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AGE EFFECTS ON SMALL FIRM GROWTH AND STRATEGIC OBJECTIVES

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Abstract

Two ageing processes are happening in West European economies that have profound implications for the development of innovations and entrepreneurship in Europe. The first is the demographic trend common in most industrialised countries of an aging population. This means not only that shortages in the supply of skilled workers are appearing but also that small firm owners are also much older. The second is the firms that were started as enterprising new companies some twenty years ago, and in many cases their main products too, are now at the plateau of their life-cycles (or, even worse, sliding down the decline curves at the end of the cycle). As well as the identified economic problems with regard to increased welfare costs and a diminishing active population having to sustain the pension expectations of a growing population of economically inactive people, there is the hidden potential problem of a fall off in general small business activity. In particular, does this mean a decline in entrepreneurial activity?

The Small Enterprise Research Team (SERT), an independent non-profit body based at the Open University Business School (OUBS), has been conducting regular surveys of small business behaviour and performance each quarter for the past 20 years. During the first quarter of 2004, small firm owners were asked about their growth intentions, strategic objectives and degree of innovative activity in addition to the regular performance measurement and classification questions (which include age of respondent and of firm). This paper is based on the responses of the 808 small firms and shows a distinct reduction in growth motivation and entrepreneurial activity related to both age of respondent and of firm but also distinct size of firm effects independent of age (especially when measured by sales). This strongly suggests that innovation is more of a social and managed process, as Peter Drucker argued, than one that depends on the inspiration or stamina of an individual entrepreneur. The other reassuring finding is that innovative activities do not cease completely after the official pension age and that certain small firm owners are still working, want to continue to work and some still intend to grow.

1. INTRODUCTION

The social and economic effects of ageing populations in most industrialised economies is now firmly on the policy agenda in the UK and elsewhere in Europe. Put simply, people are living longer because of improved diet and medical care while fertility rates have declined so that fewer younger people are being born. OECD countries are either at or below the 2.1 fertility rate required to sustain their populations (Visco, 2001). The Ageing Population Panel of the UK government's Foresight programme has projected a continuing increase in life expectancy in Britain. By 2031, people reaching 60 can expect to live for another 20-25 years. The changes in age distribution and life, expectancy are beginning to impact on society and will affect every business sector. Already the old-age dependency ratio (proportion of over 65 year olds to those aged 20-64 years) has reached an average 22 per cent in OECD counties and projected to more than double to 50 per cent (Visco, 2001).

The UK government's own *Labour Market and Skills Trends* (DfEE, 2000) summarised the UK trends as a steady increase in working age population (from 34.9 million in 1998 to 36.3 million in 2011) and a more dramatic ageing of both the population and the labour force. The overall 1998-2011 increase in working age population is projected to be 1.4 million (4 per cent) but the population over 45 years of age will increase by 3.4 million (16 per cent), including a one million increase in the 55 years and over age group. The most obvious areas where this will impact are living standards and patterns of consumption as a result of a crisis in pensions provision. As a result of under-investment in state provided pension schemes and over-reliance in the private sector on stock market based schemes, which have proved to be very volatile, pensions are already seen as inadequate and a number of private pension funds have failed.

In July 2004, the top 100 firms listed on the London Stock Exchange, after a year of reasonable performance, reported a collective deficit in their pension funds of £42 billion (nearly €65 billion). An August 2004 estimates of the UK government's own unsecured contingent pensions liability - the cost to the taxpayer if every single government employee, excluding local government staff, were to retire and take their pensions today - is now put at £580 billion (€860 billion) and growing (just to stand still would require and additional 5 per cent to be added to income tax). The ratio of contributions from active workers to support each retired pensioner has, as a result of these demographic changes, been falling and is now considered to be at unsustainable levels. Furthermore, one of the effects of the pensions crisis has been to raise the cost of private pension provision so that the majority of the workforce are effectively excluded. Although Britain is to the forefront in addressing these problems, less than half the UK working population has provision for a pension (see Table 1).

Given their generally more precarious position with respect to large firms and to public sector organisations, small firms appear to be disproportionately affected by ageing population effects and the related pensions crisis. These effects are exacerbated by a related ageing of the stock of small firms and lower enterprise survival rates (SBS, 2004). There is also an increased likelihood of falling small firm investment in product (innovation) and staff development (social capital), as a direct result of the financial impact of the pensions crisis and falling consumption due to population ageing, and as an indirect effect of the firm's own ageing process (Sorensen and Stuart, 2000). Combined with a decline in numbers of younger workers, this is already putting pressure on the current retirement ages of 60 years for women and 65 years for men.

Indeed, the current increased participation of women in the labour force, especially in part-time employment which itself has seen a dramatic rise in the UK, is also expected to continue. The current gender ratio (male:female) in the labour force is 57:43, forecast to rise to 53:47 in 2011. The rise in female self-employment has been particularly dramatic. Retirement ceilings do not apply to the self-employed or to the owners of many small firms where the gender ratio is currently 73:27 but expected to even out as more women turn to self-employment and start their own firms. The Ageing Population Panel believes that there will be scope for more lifelong learning for older learners and confirms the pressures on governments to relax retirement ceilings. In fact, the pressure to find gainful or meaningful occupations (paid or unpaid) are likely to increase even more at the older end of society. This led the Panel concluded that there may also be huge opportunities for UK business. The main aim of this paper is to examine whether this is likely to benefit Britain's 3.8 million small and medium enterprises (SMEs).

2. SME AGE ISSUES: THE OWNERS

Small firms (up to 50 employees according to EU and UK definitions) represent 36 per cent of all businesses, 31.5 per cent of national employment and 33 per cent of GDP, a more substantial share of the UK economy. Defining an owner-manager as an individual who has a controlling interest in the business they own or work for, and has the authority to hire and fire full-time staff, Labour Force Surveys (LFS) confirm that, of 3.8 million SMEs, there are around 1.5 million owner-managers who employ other people. The 1998 LFS also confirmed that, over the period 1995-98, the highest concentration of owner-managers lies in the 50-54 year age band compared with the mode for all employees in the 30-34 year age band. However, there are sharp falls in the proportion of owner-managers in the 55-64 year age bands, suggesting that many owner-managers begin to implement their retirement plans not long after turning 50. Whether this reflects a longer term strategic objective or a short term reaction to circumstances is not clear. Indeed, it is not clear to what extent the self-employed, the owner-managers or their staff make adequate pension provisions or prepare exit or succession strategies. Detailed analysis of the income levels of the self-employed, and of older people who have been self-employed during their working lives, shows that the expansion of self-employment has increased overall inequality of incomes in the UK (Meager et al., 1994). This may go some way towards explaining the much lower provisions for pensions made by the self-employed compared with employees in Table 1.

Table 1. Pension provision in Britain (row percent)

	Occupational	Private	No pension	Total (n) thousand
Paid employees, working age	47	12	41	24,247
Paid employees, all	45	12	44	25,895
Paid employees, pension age	-	-	-	1,648
Self-employed, working age	1	42	56	3,221
Self-employed, all	1	39	60	3,540
Self-employed, pension age	-	-	-	319

Source: Department of Work and Pensions, Family Resource Survey 2004.

Occupational pensions cover both the private and public sectors. Half of Britain's workforce is not covered by any pension scheme, other than the rather low state pension, but the self-employed are clearly worse off. In fact, the 1,648,000 employees who are above retirement age (some 6 per cent of all employees) is an indication of the pressures to keep working because of inadequate or no pensions. The gap for the self-employed is 9 per cent, which is even worse. Indeed, Meager et al (1994) found that, although the ex-self-employed have higher levels of savings and financial capital in old age than their ex-employee counterparts, there is a significant group with low levels of savings. Non-state pensions are the main source of relative prosperity in retirement; the ex-self-employed are generally worse off than ex-employees in this respect. Their relative lack of occupational pensions is only partly offset by a greater access to personal (private) pensions. Looking at the poorest older people, the ex-self-employed in this low-income group are much more likely than ex-employees to have low or negligible savings levels and no occupational pension entitlement.

Those with self-employment experience tend to retire later than their employee counterparts. There is some evidence that this is associated not only with a desire to continue working but, in many cases, with a (financial) need to do so. The study's analysis of data from retirement surveys – where under-reporting of incomes is less of a problem -- does, however, throw light on the effects that earlier self-employment has had on the incomes of those currently in old age. The study examines the relationship between periods of self-employment during the working life and subsequent income levels in later life, and the implications of self-employment for the retirement decision. Key findings include:

- Older individuals with self-employment experience had an average of 15 years self-employment.
- Work histories which include self-employment had greater dispersion of incomes in later life, than wage employment only work histories.

After controlling for other personal characteristics, having been self-employed significantly increases an individual's likelihood of falling into a very low income group in later life (it more than doubles the odds of falling into the poorest tenth, for example). The ex-self-employed who have worked in certain sectors (distribution, hotels and catering, and some 'other services'), and certain occupations (personal services, sales, transport) are over-represented among the low-income groups in later life, as are those who have spent longer than average periods in self-employment. The Ageing Population Panel, which also discussed potential solutions to some of these problems, examined the role that information and communication technologies (ICT) may play in ameliorating (or otherwise) the worst aspects of these demographic trends. The panel felt that ICT would offer opportunities for older, more experienced people to start new businesses that could make use of ICT to offer their important tacit and explicit knowledge in the form of new services. They used the term '*mature entrepreneurs*' to describe these older start-ups. However, the panel did not address issues concerning the nature of the firms likely to be started by mature entrepreneurs with respect to their prospects for innovation and growth.

3. SME AGE ISSUES: THE FIRM.

The notion of entrepreneurship life-cycles has a long history. Schumpeter (1934) saw the entrepreneur existing through the actions of innovation and competition and stated very clearly that most entrepreneurs were found in the early stage of a firm's existence. As their products and their firm became established and survival seemed likely, Schumpeter (1934) felt that most early entrepreneurs transformed into managers more concerned with maintaining their status quo. Only a small segment of entrepreneurs, those that had increased their size, continued seeking new growth and more competition through developing new products and processes. Indeed, in his later work, Schumpeter (1942) argued that innovation depended increasingly on the size of the firm and the knowledge and resources at its disposal. This is similar to the position taken by Peter Drucker and suggests that the small SMEs, say the microfirms with less than 10 employees, become less entrepreneurial as they age. UK figures on age of firm and firm survival rates seem to bear this out. Table 2, a 2003 distribution of UK firms, excluding self-employed sole-traders without other employees (where the age of the firm is coterminous with the owner), shows that larger SMEs do survive longer.

Table 2. Age of firm by firm size (column percent)

Years	Micro 1-9 employees	Small 10 -49 employees	Medium 50+ employees	All
1	14	3	-	12
2	11	3	2	10
3	9	3	3	7
4	7	3	3	6
5 - 9	25	20	8	23
10+	41	67	84	43
Total (n)	1,105,821	159,858	27, 794	1,361,062

Source: Trends Business Research, 2002

Some 14 per cent of microfirms had been trading one year, around 153,000 firms, compared with 3 per cent of small firms and only 133 medium firms. Thus the majority of firms start small, including those that 10 years later employ more than 50 people. A large number of microfirms do survive 10 years and more - some 450,000 – but, proportionately, it is clear to see that survival is linked to size of firm. A recent study by Sorensen and Stuart (2000) suggests that, on balance, older firms have a wealth of organisational knowledge but that their older owners may be too stuck in their ways to respond to new innovative opportunities.

Therefore, it seems that the survival of the smallest SMEs and the continued growth and development of the larger SMEs are tied to the ageing of their owners. This paper uses a series of regular surveys to cast more light on these problems with respect to SMEs in Britain and looks more closely at the implications of an ageing workforce on SMEs with respect to business strategy, performance, pensions and whether ICT does appear to offer prospects to older SMEs.

4. METHODOLOGY

The effects of ageing on SMEs were through four linked cross-sectional national surveys conducted at four separate quarterly periods, by the independent non-profit Small Enterprise Research Team (SERT) which is based at the Open University Business School (OUBS). SERT has been conducting and publishing research on SMEs for the past 20 years. The first survey, on the retirement plans of 1,078 SME owners, was conducted in the third quarter of 2002, followed in the next quarter by a 1,704 SME survey on pensions. The third survey, was conducted among 647 SME owners in the final quarter of 2003, was on ICT use and adoption. The fourth survey, on business objectives, personal motivations, growth orientation and innovation, was conducted among 808 SME owners in the first quarter of 2004. In fact, as Table 3 shows, SERT surveys had already revealed useful data on the age-effects on growth intentions, a useful indicator of behavioural and performance differences between SMEs. This helps explain partially the age and growth patterns that are so clear in Table 2. Table 3 reveals that strategic approaches in SMEs changes with the age of the owner.

Table 3. SME attitudes to growth by age, 1999/Q4 (column percentages)

	<40	40-49	50-59	60+	All
Growth-oriented	70	45	38	29	41
Sell/merge	11	18	25	30	23
Static	11	21	24	26	22
Growth averse	8	16	13	15	14
Sample	108	287	425	265	1085

Source: Small Enterprise Research Team, 4th quarter 1999

Clearly, the intention to growth declines with age as the desire to sell the firm increases. The desire to maintain a stable status quo also increases. These are not unexpected but may reflect different trends when analysing age-effects on SME growth or entrepreneurial behaviour. The samples for these surveys were drawn from a wider SERT database which has been recruited and periodically replenished through a random selection of firms nationally (with findings in SERT's regular reports weighted to reflect the distribution of SMEs across industries in the UK). Because of an overlap of common respondents, it was possible to analyse a proportion of responses across the surveys. The analysis was carried out mainly as cross-tabulations (with Chi^2 significance tests) using SPSS -12.

5. FINDINGS

In the third quarter of 2002, respondents were asked to compare their exit plans for their businesses from when they first started to their current plans. Some 20 per cent were at or over retirement age (though few of them had imminent plans to retire) compared with only 13 per cent younger than 40 years. As Table 4 shows, however, a large proportion of SME owners have no retirement plans.

Table 4. Current by initial business retirement plans. (column percent)

Current intentions	Pass to family member	Sell	Close	No plans
Pass to family member	51	5	2	10
Sell	17	65	5	18
Close	6	5	88	13
No plans	26	24	5	59
Sample (n)	152	361	60	414

Overall, 42 per cent had no plans concerning the disposal of their business on retirement and a majority of them still have no plans. Two-thirds of the 37 per cent who originally intended to sell still want to do so and half of the 15 per cent who wanted to bequeath their business to members of their family still intend to. Significantly, it is the younger owners – two-thirds of those under 35 years old - and those with small firms (as opposed to microfirms or medium firms) who intend to sell. One third of those who want to pass the firm onto their family were already past retirement age of 65 years. In both cases (sellers and 'passed to family') a large proportion now no longer have any plans. This may reflect a wider uncertainty concerning retirement.

However, they are also much less likely to view the simple closure of the firm as an option. Not surprisingly, those for whom simple closure is the main option are either immediately prior to retirement age or past it. It is also worth noting that the majority of those who always intended to close the business on their own retirement, and 84 per cent of them still do, are sole-traders without other employees. These firms account for one third of this sample but two-thirds of the 3.8 million SMEs in Britain. It is important to know more about their pension provision (and the pension arrangements in the slightly larger SMEs with employees that plan to close). The SERT quarterly survey in the final quarter of 2002 revealed that, while 81 per cent of SME owners had a pension scheme themselves, only 42 per cent of the 950 respondents who had staff (there were 118 sole-traders in the sample) provided a pension arrangement for their employees. Overwhelmingly it was the small and medium firms that made pension arrangements for their employees with only 27 per cent of the microfirms making such arrangements. Table 5 shows the percentage of SME owners who have their own personal pensions by the age of the firms.

Table 5. Provision of pension by age of firm (Column percent)

years	**Personal pension**	**Staff pension**	**All**
1-2	4	6	5
3-4	11	12	12
5-9	19	17	20
10-19	30	26	28
20+	38	39	35
Average age	20	22	
Average employees	12	19	
Sample (n)	864	401	1067

Source: Small Enterprise Research Team, 4th quarter 2002.

There are some important points to note. Firstly, with twice as many owners having personal pensions compared with those providing a pension plan for their staff, many SME owners appear to be more concerned about their own well being in retirement that that of their employees. This is not to imply a moral judgement. There is a high staff turnover in many SMEs and the owners of the smallest SMEs have to make their own arrangements and might reasonably expect their staff to do the same. Secondly, as might be expected, it is among the younger and smaller SMEs where provision is least adequate. The average size of firm where the owner has no pension was 8 employees and average firm age was 14 years. Mapping this onto the UK population distributions in Table 2 suggests that one million self-employed and small microfirms have inadequate or no pension provision. In this sample the number of people employed in firms without provision for staff was 38,000. The number of employees affected nationally will be much higher.

However, taking a more positive view, a large proportion of SMEs are making provision for themselves and their employees and it would be a mistake to assume that all the employees of a firm closed by an ageing owner themselves rush off into retirement. Innovation and new employment opportunities arise largely from the churn of firms and new types of jobs in the labour market. Traditionally, it has been the role of SMEs to furnish these new opportunities. In the first quarter of 2004, the SERT quarterly addressed the issues of innovation and growth strategy in SMEs. Table 6 returns to the issues reported in Table 3 and confirms similar size effects on the growth strategies of SMEs whilst also revealing a more positive attitude to growth in 2004.

Table 6. Growth strategy by age of owner (column percent).

strategy	<40 years	40 - 49	50 - 59	60+	All
Growth-oriented	70	58	39	38	48
Status quo	9	17	23	26	20
Exit	12	15	18	19	17
Growth-averse	5	6	11	12	9
Sample (n)	92	216	305	187	808

Source: SERT: NatWest Quarterly Survey of Small Business in Britain. 2004, 20/1, page7

Over the four years since the results in Table 3, growth orientation has increased despite the ageing SME population (as suggested by Table 2). Although growth-orientation declines with age as growth aversion increases, a rather large proportion of 38 per cent of SME owners over the age of 60 years have the strategic objective of continuing to grow their firms. This is considerably more than the 26 per cent who want to maintain their present state and significantly more than the 12 per cent who are averse to growth (including some who intend to contract). This strongly suggests that, while there are some SME owners keen to sell or close their firms as both age, there are other owners who are keen to step into their shoes and, in some cases, to purchase their old firms. Younger SME owners, especially the under-40s, are clearly more growth minded and entrepreneurial but, as Table 7 shows, some of the older SME owners are incorrigible innovators.

Table 7. Areas of innovations by age of owner (column percent).

Innovations	**<40 years**	**40 - 49**	**50 - 59**	**60+**	**All**
Products/ services	54	55	54	48	53
Processes	56	51	49	42	49
Supply management	23	16	27	27	23
Distribution/marketing	40	37	41	45	41
Sample (n)	57	129	155	98	440

Source: SERT: NatWest Quarterly Survey of Small Business in Britain. 2004, 20/1, page7

These are multiple responses and it can be seen that the older SMEs are still very active in introducing innovations in a range of areas. Indeed, in the business operations areas such as supply management and experimenting with new forms of distribution and marketing, where business experience might be expected to play a strong part, the older SMEs appear to be more active. This suggests that older firms managed by older entrepreneurs may not be so technophobic with regard to ICT as is sometimes suspected. In the final quarter of 2003, SERT surveyed SME adoption and use of ICT. There were some 633 common respondents to the 2004 survey reported in Table 7, so that the effects of owner's age could be explored. This is reported in Table 8, where it is clear that age is not an impediment to the adoption of advanced ICT.

Table 8. Areas of ICT adoption by age of owner (column percent).

ICT application	**<40 years**	**40 - 49**	**50 - 59**	**60+**	**All**
Computer	100	99	99	99	99
Internet e-mail	93	83	89	90	88
Website	63	60	63	67	63
Networked computers	53	57	51	56	54
Wireless access	19	15	13	15	15
e-Commerce	8	9	7	12	9
Sample (n)	67	161	243	162	633

Source: SERT: NatWest Quarterly Survey of Small Business in Britain. 2004, 20/1, page7

The first and most obvious point to note is that computers are now ubiquitous and neither age nor size of firm is a limit to adoption. The second and more interesting point is that there are indications that the over-60s are, in fact, more advanced in their use of ICT than other age groups. They are noticeably more likely to have a website and to use it for the e-commerce transactions of buying and selling online.

This and the pattern of responses in the other tables, strongly suggest that there is a sizeable segment of SME owners who are determined and capable of working very productively after the official retirement age.

6. DISCUSSION

There were a number of important issues raised in the introductory parts of this paper. One of the most interesting was the suggestion from the UK Ageing Population Panel that ICT may now offer a way for older workers and managers to draw on their experience in starting new businesses as ‘mature entrepreneurs’. The challenges involved in setting up a new venture for people at or near retirement age may be daunting, but the response of the older SME owners to the adoption and use of ICT is very encouraging. Indeed, the evidence that the entrepreneurial qualities of many of them remain unimpaired, at least in terms of growth motivation and propensity for innovation, is very positive.

This is also cause to reconsider the Schumpeterian assumption, that the natural life-cycle of most entrepreneurs is to become less competitive as they slowly transform into managers with more of a custodial rather than entrepreneurial function. There is no doubt that this does describe the trajectory of many start-ups, especially those that manage to survive through the first five testing years after start up. However, there is clearly a much more business-minded type of entrepreneur and much more business-minded firms for whom survival means facing up to the many challenges of the business environment. In fact, many of the respondents in the SERT surveys are part owners of family and non-family firms, and many of the firms aged 20+ years are in fact closer to three generations old. In other words, these are firms where other significant people are involved with their own traditions and culture of behaviour and development (Gray, 1998). These are firms whose purpose is to endure. In many ways, as these are the SMEs that do tend to have personal pension plans and provide pension arrangement for their employees, the strong small firm may be a bulwark against the worse impacts of the ageing society.

Finally, looking at the SMEs where the relationship with the owner is not mediated strongly through the involvement of other people and where the owner’s impending retirement presages the demise of the firm, the economic effects are not necessarily all bad. The sale and purchase of firms is an important part of the process of economic renovation. The aging firms are either taken over by younger managers or by other firms as their growth strategies (acquiring new products, new customer or entering new markets). The cessation of economic activities by the former owners and many of their employees is likely to remove a pool of experience and, if they have inadequate pensions, this will place additional burdens on the economy. However, not all of the works by any means will be at retirement age. Experience and SERT surveys suggest that the experience of working in a small firm improves employment prospects in larger firms and many ex-workers may even experience a sense of liberation and start their own firms. The overall effects of the ageing society on the SME sector remain difficult to determine.

REFERENCES

Department for Education and Employment (2000). *Labour Market and Skills Trends.* DfEE. Sheffield.

Department of Work and Pensions. (2004), *Family Resource Survey 2004*. DWP. London.

Gray C. *Enterprise and Culture*. 1998. Routledge. London.

Hirsch D (ed.) (2000). Life after 50: Issues for policy and research. YTS. London.

Labour Market Trends. June 1999. ‘Owner managers in the Labour Force Surveys’. Office for National Statistics. London.

Meager N, Court G and Morales J. (1994) *Self-Employment and the distribution of income.* Social Policy Research 58 – September. Institute of Manpower Studies. Brighton.

Schumpeter J. (1934). *Theory of Economic Development*. Harvard University Press. Cambridge, Mass.

Schumpeter J. (1942). *Capitalism, Socialism and Democracy*. Harper. New York.

Small Business Service. (2004). *Small and Medium Enterprise (SME) Statistics for the UK, 2003*. Department of Trade and Industry. London. (2004). ‘Survival Rates of VAT Registered Businesses 1993 – 2001’. SBS. Sheffield.

Small Enterprise Research Team. (2002-2004) *NatWest Quarterly Survey of Small Business in Britain*. SERT. 18/3; 18/4; 19/4; 20/1.

Sorensen I and Stuart T. (2000). ‘Aging, obsolescence, and organizational innovation’, *Administrative Science Quarterly*, vol. 45, no. 1. March. Pp 81-112.

Storey, D. (1994). *Understanding the Small Business Sector*. Routledge. London.

Visco I. (2001). *Ageing Populations: Economic Issues and Policy Challenges.* Organisation for Economic Cooperation and Development. Paris