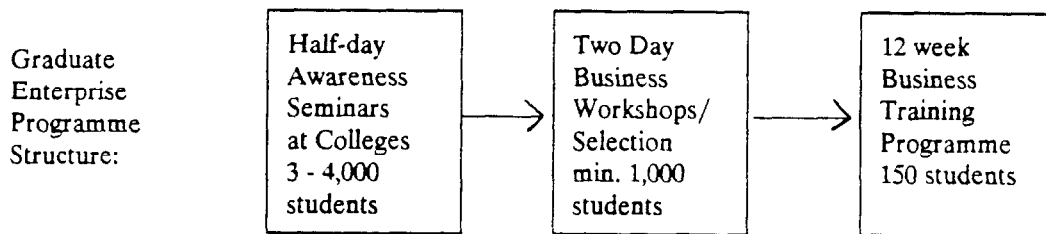
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G.E.P. has been a positive factor in this process, if only by encouraging trainees to bring forward (by up to five years) their plans to become self-employed.

In turn, it could be argued that by limiting training places (maximum 250 nationally in any one year, currently only 150 per annum) and by not selecting the nearly 1,000 other students who attended 2 day selection workshops, (see Programme structure, below), G.E.P. may have actually reduced the number of graduates seeking to enter



self-employment. To this end a survey was conducted of nearly 200 graduates at Cranfield who had been rejected for training places; the results are summarised in Exhibit 2. Nearly one-third of the 76 respondents actually proceeded to set up in business, despite the negative selection decision, without any further small business training, after graduation. Three-quarters of those in business (18 in all) reported that they were trading profitably! More importantly, from the negative point of view of G.E.P., of the majority who had not yet set up in business, nine out of ten reported that they still intended to do so, within 5 or 10 years.

Nearly all workshop participants had found the small business teaching helpful, with 80% finding favourably the negative selection decision. It would be hard to conclude, therefore, that the selection process had deterred potential entrepreneurs, while it has been shown that attendance on the programme accelerated the process of most graduates in entering self-employment. G.E.P. can be considered to have played its part, therefore, in the trend to increasing the number of graduates entering small business.

For policy makers, moreover, concerned particularly with training costs, there is an important additional consideration from this small survey (which suggests further, larger sample confirmation): while the number of graduates trading profitably after 2 day workshops (18 businesses, or 23% of respondents) is lower than comparable numbers trading profitably after 12 week G.E.P. training (which we will see in Part below), in terms of cost alone, comparing the two phases of the programme, (approximately £250 per graduate per workshop, compared with nearly £3,000 per graduate per training programme) the positive survey evidence provides support for continuing the lower cost G.E.P workshops at least!

(2) BUSINESS OUTCOMES OF CRANFIELD G.E.P.

Survival rates for companies after selection and 12 week G.E.P. training are higher than those benefiting simply from 2 day workshops, as shown in Exhibit 3. After 5 years of programmes, almost exactly one-half of participants are still trading. Survival rates, except for G.E.P. 2, do not compare favourably, however, with national comparisons, as made, for example, by Ganguly⁷ and others, where for companies registering and deregistering for V.A.T., a failure rate of 36% after and a half years and 60% after ten years was noted. Registering for V.A.T. requires, however, a turnover of £28,000, so the comparison with genuine zero-based start-up companies is not entirely correct. Nonetheless, survival rates for GEP 1 and 2 graduates compare favourably with even this difficult comparison.

The deterioration in survival rates from G.E.P. 3 onwards shown in Exhibit 3, commensurate with years traded, coincided with a considerable expansion of numbers nationally included in G.E.P. training. Policy makers recognised the loss of quality whilst attempting to expand numbers (and reduce cost per graduate) and

recent programme numbers have been reduced. The evidence in Exhibit 3 points to a need for further contraction and higher selection standards.

Survival rates, however, are simply one measure; another positive measure is in terms of turnover, profit and employment numbers created by G.E.P. companies, and here one provider, Cranfield's, Graduate Enterprise Programme results are summarised in Exhibit 4. These results show that programme training costs (including accommodation, tuition, training grants and market research allowances) are more than matched by reported (unaudited) participant's profits after 3 years of trading. Some 203 full time jobs have been created by the 67 companies reporting, at an average training cost of £4,200 per job for all programmes (compared with £3,000 per job for G.E.P. 1 & 2 programmes, after 3 years trading). The start-up sales, profits and employment patterns and final third year results (companies on the Data Base are audited for 3 years) are shown in Exhibit 5.

Partly inspired by an Iowa survey undertaken by Dr. Auken⁸ a questionnaire survey was sent to 150 Cranfield G.E.P. trainees, to establish the level of start-up finance and second stage finance needed to produce these results. Characteristics of the largely successful G.E.P. companies (47 of the 53 respondents are still trading) are summarised in Exhibit 6. Two-thirds of new starters needed less than £10,000 starting finance, and nearly half of the sample (mean trading age 2.8 years) needed less than £5,000 second stage financing (Exhibit 7), sums commensurate with the young average personal age of graduates (24 years old). It is important to note, nonetheless, (Exhibit 8) that these graduates, after training and with business plans, were able to raise in total some £935,000 starting finance (mean £9,200 equity, £8,600 debt per company) subsequently nearly matched by a further £931,000 second stage finance (mean £7,400 equity, £10,133 debt per company). More than half the starting equity came from personal savings and partners investment, whilst profit ploughed back was the single largest source of second stage equity (Exhibit 9).

Thus while Government and the Training Agency have provided nearly £840,000 in training funding to improve Cranfield graduates business success prospects, this funding has been more than matched by participants efforts in raising starter equity and debt finance, subsequently doubled in second stage financing. It is this commitment and investment which has combined to produce the £10.7 million sales to date and cumulative unaudited profit of £1 million.

The rising numbers and success of these graduate entrepreneurs should go some way to redress the unfavourable comparisons made with their American counterparts in the early 1980's and give policy makers some comfort that the ambitious goals set at the outset of these programmes are within sight of being achieved. From the evidence of these surveys, which need to be continued and enlarged, these important government training initiatives, more than matched by private sector finance, seem set to make an overall positive return to investors and ought to be continued, based upon strong selection and quality participants. We do need profitable, enterprising graduates.

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Brown RJ and Burnett A, "Encouraging Enterprise", 12th Small Firms Policy and Research Conference, London, November 1989.
2. Department of Employment, "Going it alone", Financial Times, Wednesday 17th October 1990, "Whereas in the early 1980's some 2 per cent of graduates in the U.S. started their own business (this) compared to 0.3 per cent in the U.K."
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4. "More Young Millionaires Please", The Economist, 4th February 1989, p14, "Three-quarters of a sample of American's 100 most successful entrepreneurs had first degrees (against a quarter of the whole population) and half had postgraduate degrees as well. Only one in ten of the Britons were graduates, roughly as many as in the overall population. Half of the greatest British successes had left school at 16."
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8. van Auken Dr HE and Carter Dr RB, "Acquisition of Capital by Small Business", Journal of Small Business Management, April 1989.

Total of U.K. Graduates Entering Self-Employment
Has Nearly Doubled Over Last 5 Years

(A) Total Graduates Entering Employment

| Year | 1983-4 | 1984-5 | 1985-6 | 1986-7 | 1987-8 |
|--|---------|---------|---------|---------|---------|
| Degree Establishment | | | | | |
| Universities | 72,973 | 72,046 | 69,923 | 71,574 | 72,589 |
| Polytechnics | 29,547 | 32,809 | 34,333 | 35,490 | 37,597 |
| Colleges of Further Education | 10,385 | 13,903 | 15,464 | 16,008 | 16,083 |
| Total Graduates Entering Employment (Degree & HND) | 112,905 | 118,758 | 119,720 | 123,072 | 126,269 |

(B) Self Employed

| Year | 1983-4 | 1984-5 | 1985-6 | 1986-7 | 1987-8 |
|-------------------------------|--------|--------|--------|--------|--------|
| Degree Establishment | | | | | |
| Universities | 551 | 577 | 624 | 696 | 707 |
| Polytechnics | 383 | 561 | 677 | 663 | 688 |
| Colleges of Further Education | 176 | 382 | 478 | 536 | 528 |
| Total Self-Employed | 1,110 | 1,530 | 1,779 | 1,895 | 1,923 |
| % Self-Employed (B/A) | 1.1% | 1.3% | 1.5% | 1.5% | 1.5% |

Workshops Did Not Deter Potential Entrepreneurs, Even
When Turned Down For Training Programme Places

From Sample of 76 Applicants, Refused Places:

1. 95% found teaching workshop helpful.
2. 80% found negative selection decision correct.
3. Nonetheless, nearly one-third did actually set up in business (24 businesses)
 - . 85% without any further training
 - . Three-quarters are now trading profitably (18 businesses)
 - . Half with original, but improved, workshop idea!
4. Of the two-thirds who did not set-up : (45 cases)
 - . 89% still intend to start their own business, most within 5 or 10 years
 - . Half with the same business idea!

Source: Cranfield Workshop Survey GEP 2/3/4, August 1990

EXHIBIT 3

Survival Rates

| GEP Course - Year | Number of Participants | Still Trading (Full Time) | Part Time | Ceased Trading |
|----------------------|---------------------------|------------------------------|-----------|----------------|
| GEP 1 85 | 35 | 17 or 49% 5 years out | - | 18 or 51% |
| GEP 2 86 | 34 | 23 or 68% 4 years out | 2 | 9 or 26% |
| GEP 3 87 | 37 | 16 or 43% 3 years out | 1 | 20 or 54% |
| GEP 4 88 | 34 | 13 or 38% 2 years out | 3 | 18 or 53% |
| GEP 5 89 | 19 | 9 or 47% 1 year out | 2 | 8 or 42% |
| Total | 159 | 78 or 49% | 8 | 73 or 46% |

Source: Cranfield Data Base Survey 1990

EXHIBIT 4

TRAINING COSTS OF PROGRAMME ARE MATCHED BY CUMULATIVE PROFITS IN THIRD YEAR OF BUSINESS

| Cranfield Programme/Years | Programme Cost (Approx.) | Sales (Cumulative) (Maximum 3 Years) | Profit (Unaudited) (Cumulative) | Total Employees | |
|-------------------------------|---------------------------------|--------------------------------------|-------------------------------------|----------------------------|------------|
| | | | | Full Time | Part time |
| GEP 1 1985 | £250,000 | £5,562,309 (end 88) | £624,927 | 82 | 51 |
| GEP 2 1986 | £200,000 | £3,099,679 (end 89) | £265,012 | 60 | 55 |
| GEP 3 1987 | £130,000 | £1,752,482 (June 90) | £155,729 | 32 | 32 |
| GEP 4 1988 | £130,000 | £281,030 (June 90) | £5,568 | 19 | 34 |
| GEP 5 1989 | £130,000 | £52,800 (June 90) | £-6,094 | 10 | 23 |
| Total for 5 Programmes | Cumulative Cost £840,000 | Cumulative Sales £10,748,300 | Cumulative Profit £1,045,142 | Total Employees 203 | 194 |

SOURCE: Cranfield GEP Data Base, Sept 1990

EXHIBIT 5

PROGRAMME AVERAGES - BY COMPANY

| Cranfield Programme | Average Company Sales | | Average Company Profits | | Average Company Employees | | | |
|---------------------|-----------------------|----------------------|-------------------------|----------------|---------------------------|-----------|----------------|-----------|
| | 1st Half Year | Last Half Year | 1st Half Year | Last Half Year | 1st Half Year | | Last Half Year | |
| | | | | | Full Time | Part Time | Full Time | Part Time |
| GEP 1 1985 | £7,302 (1986) | £93,744 (1988) | £1,155 | £10,955 | 2 | 3 | 5 | 3 |
| Companies | 21 | 17 | 18 | 13 | 24 | | 18 | |
| GEP 2 1986 | £10,935 (1987) | £50,183 (1989) | £879 | £8,075 | 2 | 2 | 3 | 3 |
| Companies | 22 | 16 | 19 | 16 | 27 | | 20 | |
| GEP 3 1987 | £10,884 (1988) | £50,736 (June 90) | £1,259 | £14,244 | 3 | 1 | 3 | 3 |
| Companies | 16 | 12 | 10 | 9 | 19 | | 12 | |
| GEP 4 1988 | £5,607 (1989) | £15,085 (June 90) | £851 | £743 | 1 | 3 | 2 | 3 |
| Companies | 12 | 10 | 6 | 8 | 13 | | 10 | |
| GEP 5 1989 | £8,800 (June 90) | | -£1,016 | | 1 | 3 | | |
| Companies | 6 | | 6 | | 7 | | | |

Cranfield G.E.P. Companies Financial Structure Survey

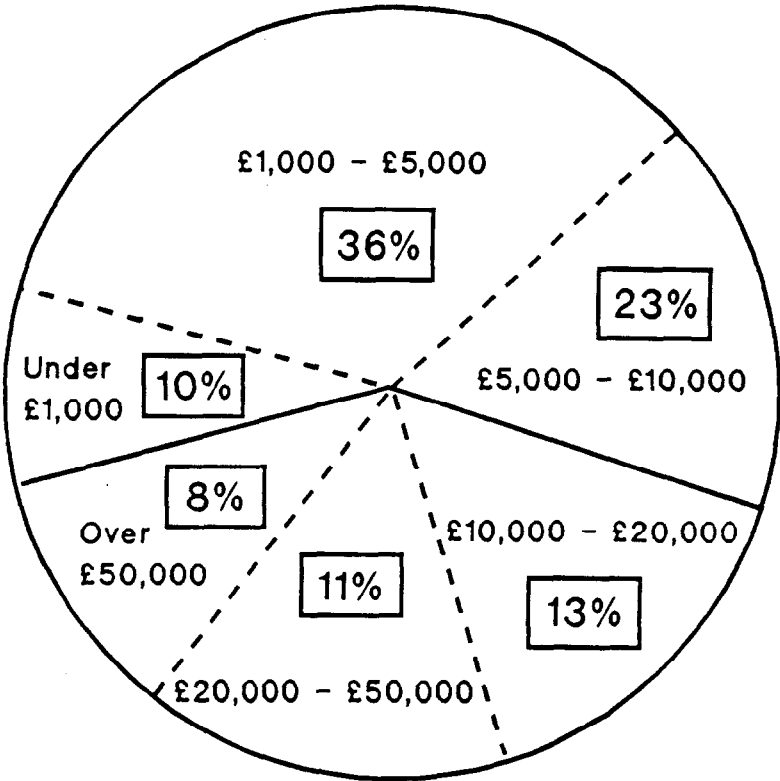
Questionnaire sent to 150 Cranfield G.E.P. trainees.

Response Sample Size: 53, of which 47 still trading; average company age 2.8 years.

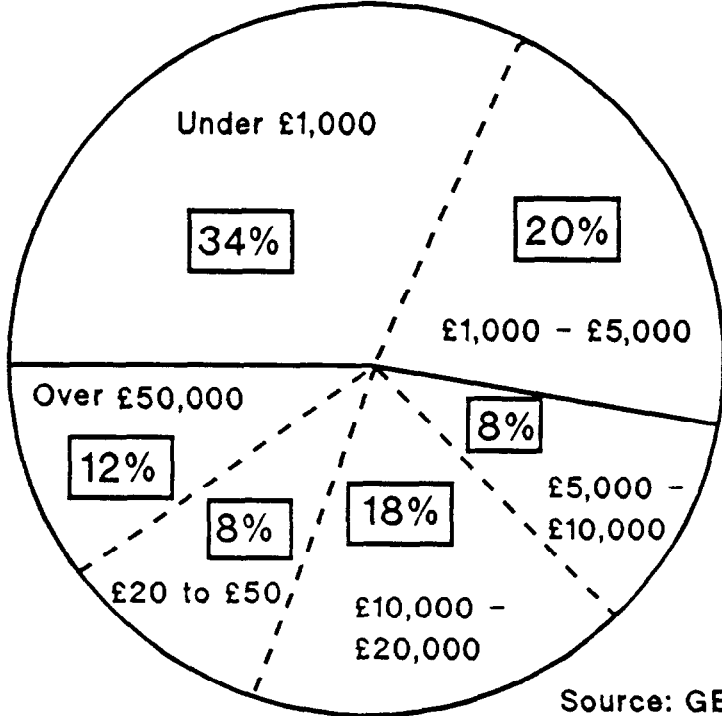
Sample Characteristics:

- . 58% in service sector; 42% in retail and manufacture.
- . 52% started as sole trader, 23% as partnership, 13% as Ltd Company.
- . 64% serve national or international market.
- . 86% had utilised Enterprise Allowance Scheme in first year.

Two - thirds of new starters needed less than £10,000 start-up finance.....



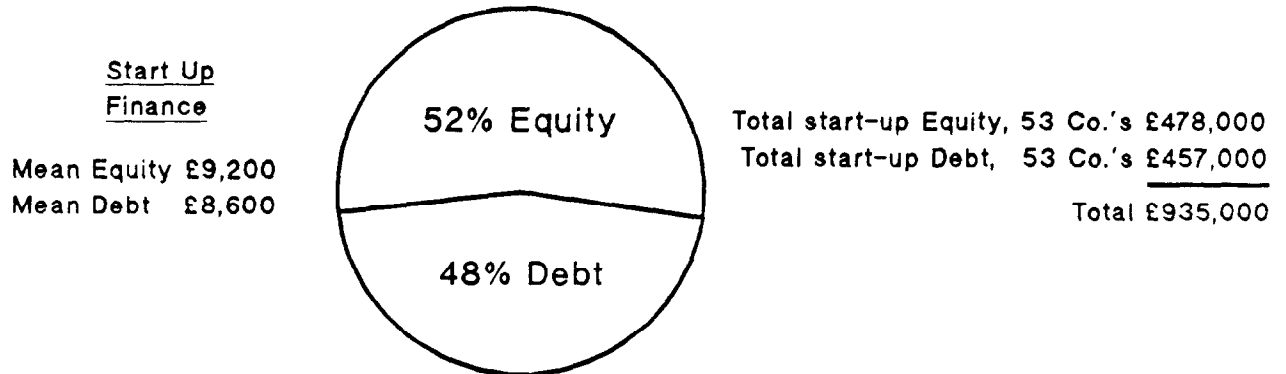
While just over one-half needed less than £5,000 second stage finance



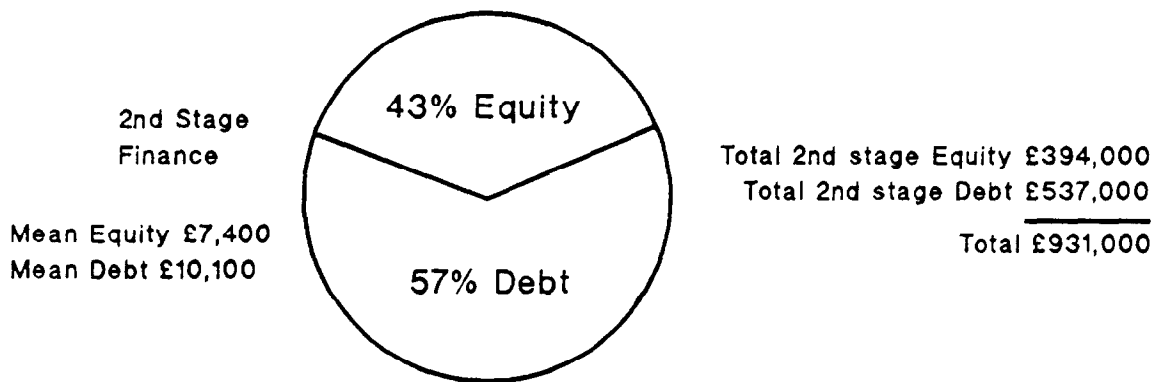
Source: GEP Financial structure survey 1990
53 Companies

Exhibit 8

Start-up Finance was weighted slightly more to Equity than Debt....



.....While 2nd Stage Finance was weighted slightly more to Debt than Equity....

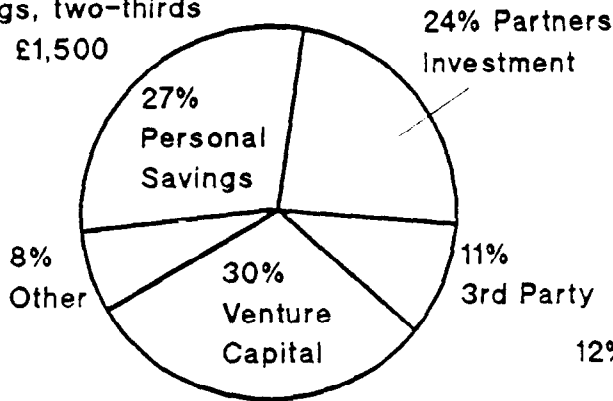


With total investment of £1.8 million in new GEP trading operations

Source: Cranfield G.E.P.
Financial Structure
Survey 1990
53 companies

Starting Equity came mainly from Personal Sources and Partners Investment....

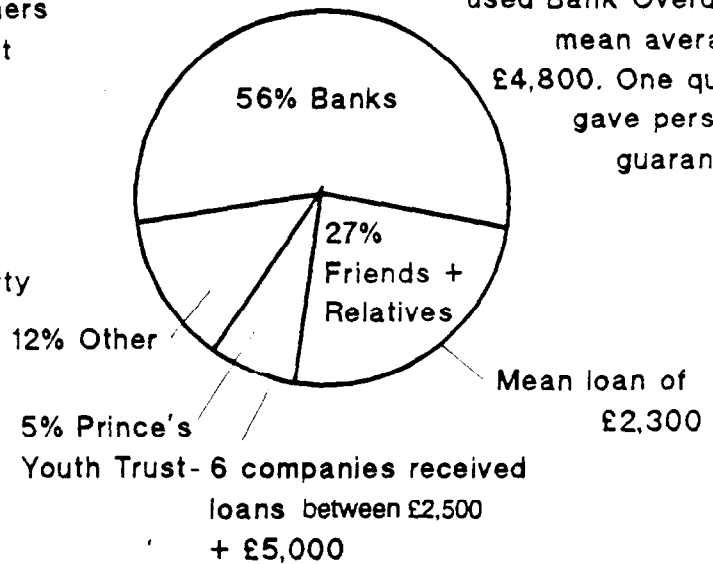
All companies invested own savings, two-thirds under £1,500



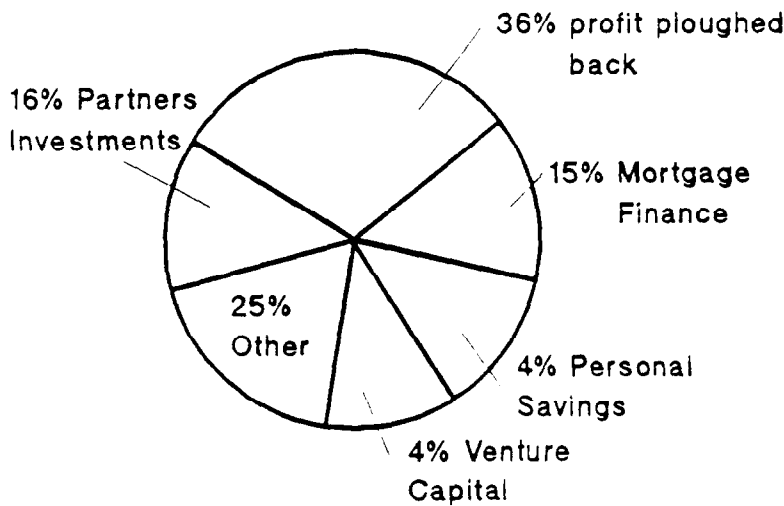
One major V.C. investment of £150,000

....With starting Debt mainly from Bank Overdrafts

Two-thirds of companies used Bank Overdraft; mean average £4,800. One quarter gave personal guarantees



Second Stage Equity came mainly from profit ploughed back....



....With second stage Debt primarily from banks

