

Novice, Serial and Portfolio Entrepreneur Behaviour and Contributions

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ABSTRACT. Policy-makers and practitioners are considering whether to allocate resources towards portfolio and serial entrepreneurs, as well as the provision of additional initiatives to increase the pool of novice entrepreneurs. To inform this policy debate, univariate statistical tests were used to test for differences between 354 firms owned by novice, serial and portfolio entrepreneurs in Scotland. Also, univariate tests were conducted to compare responses made by pairwise groups of entrepreneurs. No significant differences were detected between the three types of entrepreneurs with regard to several entrepreneur and firm demographic characteristics. Additional analysis revealed that portfolio entrepreneurs have more diverse experiences, and more resources than serial or novice entrepreneurs. On average, portfolio entrepreneurs appear to offer more attractive growth prospects than other entrepreneurs.

1. Introduction

Promoting entrepreneurship is viewed as part of a formula that will reconcile economic success with social cohesion (Organisation for Economic Co-Operation and Development, 1998). During the late 1970s and 1980s, Thatcher's British government encouraged new firm formation (Westhead and Moyes, 1992), and the growth in self-employment (Storey, 1994). The British government, however, shifted policy during the 1990s toward encouraging growth firms (Storey, 1994; Westhead, 1995). To maximize returns on public

policy investments, attempts have been made to 'target' external support to businesses with significant wealth creation potential. The case for 'targeting' assistance towards 'winning businesses' (Storey, 1994) has been made, although there is some doubt about whether such assistance is necessary (Acs et al., 1997; Holtz-Eakin, 2000), or effective (Bridge et al., 1998). In response to a recent slowdown in business start-ups, the British government has realized the need for a balanced policy agenda (Gavron et al., 1998; Department of Trade and Industry (DTI), 2002), and is encouraging business formation by inexperienced novice entrepreneurs (Reynolds, 1997), as well as supporting the growth of some 'types' of existing firms (Reynolds et al., 1994). Surprisingly, the characteristics and behaviour of 'winning entrepreneurs' have been relatively neglected.

The processes of enterprise are much broader than the processes associated with enterprise formation (Taylor, 1999). Policy-makers, practitioners, enterprise and development agencies and local Government must understand their 'target' groups. If support for entrepreneurship is to be effective, it is vital that they understand issues relating to the entrepreneurial process (Ucbasaran et al., 2001). The re-focusing of external support away from the entrepreneur, towards the more visible business, fails to fully appreciate the crucial role played by the entrepreneur (or the entrepreneurial team) in relation to the entrepreneurial process. While both research and policy has hitherto tended to focus on the business, it maybe more appropriate to consider the entrepreneur as the unit of analysis (Birley and Westhead, 1993a; Scott and Rosa, 1996). Also, there is growing appreciation that entrepreneurs are not a homogeneous entity (Woo et al., 1991) with regard to their characteristics, motivations,

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behaviour and performance. In fact, some types of entrepreneurs are associated with superior performance (Westhead, 1995). Policy-makers may, therefore, need policies that support the varying needs of different types of entrepreneur, rather than provide broad 'blanket' policies to all types of entrepreneur, irrespective of need or ability.

The nature and impact of entrepreneurial experience is attracting increasing attention (Chandler and Jansen, 1992; Reuber and Fischer, 1999). Practitioners (i.e., financial institutions and enterprise agencies) use information relating to experience accumulated by an entrepreneur to screen applications for assistance (MacMillan et al., 1985). In addition to existing support measures, some policy-makers and practitioners are now considering whether resources could be more effectively utilized if they were rebalanced with at least some resources being allocated towards serial and portfolio entrepreneurs with prior business ownership experience. Serial and portfolio entrepreneurs need to be considered as important sub-groups of entrepreneurs who make a fundamental contribution to the process of wealth creation (Scott and Rosa, 1996). Previous estimates have indicated that entrepreneurs with business ownership experience represent a significant proportion of entrepreneurs (Westhead and Wright, 1998a, 1999). Policy-makers and practitioners monitoring the growth in the supply of new firms need to be aware that serial and portfolio entrepreneurs own a sizeable proportion of new firms. More importantly, the absolute figures relating to the number of new firms maybe distorted by the activities of portfolio entrepreneurs who own more than one business. Studies which judge the scale of entrepreneurship in terms of the number of new firms, but ignore the scale of serial and portfolio entrepreneur activity may over-estimate the gross number of entrepreneurs, and under-estimate the contribution made by particular types of entrepreneur.

The ultimate performance objectives of policy may relate to growth in employment, and improved rates of return on investment. If superior business performance is generally recorded by businesses owned by serial and portfolio entrepreneurs rather than novice entrepreneurs, there maybe a case to provide policy support and

assistance to serial and portfolio entrepreneurs associated with superior performance contributions, particularly if the objective of support is maximize returns on investments. Conversely, if the objective of policy is to increase the pool of entrepreneurs, assistance maybe targeted away from successful serial and portfolio entrepreneurs towards novice entrepreneurs seeking to address obstacles to business development, as well as business opportunity identification and exploitation. However, if serial and portfolio entrepreneurs' businesses generally under-perform, there is a policy choice either to divert scarce resources away from these entrepreneurs; or develop policies that ensure the survival of businesses owned by them.¹

Limited comparative information is available surrounding the backgrounds, motivations, resources, skills and aspirations of novice, serial and portfolio entrepreneurs. In response to calls for studies to specifically focus upon the serial and portfolio entrepreneurs (Wright et al., 1998; Carter and Ram, 2003), this paper builds on fresh evidence relating to the scale of serial and portfolio entrepreneurship in Scotland to suggest policy directions for the support of entrepreneurship. In Scotland, assistance has been provided to convert individuals thinking about enterprise as a career option (i.e., *nascent* entrepreneurs (Reynolds, 1997) into novice entrepreneurs (Scott, 1998; Scottish Enterprise, 2000)). External support is primarily provided at the level of the individual entrepreneur during the business start-up process. After the business initiation hurdles have been addressed and the business has commenced trading, external support for enterprise becomes more focused on the needs of different types of businesses (i.e., high-technology firms, exporting firms, etc.), rather than the entrepreneur.

This paper provides evidence relating to the broad characteristics, behaviour and performance contributions made by serial and portfolio entrepreneurs who can leverage prior private business ownership experience, compared with inexperienced novice entrepreneurs who have no prior business ownership experience. Specifically, we discuss empirical evidence relating to the following policy-related question. Should policy-

makers and practitioners provide specific assistance to novice, serial and portfolio entrepreneurs (according to definitions presented in Section 2)?

Drawing upon data from a representative sample of 354 private firms owned by novice, serial and portfolio entrepreneurs in Scotland, we suggest that portfolio entrepreneurs have more diverse experiences, and more resources than serial or novice entrepreneurs. Further, surveyed firm growth is found to be associated with the resources and inclinations of entrepreneurs. On average, portfolio entrepreneurs appear to offer more wealth creation prospects than other entrepreneurs. In addition, we highlight that portfolio and serial entrepreneurs accumulate several entrepreneurial resources (i.e., skills and knowledge) and exhibit behaviour (i.e., opportunity recognition and exploitation) as well as inclinations that need to be widely disseminated to novice entrepreneurs who desire to follow the entrepreneurial journey to becoming serial or portfolio entrepreneurs. We also suggest that policy-makers and practitioners need to more fully appreciate the backgrounds, motivations and needs of various types of entrepreneurs, when they are formulating policies to assist novice, serial and portfolio entrepreneurs. Assuming an interventionist stance, a case for more balanced support toward novice, serial and portfolio entrepreneurs is suggested. We suggest that policy-makers and practitioners seeking to maximize returns from public policy investments should consider targeting assistance to experienced portfolio and serial entrepreneurs.

This paper is structured as follows. In Section 2, definitional issues are discussed, and a distinction is made between novice, serial and portfolio entrepreneurs. The scale of novice, serial and portfolio entrepreneur activity in Scotland and the demographic characteristics of three samples of entrepreneurs are reported in Section 3. In Section 4, differences between portfolio, serial and novice entrepreneurs are reported (see Westhead et al., 2003 for all detailed tables and statistical tests conducted). Policy considerations are then highlighted in Section 5. Areas for additional research to guide policy-makers and practitioners are discussed in Section 6. Conclusions are presented in Section 7.

2. Definitional issues

Entrepreneurship can involve the founding of new independent firms, as well as the ownership and development of purchased and inherited independent businesses (Cooper and Dunkelberg, 1986; Ucbasaran et al., 2001). The growing team-based entrepreneurship phenomenon (Birley and Stockley, 2000) indicates that entrepreneurs can hold minority and/or majority ownership stakes in private firms. Studies have made a distinction between types of entrepreneurs (Westhead and Wright, 1998a). In this study, respondents were key individuals who were the most influential decision-makers in the surveyed businesses (i.e., the founders of the business and/or the principal owner). Novice entrepreneurs were viewed as individuals with no prior minority or majority business ownership experience either as a business founder, an inheritor or a purchaser of an independent business, but who currently own a minority or majority equity stake in an independent business that is either new, purchased or inherited. Serial entrepreneurs were viewed as individuals who have sold/closed a business in which they had a minority or majority ownership stake, and they currently have a minority or majority ownership stake in a single independent business that is either new, purchased or inherited. While portfolio entrepreneurs were viewed as individuals who currently have minority or majority ownership stakes in two or more independent businesses that are either new, purchased and/or inherited.

3. The scale of novice, serial and portfolio entrepreneur activity in Scotland and the demographics of the three samples of entrepreneurs

In total, 200 firms (56.5%) involved novice entrepreneurs.² A further 66 firms involved serial entrepreneurs (18.6%). The remaining 88 firms involved portfolio entrepreneurs (24.9%). Habitual entrepreneurs (i.e., serial and portfolio entrepreneurs) owned 43.5% of firms. This proportion is higher than the level reported elsewhere. Westhead (1988) found that 34% of new manufacturing independent firm founders in Wales were habitual entrepreneurs. Further, Taylor (1999) reports survey evidence indicating that

38%, 42% and 49% of surveyed independent firms in Malaysia, England and Australia, respectively were owned by habitual entrepreneurs. With reference to a British sample of independent firms, Westhead and Wright (1998a) detected that 37.4% of responding founders were habitual entrepreneurs (i.e., 25.3% and 12.1% responses from serial and portfolio founders, respectively). In comparison, Kolvereid and Bullvåg (1993) found that 31% of their sample of Norwegian firms were owned by portfolio

founders. Detected difference between the studies may, in part, be due to definitional and sample differences (i.e., the study discussed in this paper focused upon established, purchased and inherited independent firms, rather than solely new independent firms).

Row 1 in Table I shows that portfolio entrepreneurs, on average, had held equity stakes in more businesses than serial or novice entrepreneurs.³ Also, serial entrepreneurs had exited more businesses than portfolio entrepreneurs

TABLE I
Characteristics of the entrepreneurs and businesses by type of entrepreneur

Variable (mean scores)	Novice	Serial	Portfolio	Number of respondents	Kruskal–Wallis statistic	Significance level (two-tailed)
<i>Entrepreneur characteristics</i>						
1. Total number of businesses owned ^{a, b, c}	1.00	2.26	3.75	354	329.23	0.000
2. Total number of businesses exited ^{a, b, c}	0.00	1.26	0.99	354	230.06	0.000
3. Total number of businesses currently owned ^{b, c}	1.00	1.00	2.76	354	346.40	0.000
4. Current age of the principal owner	49.99	49.72	49.99	331	0.10	0.995
5. Number of organizations worked for on a full-time basis ^{a, b}	3.18	4.11	3.82	346	7.917	0.019
<i>Business characteristics</i>						
6. Number of equity partners when this business was started, purchased or inherited	2.16	2.32	2.30	146	0.89	0.640
7. Number of equity partners in this current business ^{b, c}	1.37	1.42	4.63	309	5.05	0.080
8. Age of surveyed business (i.e. since received first order)	23.15	13.97	21.52	350	5.16	0.075
9. Number of sources of information used ^{a, b}	8.40	9.80	9.66	354	6.16	0.046
10. Total initial capital used to establish, inherit or purchase this business (£'s) ^{a, b}	41,346	99,648	99,600	276	16.23	0.000
11. How much initial capital did you personally invest in this business when you established, inherited or purchased this business (including funds from family and friends) (£'s)? ^{a, b}	17,072	67,072	60,192	276	10.96	0.004
12. Gross sales in 1999 (£'s) ^{a, b, c}	208,415	333,941	1,423,633	286	21.53	0.000
13. Absolute change in gross sales, 1996–1999 ^b	61,773	77,442	741,236	254	4.36	0.113
14. Number of total employees in 2001 ^{b, c, d}	6.07	8.42	23.57	269	26.94	0.000
15. Absolute employment change in total employees, 1996–2001 ^{b, c, d}	0.91	0.77	12.36	269	14.74	0.001
16. Percentage employment change in total employees, 1996–2001 ^{b, c, d}	24.42	24.28	70.96	269	11.21	0.004

^a A Mann-Whitney U-test detected a statistically significant difference detected by between novice and serial owners at least at the 0.1 level (two-tailed).

^b A Mann-Whitney U-test detected a statistically significant difference between novice and portfolio owners at least at the 0.1 level (two-tailed).

^c A Mann-Whitney U-test detected a statistically significant difference between serial and portfolio owners at least at the 0.1 level (two-tailed).

^d Full-time, part-time and casual employees were taken into account by scoring full-time, part-time and casual employees 1, 0.5 and 0.25, respectively.

(row 2). Row 3 shows that novice and serial entrepreneurs currently had equity stakes in only one independent business, whilst portfolio entrepreneurs, on average, had equity stakes in 2.8 independent businesses. No statistically significant differences were detected among the three

types of entrepreneurs with regard to the mode of acquisition of equity stake (row 1 in Table II), or the number of equity partners in the surveyed business when it was started, inherited or purchased (row 6 in Table I). Row 7 in Table I shows that portfolio entrepreneurs currently had

TABLE II
Demographic characteristics of the businesses and entrepreneurs by type of entrepreneur

Variable	Novice (n = 200)		Serial (n = 66)		Portfolio (n = 88)		Chi-square Statistic	Significance level
	No.	%	No.	%	No.	%		
<i>Business characteristics</i>								
1. How did you gain your equity stake in the business?							3.56	0.468
Established the business	135	67.5	50	75.8	63	71.6		
Purchased or acquired an equity stake in the business	32	16.0	11	16.7	12	13.6		
Inherited the business	33	16.5	5	7.6	13	14.8		
2. Location							12.50	0.407
Borders/Dumfries and Galloway	22	11.0	7	10.6	14	15.9		
Central/Tayside	26	13.0	7	10.6	9	10.2		
Fife	20	10.0	3	4.5	5	5.7		
Grampian	27	13.5	11	16.7	14	15.9		
Highland/Islands	10	5.0	5	7.6	5	5.7		
Lothian	38	19.0	6	9.1	10	11.4		
Strathclyde	57	28.5	27	40.9	31	35.2		
3. Main industrial activity (Standard Industrial Category (1980))							12.71	0.390
Agriculture, forestry and fishing (SIC 0)	38	19.0	9	13.6	15	17.0		
Metal goods; engineering and vehicle industries (SIC 3); other manufacturing industries (SIC 4)	19	9.5	6	9.1	5	5.7		
Construction (SIC 5)	22	11.0	6	9.1	6	6.8		
Distribution, hotels and catering; repairs (SIC 6)	64	32.0	21	31.8	27	30.7		
Transport and communication (SIC 7)	9	4.5	3	4.5	1	1.1		
Banking, finance, insurance, business services and leasing (SIC 8)	29	14.5	17	25.8	22	25.0		
Other services (SIC 9)	19	9.5	4	6.1	12	13.6		
4. Is this business a family owned business (i.e., more than 50% of voting shares are owned by a single family related by blood or marriage)?							2.39	0.303
Yes	146	73.0	47	71.2	71	80.7		
No	54	27.0	19	28.8	17	19.3		
5. Legal status ^{a, b, c}							31.58	0.000
Sole proprietorship	90	45.0	26	39.4	18	20.5		
Partnership	82	41.0	22	33.3	33	37.5		
Private limited company	28	14.0	18	27.3	37	42.0		
<i>Entrepreneur Characteristics</i>								
6. Gender ^b							4.13	0.127
Male	152	80.9	58	87.9	77	89.5		
Female	36	19.1	8	12.1	9	10.5		

TABLE II
Continued

Variable	Novice (<i>n</i> = 200)		Serial (<i>n</i> = 66)		Portfolio (<i>n</i> = 88)		Chi-square Statistic	Significance level
	No.	%	No.	%	No.	%		
7. Highest level of education							4.15	0.940
Compulsory school education	71	38.2	22	33.3	31	36.0		
Technical qualification	51	27.4	15	22.7	26	30.2		
Undergraduate first university degree	8	4.3	4	6.1	6	7.0		
Postgraduate university degree	25	13.4	12	18.2	11	12.8		
Post degree professional qualification	21	11.3	10	15.2	9	10.5		
Other	10	5.4	3	4.5	3	3.5		
8. Did either of your parents own a business? ^{b, c}							4.00	0.135
Yes	73	39.2	25	37.9	44	51.2		
No	113	60.8	41	62.1	44	48.8		
9. Job status immediately before starting first business ^{a, b, c}							25.99	0.004
Managerial	31	15.5	14	21.2	27	30.7		
Professional	49	24.5	21	31.8	15	17.0		
Self-employed	30	15.0	17	25.8	14	15.9		
Supervisory	12	6.0	1	1.5	8	9.1		
Manual	43	21.5	8	12.1	17	19.3		
Other	35	17.5	5	7.6	7	8.0		

^a Statistically significant difference between novice and serial owners at least at the 0.1 level.

^b Statistically significant difference between novice and portfolio owners at least at the 0.1 level.

^c Statistically significant difference between serial and portfolio owners at least at the 0.1 level.

more equity partners than other entrepreneurs. Whilst row 8 shows that serial entrepreneur firms were significantly younger at the 0.1 level. No statistically significant differences, however, were recorded among the three entrepreneur types with regard to their current age (row 4 in Table I), or gender and educational level (rows 6 and 7 in Table II, respectively).

Table II shows no statistically significant differences were detected among the novice, serial and portfolio entrepreneur firms with regard to the location of surveyed businesses (row 2), the main industrial activity of the businesses (row 3), and whether the business was a family firm (row 4). Larger proportions of novice and serial entrepreneur firms, however, were sole proprietorships, and a markedly larger proportion of portfolio entrepreneur firms were private limited companies (row 5). Nevertheless, we can reasonably assume that the differences reported below between the three types of entrepreneurs relate to real differences, rather than demographic sample differences.

4. Differences between portfolio, serial and novice entrepreneurs in Scotland

In this section, differences between portfolio, serial and novice entrepreneurs in Scotland are discussed with regard to the background and motivations of entrepreneurs, entrepreneurs' search and opportunity identification processes, the process of financing businesses, and organizational capabilities. This is followed by an examination of entrepreneur and business performance. For each aspect, we first compare portfolio entrepreneurs with novice and serial entrepreneurs, and then compare serial entrepreneurs with novice and portfolio entrepreneurs.

4.1. Background and motivations of entrepreneurs

4.1.1. Portfolio entrepreneurs compared with novice and serial entrepreneurs

Curran et al. (1991) detected that individuals whose parents were owners of small firms tended to follow their parent's footsteps and became

business owners. Row 8 in Table II shows that a larger proportion of portfolio entrepreneurs, rather than novice or serial entrepreneurs, reported that one of their parents had experience as business owners.

As a result of prior business ownership experience, many experienced entrepreneurs may have developed skills and competencies, a network of contacts, a business reputation and a track record. The development of a portfolio of businesses suggests a need for greater managerial skills (Donckels et al., 1987). In Scotland, portfolio entrepreneurs highlighted the importance of human capital resources. Entrepreneurs reported differences in their job status before starting the first business (row 9 in Table II). A larger proportion of portfolio entrepreneurs, rather than other entrepreneurs, reported that their last job had been a managerial position. In addition, portfolio entrepreneurs had worked in more organizations than novice entrepreneurs (row 5 in Table I). As intimated above, surveyed firms owned by portfolio entrepreneurs had more equity partners than firms owned by novice or serial entrepreneurs. In order to avoid biases

resulting from previous experience, and increase their awareness in decision-making, many portfolio entrepreneurs preferred to be a 'team', rather than a 'solo' owner of a private firm. The team aspect of entrepreneurship maybe important in providing the skills and resources needed to gain an equity stake in a (larger) venture, as well as to ensure business development. Portfolio entrepreneurs may use partners as a means of delegating responsibility. Partners can provide successful (and unsuccessful) entrepreneurs with a greater depth of expertise, as well as access to wider networks.

Prior business ownership experience maybe associated with several assets and liabilities (Starr and Bygrave, 1991). Experience may encourage serial and portfolio entrepreneurs to be more cautious with regard to subsequent forays as business owners. In Scotland, portfolio entrepreneurs were more likely than novice entrepreneurs to report that they 'find the process of starting a business very daunting' (row 1 in Table III), and were less likely to report that they 'enjoy the early stages of building a business' (row 6). Portfolio entrepreneurs were also more likely than

TABLE III
Attitudes to entrepreneurship by type of entrepreneur ^{a, b}

Variable (mean scores)	Novice (<i>n</i> = 200)	Serial (<i>n</i> = 66)	Portfolio (<i>n</i> = 88)	Number of respondents	Kruskal-Wallis statistic	Significance level (two-tailed)
1. I find the process of starting a business very daunting ^{c, d}	2.81	2.51	2.15	354	16.61	0.000
2. I have a short attention span ^c	2.64	3.07	2.85	354	6.75	0.034
3. External advice is crucial for the growth of this business ^c	3.13	3.50	3.32	354	6.13	0.047
4. I enjoy the long-run management of business	3.52	3.44	3.52	354	0.31	0.857
5. I feel I can predict and adapt to changing environmental circumstances ^{c, d}	3.69	3.88	4.07	354	13.10	0.001
6. I enjoy the early stages of building a business ^{c, d}	3.66	3.94	4.16	354	12.79	0.002
7. I frequently try to establish/develop new contacts ^{c, d}	3.77	4.08	4.10	354	9.39	0.009
8. I like to be aware of all decisions made about this business and have the final say ^c	4.13	4.41	4.18	354	3.92	0.141

^a Statements derived from Starr and Bygrave's (1991) discussion of the assets and liabilities of experience.

^b The following scale was used: (1) strongly agree, (2) partly agree, (3) neutral, (4) partly disagree, and (5) strongly disagree.

^c A Mann-Whitney U-test detected a statistically significant difference between novice and serial owners at least at the 0.1 level (two-tailed).

^d A Mann-Whitney U-test detected a statistically significant difference between novice and portfolio owners at least at the 0.1 level (two-tailed).

novice entrepreneurs to disagree with the statement that they 'frequently try to establish/develop new contacts' (row 7). We can infer here that some portfolio entrepreneurs focusing on existing contacts may exhibit the liability of staleness. Portfolio entrepreneurs were, in addition, less likely than novice entrepreneurs to agree with the statement that they 'can predict and adapt to changing environmental circumstances' (row 5). This evidence suggests that most portfolio entrepreneurs do not suffer from an illusion of control.

Triggers to serial or portfolio entrepreneurship may involve a desire for independence, autonomy and wealth creation (Wright et al., 1997a; Westhead and Wright, 1998a). Motivations cited by experienced entrepreneurs for owning businesses can also change over time. While independence is a strong reason for starting a first business, a variety of other more materialistic reasons may come to the fore when an entrepreneur establishes (or purchases) a subsequent business (Donckels et al., 1987). In line with the wealth creation expectations of policy-makers

and practitioners, a larger proportion of portfolio rather than other entrepreneurs, reported 'to generate personal wealth' as the *main* reason leading to business ownership (row 5 in Table IV). Portfolio entrepreneurs were less likely than other entrepreneurs to suggest that they were 'unemployed/made redundant' (row 21 in Table V), and they were less likely than novice entrepreneurs to report that they had gained an ownership stake in the business 'to have greater flexibility for my personal and family life' (row 9). However, portfolio entrepreneurs were more likely than novice entrepreneurs to report 'to be challenged by the problems and opportunities of starting and growing a new business' (row 8).

Differences were detected with regard to creativity and innovation. A larger proportion of portfolio, rather than other entrepreneurs, reported that they had 'found new ways of managing finance' (row 4 in Table VI), and had 'introduced a new culture especially through the induction of innovative people at lower levels' (row 10). Also, larger proportions of portfolio rather than novice entrepreneurs, reported that

TABLE IV
Main reason leading to business ownership by type of entrepreneur ^a

Variable	Novice (n = 200)		Serial (n = 66)		Portfolio (n = 88)		Chi-square statistic	Significance level
	No.	%	No.	%	No.	%		
1. To have considerable freedom to adopt my own approach to my work – yes (i)	32	16.0	10	15.2	13	14.8	0.08	0.961
2. To take advantage of an opportunity that appeared – yes (ii)	30	15.0	9	13.6	12	13.6	0.13	0.937
3. I was unemployed/made redundant – yes	29	14.5	5	7.6	5	5.7	5.83	0.054
4. To be challenged by the problems and opportunities of starting and growing a new business – yes (ii)	16	8.0	6	9.1	11	12.5	1.47	0.480
5. To generate personal wealth (earnings or capital gain) – yes ^{b, c}	11	5.5	5	7.6	14	15.9	8.62	0.013
6. It made sense at that time in my life – yes (i)	19	9.5	7	10.6	4	4.5	2.41	0.300
7. To give myself, my spouse, and children security – yes (iii)	12	6.0	5	7.6	7	8.0	0.45	0.798
8. Other reasons – yes	32	16.0	14	21.2	15	17.0	0.95	0.622

^a Statements derived from Birley and Westhead (1994).

^b A Mann-Whitney U-test detected a statistically significant difference between novice and portfolio at least at the 0.1 level (two-tailed).

^c A Mann-Whitney U-test detected a statistically significant difference between serial and portfolio owners at least at the 0.1 level (two-tailed). Birley and Westhead (1994) detected the statements were associated with: (i) Need for independence; (ii) Need for personal development; and (iii) Perceived instrumentality of wealth.

they had 'developed new structures, systems or procedures' (row 1); 'found a new market or employed a new marketing strategy in an existing market' (row 3); 'used new ways of managing and developing personnel' (row 5); 'developed new ways of managing quality control and R & D' (row 6); 'found new ways of dealing with government and other external agencies' (row 7); 'introduced a new product or a new quality of an existing product' (row 8); or 'introduced a new method of production or modified an existing method' (row 9).

4.1.2. *Serial entrepreneurs compared with novice and portfolio entrepreneurs*

A smaller proportion of serial rather than portfolio entrepreneurs, reported they had parents with prior business ownership experience (row 8 in Table II). Consequently, a relatively higher proportion of serial entrepreneurs did not have access to the financial resources, or the social networks generally more available to individuals drawn from business ownership parental backgrounds. However, a larger proportion of serial, rather than other entrepreneurs, indicated that they had been self-employed prior to gaining an equity stake in the surveyed business (row 9 in Table II). Also, serial entrepreneurs had worked in more organizations than novice entrepreneurs (row 5 in Table I). A positive interpretation of these findings is that serial entrepreneurs may have gained business experiences in a variety of settings.

With regard to attitudes to entrepreneurship and the possibility of liabilities associated with prior ownership experience, serial entrepreneurs were more likely than novice entrepreneurs to state that they 'find the process of starting a business very daunting' (row 1 in Table III). Novice entrepreneurs were less likely to report that they 'have a short attention span' (row 2). Serial entrepreneurs were more likely than novice entrepreneurs to disagree with the statements that they 'can predict and adapt to changing environmental circumstances' (row 5); they 'enjoy the early stages of building a business' (row 6); they 'frequently try to establish/develop new contacts' (row 7); and they 'like to be aware of all decisions made about this business and have the final say' (row 8). Novice entrepreneurs were

more likely than serial entrepreneurs to recognize that 'external advice is crucial for the growth of this business' (row 3). Further, in terms of their motivations for business ownership, serial entrepreneurs were more likely than novice entrepreneurs to cite 'to control their own time' (row 2 in Table V), but they were less likely than novice entrepreneurs to report that they had an equity stake in a business 'to continue a family tradition' (row 17).

With regard to attitudes to creativity and innovation, a larger proportion of serial rather than novice entrepreneurs, reported that they 'found new ways of managing and developing personnel' (row 5 in Table VI); had 'developed new ways of managing quality control and R & D' (row 6); had 'introduced a new product or a new quality of an existing product' (row 8); and had 'introduced a new method of production or modified an existing method' (row 9). However, a smaller proportion of serial entrepreneurs, rather than portfolio entrepreneurs, reported that they had 'found new ways of managing finance' (row 4), and had 'introduced a new culture especially through the induction of innovative people at lower levels' (row 10).

4.2. *Entrepreneurs' search processes*

4.2.1. *Portfolio entrepreneurs compared with novice and serial entrepreneurs*

Opportunity recognition and exploitation are regarded as key entrepreneurial skills (Shane and Venkataraman, 2000). The extent to which individuals search for relevant information, and identify business opportunities, can be determined by an individual's prior experience (Cooper et al., 1995; Fiet et al., 2000). As a result of their experience, it is reasonable to assume that serial and portfolio entrepreneurs will exhibit more effective information search behaviour than novice entrepreneurs.

On average, portfolio entrepreneurs had used a wider range of information sources than novice entrepreneurs (row 9 in Table I). A larger proportion of portfolio rather than novice entrepreneurs, indicated that they had used information from personal friends, magazines/newspapers, trade publications, financiers, employees, technical literature,

TABLE V
Reasons leading to business ownership by type of entrepreneur ^{a, b}

Variable (mean scores)	Novice (<i>n</i> = 200)	Serial (<i>n</i> = 66)	Portfolio (<i>n</i> = 88)	Number of respondents	Kruskal–Wallis statistic	Significance level (two-tailed)
1. To have considerable freedom to adopt my own approach to my work (ii)	3.93	4.15	4.14	354	3.46	0.178
2. To control my own time ^c (ii)	3.75	4.02	3.76	354	3.19	0.203
3. It made sense at that time in my life (ii)	3.74	3.85	3.52	354	1.90	0.386
4. To take advantage of an opportunity that appeared (iii)	3.54	3.59	3.44	354	0.58	0.748
5. To generate personal wealth (earnings or capital gain) ^{d, e}	3.10	3.32	3.67	354	13.86	0.001
6. To give myself, my spouse, and children security (v)	3.25	3.09	3.39	354	1.99	0.369
7. To achieve something and get recognition for it (i)	3.13	3.09	3.30	354	1.88	0.391
8. To be challenged by the problems and opportunities of starting and growing a new business ^d (ii)	2.89	2.86	3.23	354	4.99	0.082
9. To have greater flexibility for my personal and family life ^d (ii)	2.85	3.11	3.31	354	6.63	0.036
10. To continue learning (iii)	2.84	2.86	2.83	354	0.04	0.980
11. To be innovative and be in the forefront of technological development (iii)	2.42	2.36	2.47	354	0.54	0.764
12. To develop an idea for a product (iii)	2.35	2.41	2.40	354	0.03	0.985
13. To achieve a higher position for myself in society (i)	2.04	2.05	2.16	354	0.87	0.647
14. To increase the status and prestige of my family (i)	1.96	2.03	2.11	354	0.31	0.854
15. To contribute to the welfare of the community I live in (iv)	1.97	1.85	2.19	354	2.89	0.236
16. To follow the example of a person I admire (vii)	2.03	1.83	1.97	354	1.72	0.423
17. To continue a family tradition ^c (vii)	2.03	1.70	1.93	354	3.72	0.156
18. To be respected by my friends (i)	1.84	1.92	2.07	354	1.77	0.413
19. To have access to indirect benefits such as tax exemptions (vi)	1.80	1.91	2.05	354	1.99	0.370
20. To contribute to the welfare of my relatives (v)	1.87	1.73	2.02	354	1.88	0.390
21. I was unemployed/made redundant ^{d, e}	2.03	1.83	1.43	354	10.86	0.004
22. To contribute to the welfare of people with the same background as me (iv)	1.80	1.55	1.76	354	1.83	0.400
23. To have more influence in my community (iv)	1.75	1.73	1.81	354	0.06	0.972
24. As a vehicle to reduce the burden of taxes I face (vi)	1.58	1.53	1.74	354	2.83	0.242

^a Statements derived from Birley and Westhead (1994).

^b The following scale was used: (1) to no extent, (2) to little extent, (3) to some extent, (4) to a great extent, and (5) to a very great extent.

^c A Mann–Whitney U-test detected a statistically significant difference between novice and serial owners at least at the 0.1 level (two-tailed).

^d A Mann–Whitney U-test detected a statistically significant difference between novice and portfolio owners at least at the 0.1 level (two-tailed).

^e A Mann–Whitney U-test detected a statistically significant difference between serial and portfolio owners at least at the 0.1 level (two-tailed). Birley and Westhead (1994) detected the statements were associated with: (i) Need for approval; (ii) Need for independence; (iii) Need for personal development; (iv) Welfare considerations; (v) Perceived instrumentality of wealth; (vi) Tax reduction and indirect benefits; and (vii) Follow role models.

TABLE VI
Attitudes to creativity and innovation by type of entrepreneur ^a

Variable	Novice		Serial		Portfolio		Chi-square statistic	Significance level
	No.	%	No.	%	No.	%		
<i>Creativity statements</i>								
1. Have you developed new structures, systems, or procedures in your organization? – yes ^c	96	51.6	39	60.9	61	71.8	9.95	0.007
2. Have you found a new source of supply? – yes	99	53.5	31	47.7	50	58.8	1.84	0.398
3. Have you found a new market or employed a new marketing strategy in an existing market? – yes ^c	73	39.5	28	43.1	42	49.4	2.36	0.307
4. Have you found new ways of managing finance? – yes ^{c, d}	63	34.1	20	30.8	38	44.7	3.86	0.145
5. Have you found new ways of managing and developing personnel? – yes ^{b, c}	54	29.0	27	41.5	36	42.9	6.42	0.040
6. Have you developed new ways of managing quality control and R&D? – yes ^{b, c}	41	22.3	21	32.8	33	39.8	9.19	0.010
7. Have you found new ways of dealing with government and other external agencies? – yes ^c	25	13.8	19	14.3	20	24.1	4.65	0.098
<i>Innovation statements</i>								
8. Have you introduced a new product or a new quality of an existing product? – yes ^{b, c}	77	41.4	40	61.5	44	51.2	8.36	0.015
9. Have you introduced a new method of production or modified an existing method? – yes ^b	69	37.5	28	43.8	43	52.4	5.24	0.073
10. Have you introduced a new culture especially through the induction of innovative people at lower levels? – yes ^{c, d}	36	19.6	13	21.0	36	43.4	17.87	0.000

^a Statements derived from Manimalla (1992).

^b A Mann-Whitney U-test detected a statistically significant difference between novice and serial owners at least at the 0.1 level (two-tailed).

^c A Mann-Whitney U-test detected a statistically significant difference between novice and portfolio owners at least at the 0.1 level (two-tailed).

^d A Mann-Whitney U-test detected a statistically significant difference between serial and portfolio owners at least at the 0.1 level (two-tailed).

and local enterprise and development agencies, consultants and government sources (see Westhead et al., 2003). Further, a larger proportion of serial rather than portfolio entrepreneurs, reported that they had used information from other business owners.

Portfolio entrepreneurs were more likely than novice entrepreneurs to report that ‘new business opportunities often arise in connection with a solution to a specific problem’ (row 1 in Table VII), and they ‘enjoy just thinking about and/or looking for new business opportunities’ (row 4). In addition, portfolio entrepreneurs were more likely than other entrepreneurs to describe themselves as ‘opportunistic’ (row 3). Portfolio entrepreneurs were more likely than novice entrepreneurs to agree that ‘the consideration of one opportunity often leads to other opportunities’ (row 6); ‘identifying opportunities is really

several learning steps over time’ (row 7); ‘it is very important that the idea represents a concept which can be developed over time’ (row 8); and ‘identifying good opportunities usually requires ‘immersion’ in a particular market’ (row 9). Also, portfolio entrepreneurs were more likely than other entrepreneurs to agree that ‘the problem is not to identify the idea, but to obtain capital and other resources’ (row 10).

With respect to their personal capabilities regarding opportunity identification, portfolio entrepreneurs were more likely than novice entrepreneurs to agree that ‘one of my greatest strengths is organizing resources and co-ordinating tasks’ (row 4 in Table VIII); ‘my ability to supervise, influence and lead people’ (row 5); ‘my ability to delegate effectively’ (row 8); ‘my ability to seize high quality business opportunities’ (row 9); and to have a ‘special alertness or sensitivity

TABLE VII
Attitudes towards opportunity identification by type of entrepreneur ^{a, b}

Variable (mean scores)	Novice (<i>n</i> = 200)	Serial (<i>n</i> = 66)	Portfolio (<i>n</i> = 88)	Number of respondents	Kruskal–Wallis statistic	Significance level (two-tailed)
1. New business opportunities often arise in connection with a solution to a specific problem ^{c, d}	2.65	2.15	2.17	354	23.98	0.000
2. New business opportunities normally arise due to market or technological changes	2.53	2.48	2.39	354	1.09	0.577
3. I would describe myself as opportunistic ^{d, e}	2.65	2.67	2.33	354	7.89	0.019
4. I enjoy just thinking about and/or looking for new business opportunities ^d	2.81	2.61	2.28	354	14.21	0.001
5. Ideas for new business opportunities do not require specific market or technological knowledge	2.96	3.03	2.76	354	2.30	0.316
6. The consideration of one opportunity often leads to other opportunities ^{c, d}	2.19	1.92	1.95	354	10.58	0.005
7. Identifying opportunities is really several learning steps over time ^{c, d}	2.45	2.09	2.16	354	11.69	0.003
8. It is very important that the idea represents a concept which can be developed over time ^{c, d}	2.52	2.26	2.32	354	5.93	0.052
9. Identifying good opportunities usually requires ‘immersion’ in a particular market ^d	2.60	2.47	2.42	354	3.46	0.177
10. The problem is not to identify the idea, but to obtain capital and other resources ^{d, e}	2.82	2.82	2.44	354	8.22	0.016

^a Statements derived from Hills et al. (1997).

^b The following scale was used: (1) strongly agree, (2) partly agree, (3) neutral, (4) partly disagree, and (5) strongly disagree.

^c A Mann–Whitney U-test detected a statistically significant difference between novice and serial owners at least at the 0.1 level (two-tailed).

^d A Mann–Whitney U-test detected a statistically significant difference between novice and portfolio owners at least at the 0.1 level (two-tailed).

^e A Mann–Whitney U-test detected a statistically significant difference between serial and portfolio owners at least at the 0.1 level (two-tailed).

towards spotting opportunities’ (row 11). They were more likely than other entrepreneurs to agree that one of their greatest strengths is ‘achieving results by organizing and motivating people’ (row 6), and to report they can ‘usually spot a real opportunity better than professional researchers/analysts’ (row 12).

A larger proportion of portfolio entrepreneurs, rather than other entrepreneurs, had identified one or more opportunities within the last five years (see Westhead et al., 2003). Moreover, a larger proportion of portfolio, rather than other entrepreneurs, had pursued opportunities (i.e. committed time and resources) within the last five years.

4.2.2. Serial entrepreneurs compared with novice and portfolio entrepreneurs

On average, serial entrepreneurs used more sources of information than novice entrepreneurs (row 9 in Table I). A larger proportion of serial,

rather than other entrepreneurs, had used information from other business owners (see Westhead et al., 2003). Further, a larger proportion of serial rather than novice entrepreneurs, reported that they had used information from customers and clients, personal friends, financiers, employees and technical literature.

Serial entrepreneurs were more likely than novice entrepreneurs to agree that ‘new business opportunities often arise in connection with a solution to a specific problem’ (row 1 in Table VII); that ‘the consideration of one opportunity often leads to other opportunities’ (row 6); that ‘identifying opportunities is really several learning steps over time’ (row 7); and that ‘it is very important that the idea represents a concept which can be developed over time’ (row 8). With regard to the source of the opportunity for the surveyed business, serial entrepreneurs were less likely than other entrepreneurs to suggest that

TABLE VIII
Personal capabilities toward opportunity identification and sources of opportunities by type of entrepreneur ^a

Variable (mean scores)	Novice (n = 200)	Serial (n = 66)	Portfolio (n = 88)	Number of respondents	Kruskal–Wallis statistic	Significance level (two-tailed)
<i>Personal capabilities toward opportunity identification (i)</i>						
1. One of my greatest strengths is identifying goods and services people want ^b	2.19	1.94	2.01	354	3.66	0.160
2. I make resource allocation decisions that achieve maximum resources with limited resources	2.25	2.23	2.14	354	2.04	0.360
3. I accurately perceive unmet customer needs ^b	2.36	1.98	2.18	354	8.96	0.011
4. One of my greatest strengths is organizing resources and co-ordinating tasks ^c	2.31	2.29	2.10	354	3.30	0.192
5. One of my greatest strengths is my ability to supervise, influence, and lead people ^c	2.35	2.33	2.07	354	4.92	0.085
6. One of my greatest strengths is achieving results by organizing and motivating people ^{c, d}	2.54	2.41	2.06	354	15.46	0.000
7. One of my greatest strengths is my expertise in a technical or functional area ^d	2.46	2.21	2.61	354	5.59	0.061
8. One of my greatest strengths is my ability to delegate effectively ^c	2.56	2.61	2.36	354	3.37	0.185
9. One of my greatest strengths is my ability to seize high quality business opportunities ^c	2.80	2.61	2.43	354	10.10	0.006
10. One of my greatest strengths is my ability to develop goods or services that are technically superior	2.80	2.85	2.87	354	0.39	0.823
11. I have a special alertness or sensitivity towards spotting opportunities ^c	2.66	2.52	2.36	354	6.66	0.036
12. I can usually spot a real opportunity better than professional researchers / analysts ^{c, d}	3.02	2.98	2.68	354	6.53	0.038
<i>Source of the Opportunity for Surveyed Business (ii)</i>						
13. The business idea was strictly mine alone	2.70	2.53	2.45	354	2.11	0.348
14. The idea for my business was strictly market driven	2.95	2.88	2.94	354	0.14	0.933
15. The business concept was developed while I was employed by another firm ^{b, d}	2.85	3.39	2.82	354	6.76	0.034
16. The business concept was developed while I was in conversation with other people	3.18	3.18	3.18	354	0.02	0.990
17. The idea behind this business was the result of a deliberate effort to search for an idea	3.29	3.03	3.13	354	2.86	0.239
18. The idea for my business was driven by my ability to obtain funds	3.29	3.41	3.22	354	1.00	0.606
19. The idea for my business was technology driven	3.81	3.89	3.86	354	0.19	0.910
20. The idea behind this business was the result of an accidental process ^{b, d}	3.26	2.91	3.51	354	8.13	0.017

^a The following scale was used: (1) strongly agree, (2) partly agree, (3) neutral, (4) partly disagree, and (5) strongly disagree.

^b A Mann-Whitney U-test detected a statistically significant difference between novice and serial owners at least at the 0.1 level (two-tailed).

^c A Mann-Whitney U-test detected a statistically significant difference between novice and portfolio owners at least at the 0.1 level (two-tailed).

^d A Mann-Whitney U-test detected a statistically significant difference between serial and portfolio owners at least at the 0.1 level (two-tailed). (i) Statements derived from Chandler and Hanks (1998). (ii) Statements derived from Hills et al. (1997).

'the business concept was developed while I was employed by another firm' (row 15 in Table VIII). Serial entrepreneurs were more likely than novice entrepreneurs to agree that one of their greatest strengths is 'identifying goods and services that people want' (row 1), and that they 'accurately perceive unmet customer needs' (row 3). Also, serial entrepreneurs were more likely than portfolio entrepreneurs to suggest that their greatest strength was 'expertise in a technical or functional area' (row 7).

A smaller proportion of serial rather than novice entrepreneurs had failed to spot an opportunity for creating or purchasing a business within the last five years (see Westhead et al., 2003). Further, a larger proportion of serial, rather than portfolio entrepreneurs, reported that they had failed to spot any opportunity within the last five years. A smaller proportion of serial, rather than portfolio entrepreneurs, had pursued opportunities within the last five years. In part, difficulties reported by serial entrepreneurs with regard to the identification and pursuit of business opportunities maybe associated with the way they identify opportunities. Serial entrepreneurs were more likely than other entrepreneurs to agree that 'the idea behind the business was the result of an accidental process' (row 20 in Table VIII). They were less likely than portfolio entrepreneurs to describe themselves as 'opportunistic' (row 3 in Table VII), and to suggest they can 'spot a real opportunity better than professional researchers/analysts' (row 12 in Table VIII). Taken together, this evidence suggests that some serial entrepreneurs may require support in terms of addressing the market-related aspects of identifying business opportunities.

4.3. *Process of financing businesses*

4.3.1. *Portfolio entrepreneurs compared with novice and serial entrepreneurs*

An entrepreneur's background and incubator experience can have a profound influence on the amounts of initial capital, and types of finance used during the launch period of a new, acquired or inherited business. Serial and portfolio entrepreneurs with successful track records maybe more credible than those who have failed

first time around, and may lever their prior business ownership experience to obtain external financial resources from banks and venture capitalists for their subsequent ventures (Wright et al., 1997b). Portfolio entrepreneurs who have not exited from a venture(s) they have an ownership stake(s) in maybe able to leverage the internal financial resources from their existing business(es) (Alsos and Kolvereid, 1998), and may make use of finance from existing customers and suppliers. A reluctance to be involved in projects which may undermine their standing amongst the financial and business community, and a desire to invest a smaller proportion of their personal wealth the second time around (Wright et al., 1997a) may mean that some serial and portfolio entrepreneurs become risk averse over time.

Portfolio entrepreneurs, on average, invested more total initial capital to establish, inherit or purchase the surveyed businesses than novice entrepreneurs (row 10 in Table I). Portfolio entrepreneurs were able to leverage their prior business experience to acquire more initial capital from external sources (i.e., banks) (see Westhead et al., 2003). A larger proportion of portfolio, rather than other entrepreneurs, had used bank loans as part of their initial capital. However, portfolio entrepreneurs were less likely than novice entrepreneurs to report that access to bank finance and trade credit was easy. Additional research is warranted to explore whether portfolio entrepreneurs subsequently engage in bigger deals, which may explain this difficulty with access to finance. Financiers may also have reservation about individuals, who are involved in multiple businesses, if there are concerns about a portfolio entrepreneur's lack of focus.

4.3.2. *Serial entrepreneurs compared with novice and portfolio entrepreneurs*

On average, serial entrepreneurs invested more total initial (and personal) capital to establish, inherit or purchase the surveyed businesses than novice entrepreneurs (rows 10 and 11 in Table I). A larger proportion of serial, rather than novice entrepreneurs, had used personal savings and/or a mortgage on their home as part of their initial capital (see Westhead et al., 2003).

In terms of the proportion of initial funds contributed by each source, serial rather than other entrepreneurs, reported a higher proportion of initial capital was obtained from personal savings (i.e., potentially accumulated from the sale of a previous venture). This evidence maybe indicative that their first (previous) venture was a financial success. On the other hand, this maybe consistent with the views of venture capital firms that one of the main reasons for not funding serial entrepreneurs in a subsequent venture relates to the inability of serial entrepreneurs to identify attractive subsequent ventures (Wright et al., 1997b). Indeed, two-thirds of serial entrepreneurs did not (or were unable to) use bank loans as part of their initial capital for the surveyed businesses.

4.4. Organizational capabilities

4.4.1. Portfolio entrepreneurs compared with novice and serial entrepreneurs

A firm (and entrepreneur) can gain a competitive advantage by acquiring and developing key capabilities (Teece et al., 1997). Firms and entrepreneurs maybe able to learn and acquire additional organizational and intangible assets/resources (Eisenhardt and Martin, 2000) that enable them to address barriers to business development. Portfolio entrepreneurs were more likely than other entrepreneurs to report 'the need to grow the business' (row 8 in Table IX). Also, they were more likely than other entrepreneurs to report they 'actively recruit the most talented people' (row 13); they 'invest heavily in providing formal job related training for employees' (row 15); they use 'novel and innovative marketing techniques' (row 16); and they 'grow the business by acquiring new businesses' (row 18). Portfolio rather than novice entrepreneurs, placed more emphasis upon 'strict quality control' (row 5); 'to strive to turn around performance and develop a stronger business' (row 6); to grow the 'business by using profits generated by the business' (row 7), to 'emphasize improvement in employee productivity and operations efficiency' (row 9); and to 'invest heavily in R&D' (row 19). The fact that portfolio entrepreneurs own more than one business may explain their greater focus on organizational capabilities.

4.4.2. Serial entrepreneurs compared with novice and portfolio entrepreneurs

Serial entrepreneurs were more likely than novice entrepreneurs to report an emphasis on growing the 'business by using profits generated by the business' (row 7), to 'emphasize the need to grow the business' (row 8); to 'stress new products/services developments' (row 11); to 'strive to be the first to have products available' (row 12); and to 'have developed lower production costs via process innovation' (row 14). Also, serial entrepreneurs were more likely than other entrepreneurs to report that they 'strive to form alliances with other businesses' (row 17).

4.5. Entrepreneur and business performance

4.5.1. Portfolio entrepreneurs compared with novice and serial entrepreneurs

Entrepreneurs have contrasting thresholds of economic performance (Gimeno et al., 1997). These thresholds can be influenced by the objectives of entrepreneurs. Owners may have growth objectives as well as a desire to draw regular income streams from the business(es) in which they have ownership stake(s) (Westhead, 1997). Some entrepreneurs set higher economic thresholds, and the extent to which they are satisfied with the performance of the surveyed venture may impact on the decision to stay with this venture or exit from it, and/or the intention to start or purchase another firm.

Row 1 in Table X shows that a larger proportion of portfolio, rather than other entrepreneurs, reported that they received income from sources other than the surveyed businesses. Also, row 2 shows that a larger proportion of portfolio, rather than novice entrepreneurs, had drawn out more than £75,000 during the previous twelve months. A larger proportion of portfolio rather than other entrepreneurs indicated that they intended to establish or purchase an additional business (row 3).

Previous studies have failed to detect any statistically significant size and performance differences between firms owned by novice, serial and portfolio entrepreneurs (Westhead and Wright, 1998a). Reflecting a common weakness of studies focusing upon portfolio entrepreneurs, the survey instrument utilized by Westhead et al. (2003)

TABLE IX
Organizational capabilities by type of entrepreneur ^{a, b}

Variable (mean scores)	Novice (<i>n</i> = 200)	Serial (<i>n</i> = 66)	Portfolio (<i>n</i> = 88)	Number of respondents	Kruskal–Wallis statistic	Significance level (two-tailed)
1. We emphasize that customer needs always come first	1.80	1.56	1.72	354	2.53	0.282
2. We focus on providing only highest quality goods and services	1.82	1.67	1.76	354	1.31	0.520
3. We emphasize our superior customer service	1.92	1.77	1.87	354	1.05	0.591
4. We will go to almost any length to meet customer requirements	1.93	1.85	1.83	354	1.13	0.568
5. We emphasize strict quality control ^d	2.20	1.98	1.94	354	3.61	0.164
6. We strive to turn around poor performance and develop a stronger business ^d	2.28	2.08	2.01	354	6.96	0.031
7. We emphasize the need to grow the business by using profits generated by the business ^{c, d}	2.59	2.29	1.95	354	24.61	0.000
8. We emphasize the need to grow the business ^{c, d, e}	2.57	2.38	2.09	354	16.07	0.000
9. We strongly emphasize improvement in employee productivity and operations efficiency ^d	2.55	2.45	2.35	354	3.31	0.191
10. We emphasize cost reduction in all facets of business operations	2.60	2.56	2.52	354	0.33	0.846
11. We stress new products / service development ^{c, d}	2.85	2.39	2.31	354	17.51	0.000
12. We strive to be the first to have products available ^{c, d}	2.85	2.59	2.44	354	9.41	0.009
13. We actively recruit the most talented people ^{d, e}	3.03	2.82	2.52	354	12.20	0.002
14. We have developed lower production costs via process innovation ^{c, d}	3.06	2.77	2.76	354	7.47	0.024
15. We invest heavily in providing formal job related training for our employees ^{d, e}	3.20	2.95	2.56	354	15.40	0.000
16. We engage in novel and innovative marketing techniques ^{d, e}	3.22	3.18	2.83	354	8.70	0.013
17. We strive to form alliances with other businesses ^{c, e}	3.53	2.95	3.33	354	9.74	0.008
18. We emphasize the need to grow the business by acquiring new businesses ^{d, e}	3.54	3.65	3.14	354	7.98	0.018
19. We invest heavily in Research & Development (R&D) ^d	3.78	3.65	3.44	354	4.93	0.085
20. We have sold equity in the business to encourage growth	4.09	4.06	4.00	354	0.07	0.966

^a Several statements derived from Chandler and Hanks (1998).

^b The following scale was used: (1) strongly agree, (2) partly agree, (3) neutral, (4) partly disagree, and (5) strongly disagree.

^c A Mann-Whitney U-test detected a statistically significant difference between novice and serial owners at least at the 0.1 level (two-tailed).

^d A Mann-Whitney U-test detected a statistically significant difference between novice and portfolio owners at least at the 0.1 level (two-tailed).

^e A Mann-Whitney U-test detected a statistically significant difference between serial and portfolio owners at least at the 0.1 level (two-tailed).

TABLE X
Performance considerations by type of entrepreneur

Variable	Novice		Serial		Portfolio		Chi-square statistic	Significance level
	No.	%	No.	%	No.	%		
1. This business alone provides income ^{a, b, c}							30.78	0.000
Yes	157	78.5	44	66.7	40	45.5		
No	43	21.5	22	33.3	48	54.5		
2. How much money have you been able to take out of the business(es) you own in the previous twelve months (£'s)? ^b							23.51	0.009
Less than 5,000	47	27.5	12	19.0	8	10.5		
5,001 – 10,000	30	17.5	6	9.5	10	13.2		
10,001 – 35,000	75	43.9	32	50.8	36	47.4		
35,001 – 50,000	10	5.8	5	7.9	8	10.5		
50,001 – 75,000	6	3.5	4	6.3	5	6.6		
More than 75,000	3	1.8	4	6.3	9	11.8		
3. Do you intend to establish/purchase an additional business in the future? ^{b, c}							13.64	0.001
Yes	42	23.0	19	29.7	38	45.2		
No	141	77.0	45	70.3	46	54.8		
4. How do you rate the current profit performance (operating profit) of this business relative to your competitors? ^{a, b}							16.77	0.033
Very poor	8	4.0	3	4.5	1	1.1		
Poor	19	9.5	5	7.6	13	14.8		
About average	108	54.0	29	43.9	34	38.6		
Good	54	27.0	18	27.3	27	30.7		
Very good	11	5.5	11	16.7	13	14.8		

^a Statistically significant difference between novice and serial owners at least at the 0.1 level.

^b Statistically significant difference between novice and portfolio owners at least at the 0.1 level.

^c Statistically significant difference between serial and portfolio owners at least at the 0.1 level.

failed to gather information on the characteristics and the performance of the other business(es) in which portfolio entrepreneurs have ownership stake(s) in. As a result, the full economic contribution of portfolio entrepreneurs in Scotland was not assessed. Nevertheless, we would expect that experienced serial and portfolio entrepreneurs would be associated with skills and resources, which could be used to enhance their individual subsequent performance, as well as enhance the performance of their subsequent venture(s).

In 1999, the average sales revenues of businesses owned by portfolio entrepreneurs were larger than those owned by other entrepreneurs (row 12 in Table I). On average, businesses owned by portfolio entrepreneurs reported larger absolute sales growth over the 1996–1999 period than those owned by novice entrepreneurs (row 13). Further, a larger proportion of portfolio rather than novice entrepreneurs, reported that

their current operating profit performance was above average relative to competitors (row 4 in Table X).

Supporting the finding relating to sales, portfolio entrepreneur firms were larger than those owned by other entrepreneurs in terms of total employment size in 2001 (row 14 in Table I). Moreover, portfolio entrepreneur firms, on average, reported higher absolute (row 15) and percentage total employment growth over the 1996–2001 period (row 16), than firms owned by other entrepreneurs.

Additional analysis revealed that the top 4% of fastest growing firms owned by portfolio entrepreneurs generated 55% of gross new jobs created by portfolio entrepreneur firms, while the comparable sub-sample of firms owned by novice entrepreneurs generated 44% of gross new jobs. In contrast, the comparable serial entrepreneur sub-sample only generated 38% of gross new

jobs. This evidence supports the view that relatively few entrepreneurs have the inclination, or the ability to be wealth creators (Storey et al., 1987). Evidence suggests with reference to the surveyed firms alone that leading 'winning entrepreneurs' within the portfolio entrepreneur category accounted for more absolute employment growth than leading 'winning entrepreneurs' in the other entrepreneur categories.

4.5.2. *Serial entrepreneurs compared with novice and portfolio entrepreneurs*

Row 3 in Table X shows that less than a third of serial entrepreneurs intended to establish or purchase an additional business in the future. In 1999, the average sales revenues of businesses owned by serial entrepreneurs were larger than those owned by novice entrepreneurs (row 12 in Table I). Further, a larger proportion of serial rather than novice entrepreneurs, reported that their current profit performance was above average relative to competitors (row 4 in Table X).

5. Policy considerations

On the basis of the summary of evidence reviewed in the previous section, we now discuss three key policy questions.

5.1. *Should policy-makers and practitioners tailor assistance to portfolio entrepreneurs seeking wealth creation?*

Portfolio entrepreneurs are more likely to be motivated by wealth generation and display higher levels of growth in the businesses they own. To maximize returns from investments, policy-makers and practitioners could consider allocating resources (i.e., information, training, counselling, finance, etc.) to portfolio entrepreneurs who are actively seeking to maximize wealth creation, as well as job generation. These individuals are relatively easy to identify. Policy-makers and practitioners should consider introducing schemes that encourage novice and serial entrepreneurs to take-up and utilize the methods of best business practice exhibited by portfolio entrepreneurs. Specifically, portfolio entrepreneurs have identified information as a vital business resource. We detected that over three-

quarters of portfolio entrepreneurs had used customers and clients, other business owners, personal friends, family, suppliers, magazines/newspapers and trade publications (see Westhead et al., 2003). Conversely, approximately two-fifths of portfolio entrepreneurs did not use the following sources of information: technical literature; consultants; national government sources; and/or local enterprise/development agency/business link/TEC/LEC. Portfolio entrepreneurs, therefore, appear to be avoiding external professional information sources. Additional research is warranted to explore whether individual external agencies provide the appropriate information (i.e., quality and depth) and networking roles required by entrepreneurs to identify business opportunities. We can reasonably conclude that portfolio and other types of entrepreneurs in Scotland could benefit from any additional national support network initiative to provide, from one point, a comprehensive source of business information.

5.2. *Do policy-makers and practitioners need to carefully evaluate serial entrepreneurs associated with the assets and liabilities of prior business ownership experience?*

Serial entrepreneurs appear to be more concerned with independence and autonomy relative to portfolio entrepreneurs. A distinguishing feature of serial entrepreneurs is the fact that they have exited from at least one business. On average, serial entrepreneurs have exited significantly more businesses than portfolio entrepreneurs. Policy-makers and practitioners should consider why serial entrepreneurs repeatedly exit from their businesses. Repeated exit maybe a signal of an entrepreneur's willingness to establish new ventures (Stokes and Blackburn, 2002), and the perception that the next business offers a more attractive opportunity. It may, however, signal that this entrepreneur has insufficient managerial skills and resources to grow a business.

Traditionally exit from a business has been viewed as 'failure'. Evidence from elsewhere suggests that the reasons for business exit are multiple, and business owners select several exit modes (Birley and Westhead, 1993b; Stokes and Blackburn, 2001). To maximize returns on investments,

policy-makers and practitioners need to be aware of the assets and liabilities (Starr and Bygrave, 1991) associated with serial entrepreneurs. Policy-makers and practitioners seeking to encourage wealth creation may seek to provide assistance to serial entrepreneurs who require external support to address the liabilities (i.e., narrower skill and expertise base, tarnished reputation leading to the inability to obtain external financial support on acceptable terms, etc.) associated with owning a previously unsuccessful venture, but who can learn from their prior business ownership 'failure' (McGrath, 1999). Support provided to serial entrepreneurs who have held an equity stake in a business that has closed, but have surmounted their personal difficulties to subsequently own a successful venture, may encourage other serial entrepreneurs to have another (more successful) foray as an equity stakeholder in a venture. There is some evidence to suggest that individuals may learn more from 'failure' than 'success' (Sitkin, 1992). Initiatives maybe designed to ameliorate the liabilities associated with serial entrepreneurs. By communicating with serial entrepreneurs who are seeking sales and employment growth, policy-makers and practitioners can provide support responding to their specific needs.

There maybe a case to provide both serial and portfolio entrepreneurs with 'hard' financial incentives through changes in the tax regime. These changes would seek to encourage the investment of profits, or funds realized from the sale of a business, into subsequent ventures with growth potential. In addition, any supportive and carefully considered changes to the bankruptcy laws in Scotland may help retain serial (and novice) entrepreneurs within the entrepreneurial pool.

5.3. Should policy-makers and practitioners tailor assistance to novice entrepreneurs associated with the liabilities of entrepreneurial inexperience?

For many novice entrepreneurs, the ability to have addressed several obstacles to business formation is an achievement. Novice entrepreneurs often seek secure incomes for themselves and their families and maybe reluctant to lose the

recently gained independence in the pursuit of rapid business growth. Policy-makers and practitioners can introduce measures that encourage the survival and development of existing businesses owned by novice (as well as experienced) entrepreneurs, rather than solely trying to identify (and support) novice entrepreneurs who are likely to have a high probability of owning businesses that close within three years of operation (Storey, 1994). Whilst continuing to encourage the supply of entrepreneurs, policy-makers are seeking to encourage the survival of a diverse pool of entrepreneurial talent (Scottish Enterprise, 2000). If a business survival policy is pursued, it is critical that resources are allocated to entrepreneurs (and businesses) with significant growth potential, rather than ensuring the survival of a large number of uncompetitive businesses which will close after the period of subsidy, because a market cannot be found for their goods or services.

Policy-makers and practitioners need to consider the assets and liabilities associated with being a novice entrepreneur. For example, they need to appreciate that some entrepreneurs go into business with only one business idea. Unlike serial and portfolio entrepreneurs, novice entrepreneurs cannot draw upon their prior business ownership experience. In part, due to their inexperience, a larger proportion of novice entrepreneurs reported that they were less cautious with regard to their attitudes to entrepreneurship. In addition, while some novice entrepreneurs perceived that they were creative and innovative, the novice entrepreneurs surveyed were significantly less creative and innovative than serial and portfolio entrepreneurs on a number of dimensions. Policy-makers and practitioners may, therefore, need to consider ways in which novice entrepreneurs can be stimulated to be more creative and innovative, as well as more realistic in the way they start and develop ventures.

Presented evidence suggests that the resource backgrounds of novice entrepreneurs may not be as appropriate as those reported by serial and portfolio entrepreneurs. Novice entrepreneurs generally invested less initial capital and personal (i.e., internal) capital to establish, inherit or purchase their businesses. In contrast to serial and portfolio entrepreneurs who may have been able

to accumulate funds from other businesses owned or the sale of a business, novice entrepreneurs, on average, initially invested more external rather than internal finance. Firms owned by novice entrepreneurs may, therefore, have been initially more highly geared. Policy-makers and practitioners may need to consider the implications of these factors for the survivability of ventures owned by novice entrepreneurs. Taken together with our findings regarding the lesser degree of caution and the lower levels creativity and innovation reported by novice entrepreneurs, higher gearing may have adverse implications for the survivability of venture owned by novice entrepreneurs.

Policy-makers and practitioners should consider introducing schemes that address the obstacles to business development faced by novice entrepreneurs. Evidence suggests that these schemes might usefully cover: attempts to address the barriers faced by novice entrepreneurs in the collection of information to identify and evaluate additional profitable business opportunities; the encouragement of novice entrepreneurs to constantly develop and re-define business ideas; the enhancement of opportunity recognition skills; the provision of financial initiatives targeted to the specific needs of novice entrepreneurs; the encouragement of novice entrepreneurs to be more responsive to the actual needs of customers; and the encouragement of novice entrepreneurs to take-up and exhibit the methods of best business practices displayed by successful portfolio entrepreneurs. Novice entrepreneurs could also be encouraged to adopt the organizational routines reported by portfolio entrepreneurs. Most notably, organizational routines oriented towards innovation (i.e., to invest heavily in R&D and to use novel and innovative marketing techniques); routines oriented towards growing the business (i.e., an emphasis on growing the business using profits generated by the business and to grow through alliances and acquisition); and routines oriented towards professional management (e.g., strict quality control, improvements in employee productivity and operations efficiency, and human resource management relating to recruiting the most talented people, as well as invest heavily in formal job related training for employees). The personal capabilities toward opportu-

nity identification reported by portfolio entrepreneurs (i.e., ability to organize resources and co-ordinate tasks; ability to supervise, influence and lead people; ability to delegate effectively; and the ability to spot opportunities) should be adopted by other entrepreneurs. The external support network could have a role in encouraging successful portfolio entrepreneurs to mentor inexperienced novice entrepreneurs to utilize appropriate information and networking services, as well as the adoption of appropriate personal and organizational capabilities. By specifically encouraging information exchange between successful portfolio entrepreneurs and other entrepreneurs, more novice entrepreneurs may appreciate the benefits associated with the potentially rewarding team aspect of business ownership.

6. Areas for additional research to guide policy-makers and practitioners

The purpose of this paper was to provide a broad discussion of policy-related themes concerning support for entrepreneurs. To enable policy-makers and practitioners to develop more appropriate policies, additional in-depth and careful multi-disciplinary research needs to be conducted surrounding serial and portfolio entrepreneurs (Carter and Ram, 2003). There is scope for empirical research to refine and validate the themes explored in this paper. The scale and nature of novice, serial and portfolio entrepreneurs needs to be assessed by representative and large sample empirical studies conducted in a variety of industrial, locational and cultural settings. In this paper, results from univariate statistical tests are reported covering a broad range of themes. Future studies should utilize multivariate statistical techniques (i.e., multinomial regression analysis and discriminant analysis) to identify the independent variables associated with the themes discussed here. In-depth qualitative studies are needed to explore the entrepreneurial process (Rosa, 1998; Ucbasaran et al., 2003). Evidence suggests that many novice entrepreneurs do not intend to obtain an equity stake in another independent business. Additional research is, however, warranted to explore the transformation of novice entrepreneurs into 'transient' novice

entrepreneurs (i.e., individuals considering serial or portfolio entrepreneurship for the first time), the transformation of 'transient' novice entrepreneurs into serial or portfolio entrepreneurs, and the movement of serial and portfolio entrepreneurs across the two experienced entrepreneur sub-categories. Longitudinal studies monitoring the 'stock' of skills and experience of each type of entrepreneur, and the 'flows' across the entrepreneur categories would provide rich process and contextual evidence. Longitudinal studies are needed to explore the causal links across several dimensions. They, for example, could explore the characteristics and skills associated with novice entrepreneurs who are able to transform into serial or portfolio entrepreneurs. Also, studies might focus on the initiation processes leading to the ownership of subsequent ventures by experienced entrepreneurs, and why they accept or reject particular types of deals. Similarly, there is a need to understand how serial and portfolio entrepreneurs learn from their previous business ownership experiences. For the purposes of understanding wealth creation, there is a need to analyze the 'quality', rather than the 'quantity' of prior business ownership experience. In addition, there is a need for research that analyses the total economic contribution of portfolio, serial and novice entrepreneurs to local and national economies.

The relationship between financial institutions and types of entrepreneur warrants increased research attention. Most notably, do financial institutions treat novice, serial, portfolio entrepreneurs differently with regard to financing arrangements (for example, with regard to the interest rate charged, the need for collateral to be provided, the speed of the deal, etc.)? Moreover, research on the search and initiation of ventures is required, because the evidence shows that the inability to identify a profitable deal, is one of the main reasons why venture capitalists do not invest in entrepreneurs irrespective of their experience. Studies are needed that explore the approaches adopted by entrepreneurs who have previously 'failed' as business owners, and those who have previously been 'successful'. It may be inappropriate to discriminate against those who have previously 'failed', if there is a way of determining whether 'failure' has allowed them to

learn and re-evaluate their strategies and behaviour. The corollary applies to previously 'successful' entrepreneurs. Research is also warranted that focuses upon the question whether the support network (e.g., local enterprise agencies and trusts, LECs, Business Links, accountants, bankers, lawyers, etc.) can encourage the formation and growth of constellations of business ownership clusters (Rosa and Scott, 1998) owned by a number of 'local heroes' in a community (Scottish Enterprise, 1997).

7. Conclusions

This paper has drawn on novel survey evidence to identify important areas for policy development regarding the promotion of entrepreneurship. We have emphasized that there are significant differences in the characteristics and behaviour of entrepreneurs based on the nature of their business ownership experience. Presented findings support the view that there is a need for a balanced policy agenda, which encourages the supply of novice entrepreneurs, but also supports the entrepreneur, rather than the firm, after the private business has been established, purchased or inherited. This paper highlights that some novice entrepreneurs maybe associated with entrepreneurial resource deficiencies (i.e., skills and knowledge), which may impact on their behaviour (i.e., information search, opportunity recognition and exploitation, etc.), as well as their inclinations and performance contributions. Whilst we detected that less than a quarter of novice entrepreneurs reported they intended to establish/purchase an additional business in the future, evidence suggests a larger proportion will subsequently become serial and portfolio entrepreneurs. To broaden the entrepreneurial pool and increase the future stocks of serial and portfolio entrepreneurs, inexperienced novice entrepreneurs could be encouraged to acquire some of the skills accumulated by experienced successful entrepreneurs, particularly portfolio entrepreneurs. In addition, our findings raise concerns about whether policy-makers and practitioners should consider rebalancing the allocation of scarce resources to encompass serial and portfolio entrepreneurs with prior business ownership

experience, who have the inclination and ability to be significant wealth creators and job generators. Presented evidence raises issues relating to how and to what extent policy-makers and practitioners should adopt different approaches to the support of portfolio, serial and novice entrepreneurs. Additional research and debate is required to help develop policy responses to these issues.

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Notes

¹ Policy-makers and practitioners assist the supply of entrepreneurs and the development of entrepreneurs (and firms) by providing 'hard' (i.e., financial) and/or 'soft' (i.e., technical support to enhance the skills or capabilities of entrepreneurs) assistance (Bridge et al., 1998).

² The data discussed here was collected as follows (for a more detailed discussion see Westhead et al., 2003). A stratified random sample (by four broad industrial categories) of 3000 independent firms was drawn from a cleaned list of business names provided by Dun and Bradstreet. Public Limited Companies, branch plants of larger organizations, co-operatives and organizations not seeking profits were excluded from the sample frame. To control for response bias, the structured questionnaire was posted during September 2000 to a single respondent in each of the 3000 randomly selected businesses, generally a founder and/or the principal owner. During the four month data collection period, 100 responses were returned that indicated that the previous owner had retired, the business was no longer trading or had been taken-over, the business was a not for profit organization, the business was a subsidiary, or the business had been recently floated on the Stock Exchange. These non-valid respondents were removed from the sampling frame. After a three-wave mailing, 354 valid questionnaires were obtained from a valid sample of 2900 independent firms. Respondents to the survey indicated that they were either the founder or the principal owner of the surveyed business. A 12.2% valid response rate was achieved. This response rate was considered acceptable, and compares very favourably with similar studies (see Storey, 1994, pp.xvi-xvii), which generally have much shorter and less detailed research instruments. To assess whether the results from the sample can be generalized to the population of independent businesses in Scotland as a whole, chi-square and Mann-Whitney 'U' tests were conducted to detect response bias. With regard to industry, legal form, age of the business

and employment size, no statistically significant response bias was detected between the respondents and non-respondents. This evidence does not eliminate the concern relating to non-response bias, but it does indicate some representativeness.

³ Chi-square analysis was used to analyze variables measured at a nominal level, whereas Kruskal-Wallis and Mann-Whitney 'U' tests were used in relation to variables measured at an ordinal or an interval level. To identify statistically significant differences between novice, serial and portfolio entrepreneurs, and the three types of surveyed businesses, Chi-square and Kruskal-Wallis tests were conducted. Mann-Whitney 'U' univariate tests were conducted to compare responses made by pairwise groups of entrepreneurs (i.e., serial and portfolio entrepreneurs). We were aware that sample size could impact on a statistical test selected to explore whether an effect exists (i.e., a difference between novice and serial entrepreneurs). A statistical test maybe insensitive (at small sample sizes) to real differences. To avoid ignoring potentially important real differences between the three types of entrepreneurs, several technical issues were considered: effect size, sample size, statistical power (i.e., the probability of correctly rejecting the null hypothesis when it should be rejected), and significance level (i.e., alpha) (Hair et al., 1995). Statistical power and sample size should determine the significance level (i.e., the probability that the null hypothesis is correct) selected. Following the precedent of previous exploratory studies, we sought to avoid Type II errors (i.e., accepting the null hypothesis when it should be rejected). Therefore, the 0.1 level of significance was selected to test for differences between the samples of novice ($n = 200$), serial ($n = 66$) and portfolio ($n = 88$) entrepreneurs. Most of the reported differences, however, were significant at the 0.05 level or less.

References

- Acs, Z. J., R. Morck, J. M. Shaver and B. Yeung, 1997, 'The Internationalization of Small and Medium-Sized Enterprises: A Policy Perspective', *Small Business Economics* 9(1), 7-20.
- Alsos, G. A. and L. Kolvereid, 1998, 'The Business Gestation Process of Novice, Serial and Parallel Business Founders', *Entrepreneurship Theory and Practice* 22(4), 101-114.
- Birley, S. J. and S. Stockley, 2000, 'Entrepreneurial Teams and Venture Growth', in D. L. Sexton and H. Landström (eds.), *The Blackwell Handbook of Entrepreneurship*, Oxford: Blackwell, pp.287-307.
- Birley, S. and P. Westhead, 1993a, 'A Comparison of New Businesses Established by 'Novice' and 'Habitual' Founders in Great Britain', *International Small Business Journal* 12(1), 38-60.
- Birley, S. and P. Westhead, 1993b, 'The Owner-Managers Exit Route', in H. Klandt (ed.), *Entrepreneurship and Business Development*, Aldershot: Avebury, pp.123-140.
- Birley, S. and P. Westhead, 1994, 'A Taxonomy of Business Start-Up Reasons and their Impact on Firm

- Growth and Size', *Journal of Business Venturing* **9**(1), 7–31.
- Bridge, S., K. O'Neill and S. Cromie, 1998, *Understanding Enterprise, Entrepreneurship & Small Business*, Basingstoke: Macmillan Press Ltd.
- Carter, S. and M. Ram, 2003, 'Reassessing Portfolio Entrepreneurship: Towards a Multi-disciplinary Approach', *Small Business Economics* **21**(4), 371–380.
- Chandler, G. N. and S. H. Hanks, 1998, 'An Examination of the Substitutability of Founders Human and Financial Capital in Emerging Business Ventures', *Journal of Business Venturing* **13**(5) 353–369.
- Chandler, G. N. and E. Jansen, 1992, 'The Founder's Self-Assessed Competence and Venture Performance', *Journal of Business Venturing* **7**(3), 223–236.
- Cooper, A. C. and W. C. Dunkelberg, 1986, 'Entrepreneurship and Paths to Business Ownership', *Strategic Management Journal* **7**(1), 53–68.
- Cooper, A. C., T. B. Folta and C. Woo, 1995, 'Entrepreneurial Information Search', *Journal of Business Venturing* **10**(2), 107–120.
- Curran, J., R. Blackburn and A. Woods, 1991, *Profiles of the Small Enterprise in the Service Sector*, Kingston: Kingston University, ESRC Centre for Research on Small Service Sector Enterprise.
- Department of Trade and Industry, 2002, *A Comprehensive Strategy for Start-Ups: A Consultation Document*, London: Department of Trade and Industry, Small Firms Service.
- Donckels, R., B. Dupont and P. Michel, 1987, 'Multiple Business Starters. Who? Why? What?', *Journal of Small Business and Entrepreneurship* **5**(1), 48–63.
- Eisenhardt, K. M. and J. A. Martin, 2000, 'Dynamic Capabilities: What Are They?', *Strategic Management Journal* **21**(11), 1105–1121.
- Fiet, J. O., A. Piskounov and V. Gustavsson, 2000, 'How to Decide How to Search for Entrepreneurial Discoveries', in P. Reynolds, E. Autio, C. G. Brush, W. D. Bygrave, S. Manigart, H. J. Sapienza and K. G. Shaver (eds.), *Frontiers of Entrepreneurship Research 2000*, Wellesley, Massachusetts: Babson College, p.198.
- Gavron, R., M. Cowling, G. Holtham and A. Westall, 1998, *The Entrepreneurial Society*, London: Institute for Public Policy Research.
- Gimeno, J., T. B. Folta, A. C. Cooper and C. Y. Woo, 1997, 'Survival of the Fittest? Entrepreneurial Human Capital and the Persistence of Underperforming Firms', *Administrative Science Quarterly* **42**(4), 750–783.
- Hair, J. F. Jr., R. E. Anderson, R. L. Tatham and W. C. Black, 1995, *Multivariate Data Analysis with Readings*, 4th Edition, Englewood Cliffs, New Jersey: Prentice-Hall.
- Hills, G., G. Lumpkin and R. P. Singh, 1997, 'Opportunity Recognition: Perceptions and Behaviors of Entrepreneurs', in P. Reynolds, P. Davidsson, W. Gartner and P. McDougall (eds.), *Frontiers in Entrepreneurship Research 1997*, Wellesley, MA: Babson College, pp.330–344.
- Holtz-Eakin, D., 2000, 'Public Policy Toward Entrepreneurship', *Small Business Economics* **15**, 283–291.
- Kolvereid, L. and E. Bullvåg, 1993, 'Novices Versus Experienced Founders: An Exploratory Investigation', in S. Birley, I. MacMillan and S. Subramony (eds.), *Entrepreneurship Research: Global Perspectives*, Amsterdam: Elsevier Science, pp.275–285.
- MacMillan, I., R. Siegel and P. SubbaNarasimha, 1985, 'Criteria Used by Venture Capitalists to Evaluate New Venture Proposals', *Journal of Business Venturing* **1**(1), 119–128.
- Manimala, M. J., 1992, 'Entrepreneurial Heuristics: A Comparison Between High PI and Low PI Ventures', *Journal of Business Venturing* **7**(3), 477–504.
- McGrath, R. G., 1999, 'Falling Forward: Real Options Reasoning and Entrepreneurial Failure', *Academy of Management Review* **24**(1), 13–30.
- Organisation for Economic Co-operation and Development (OECD), 1998, *Fostering Entrepreneurship*, Paris: Organisation for Economic Co-operation and Development.
- Reuber, A. R. and E. Fischer, 1999, 'Understanding the Consequences of Founders' Experience', *Journal of Small Business Management* **37**(2), 30–45.
- Reynolds, P., 1997, 'Who Starts New Firms? - Preliminary Explorations of Firms-in-Gestation', *Small Business Economics* **9**(5), 449–462.
- Reynolds, P. D., D. J. Storey and P. Westhead, 1994, 'Cross-National Comparisons of the Variation in New Firm Formation Rates', *Regional Studies* **28**(4), 443–456.
- Rosa, P., 1998, 'Entrepreneurial Processes of Business Cluster Formation and Growth by 'Habitual' Entrepreneurs', *Entrepreneurship Theory and Practice* **22**(4), 43–61.
- Rosa, P. and M. G. Scott, 1998, *Entrepreneurial Performance and 'Habitual' Entrepreneurs: Processes of Business Cluster Formation and Growth*, Stirling: Department of Entrepreneurship, University of Stirling.
- Scott, M., 1998, 'Case Study: Scotland's Business Birth Rate; Research, Policy and Action', in M. G. Scott, P. Rosa and H. Klandt (eds.), *Educating Entrepreneurs for Wealth Creation*, Aldershot: Ashgate, pp.15–27.
- Scott, M. G. and P. Rosa, 1996, 'Has Firm Level Analysis Reached Its Limits?', *International Small Business Journal* **14**(4), 81–89.
- Scottish Enterprise, 1997, *Local Heroes*, Glasgow: Scottish Enterprise.
- Scottish Enterprise, 2000, *Scotland's Business Birth Rate Strategy: A Review*, Glasgow: Scottish Enterprise.
- Shane, S. and S. Venkataraman, 2000, 'The Promise of Entrepreneurship as a Field of Research', *Academy of Management Review* **25**(1), 217–226.
- Sitkin, S. B., 1992, 'Learning Through Failure: The Strategy of Small Losses', in B. M. Staw and L. L. Cummings (eds.), *Research in Organizational Behavior*, 14, Greenwich, CT: JAI Press, pp.231–266.

- Starr, J. and W. Bygrave, 1991, 'The Assets and Liabilities of Prior Start-Up Experience: An Exploratory Study of Multiple Venture Entrepreneurs', in N. C. Churchill, W. D. Bygrave, J. G. Covin, D. L. Sexton, D. P. Slevin, K. H. Vesper, and W. E. Wetzel (eds.), *Frontiers of Entrepreneurship Research 1991*, Wellesley, Massachusetts: Babson College, pp.213-227.
- Stokes, D. and R. Blackburn, 2001, *Opening Up Business Closures: A Study of Businesses that Close and Owners' Exit Routes*, Kingston: Kingston University, Small Business Research Centre.
- Stokes, D. and R. Blackburn, 2002, 'Learning the Hard Way: The Lessons of Owner-Managers who Have Closed their Businesses', *Journal of Small Business and Enterprise Development* 9(1), 17-27.
- Storey, D. J., 1994, *Understanding the Small Business Sector*, London: Routledge.
- Storey, D. J., K. Keasey, R. Watson and P. Wynczyk, 1987, *The Performance of Small Firms: Profits, Jobs and Failures*, London: Croom Helm
- Taylor, M., 1999, 'The Small Firm as a Temporary Coalition', *Entrepreneurship and Regional Development* 11(1), 1-19.
- Teece, D. J., G. Pisano and A. Shuen, 1997, 'Dynamic Capabilities and Strategic Management', *Strategic Management Journal* 18(7), 509-533.
- Ucbasaran, D., P. Westhead and M. Wright, 2001, 'The Focus of Entrepreneurial Research: Contextual and Process Issues', *Entrepreneurship Theory and Practice* 25(4), 57-80.
- Ucbasaran, D., M. Wright and P. Westhead, 2003, 'A Longitudinal Study of Habitual Entrepreneurs: Starters and Acquirers', *Entrepreneurship and Regional Development* 15(3), 207-228.
- Westhead, P., 1995, 'Survival and Employment Growth Contrasts Between Types of Owner-Managed High-Technology Firms', *Entrepreneurship Theory and Practice* 20(1), 5-27.
- Westhead, P., 1997, 'Ambitions, 'External' Environment and Strategic Factor Differences Between Family and Non-Family Unquoted Companies', *Entrepreneurship and Regional Development* 9(2), 127-157.
- Westhead, P. and A. Moyes, 1992, 'Reflections on Thatcher's Britain: Evidence from New Production Firm Registrations 1980-88', *Entrepreneurship and Regional Development* 4(1), 21-56
- Westhead, P. and M. Wright, 1998a, 'Novice, Serial and Portfolio Founders: Are They Different?', *Journal of Business Venturing* 13(3), 173-204.
- Westhead, P. and M. Wright, 1998b, 'Novice, Portfolio and Serial Founders Located in Rural and Urban Areas', *Entrepreneurship Theory and Practice* 22(4), 63-100.
- Westhead, P. and M. Wright, 1999, 'Contributions of Novice, Portfolio and Serial Founders Located in Rural and Urban Areas', *Regional Studies* 33(2), 157-173.
- Westhead, P., D. Ucbasaran, M. Wright and F. Martin, 2003, *Habitual Entrepreneurs in Scotland: Characteristics, Search Processes, Learning and Performance*, Glasgow: Scottish Enterprise.
- Woo, C. Y., A. Cooper and W. Dunkelberg, 1991, 'The Development and Interpretation of Entrepreneurial Typologies', *Journal of Business Venturing* 6(2), 93-114.
- Wright, M., K. Robbie and C. Ennew, 1997a, 'Serial Entrepreneurs', *British Journal of Management* 8(3), 251-268.
- Wright, M., K. Robbie and C. Ennew, 1997b, 'Venture Capitalists and Serial Entrepreneurs', *Journal of Business Venturing* 12(3), 227-249.
- Wright, M., P. Westhead and J. Sohl, 1998, 'Editors' Introduction: Habitual Entrepreneurs and Angel Investors', *Entrepreneurship Theory and Practice* 22(4), 5-21.

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