



**SWP 32/92 THE DIMENSIONALITY AND WELL-BEING  
CORRELATES OF WORK LOCUS OF CONTROL**

**DR KEVIN DANIELS  
Cranfield School of Management**

**and**

**DR ANDREW GUPPY  
Applied Psychology Unit**

**Cranfield School of Management  
Cranfield Institute of Technology  
Cranfield  
Bedford MK43 0AL  
United Kingdom**

**(Tel: 0234-751122)**

**(Fax: 0234-751806)**



## ABSTRACT

Theoretical and empirical developments with the locus of control construct demonstrate that it is a context specific multi-dimensional construct that has implications for stress, well-being and job performance. In this paper, the multi-dimensionality of work specific locus of control is explored by subjecting Spector's work locus of control scale to principal components analysis. Using samples of 221 university staff and 399 accountants, a two dimensional structure was uncovered; external agents control and personal control. Test-retest data with a sub-sample of 244 accountants revealed that work locus of control may be best thought of as a state rather than trait measure. Correlations with constructs that have been theoretically and empirically associated with locus of control indicate different results for the two dimensions, thus demonstrating the importance of treating locus of control as domain specific multi-dimensional construct.

## INTRODUCTION

A great deal of evidence has accumulated to suggest that high perceived control over the work place is associated with greater job motivation, performance, satisfaction, health, tenure, organisational commitment, job involvement, and lower levels of emotional distress, role stress, absenteeism, intent to turnover and actual turnover (Spector, 1982, 1986, Aronsson, 1989). Clearly, perceived control and its measurement have implications for job performance and employee well-being. One construct that relates to perceived control in the work place is locus of control.

Locus of control is thought to be the generalized expectancy that behaviours lead to desired outcomes (Rotter, 1966). The person with an internal locus of control perceives him/herself to be the primary determinant of what happens to him/her. The person with an external locus of control perceives extra-personal factors such as luck and powerful others as the determinants of what happens to him/her. Hence, locus of control is a generalized perception of control.

Although Rotter (1966) originally suggested that locus of control is a stable personality trait, more recent developments suggest that it is better to treat locus of control as more situationally/contextually specific.

Work on the dimensionality of locus of control shows this to be true.

Early factor analyses of Rotter's I-E measure of locus of control (1966) show that the scale consists of more than one factor, although these analyses produced inconsistent results (Lefcourt, 1982), possibly due to differences between samples (cf. Tyler et al, 1989).

Two lines of theory have produced a more stable empirical and theoretical base for the multi-dimensionality of locus of control. Levenson (1981) considers locus of control to be determined by three separate components; internality, chance and powerful others. Paulhus and Christie (1981, Paulhus, 1983) consider the individual to be in the centre of three spheres; personal achievement, interpersonal and socio-political. Paulhus and Christie consider there to be a generalized perception of control for each of these spheres. Other researchers have attempted to formulate locus of control scales for particular domains, such as health (Hartke & Kuncze, 1982) and unemployment (Taylor, 1988).

Spector (1988) has presented the sixteen item Work Locus of Control Scale (WLCS) that relates specifically to the work context. Each item is rated on a six-point Likert type scale, ranging from strongly agree to strongly disagree. However, the problem with the WLCS is that it is scored uni-dimensionally, despite theoretical and

empirical evidence that locus of control is multi-dimensional. It is clearly important to determine the appropriate structure of work locus of control in order to increase the accuracy of its measurement. Therefore, one aim of the study reported here is to subject the WLCS to principal components analysis as a preliminary exploration of the dimensionality of work related locus of control.

Rees and Cooper (1992) have suggested that the locus of control scale from the Occupational Stress Indicator (Cooper et al, 1988) is measuring a state perception of control, rather than a trait. It may be that work related locus of control is a state construct. The extent to which the WLCS is a state rather than a trait measure will also be assessed in this study.

Locus of control has been shown to be associated with wide range of health and well-being measures (Lefcourt, 1982, Kasl, 1989). Some studies have also reported correlations between locus of control and social support (Revicki & May, 1985, Krause, 1987). Parkes (1989) also considers perceived control to be related to actual control in the work place. It is therefore important, if work locus of control is indeed multi-dimensional, to determine the extent to which different work locus of control dimensions relate to stress, well-being and related constructs, such as social support and work place autonomy. As noted earlier in the introduction, locus

of control may also have implications for job performance. Unfortunately, job performance data were not gathered in this study.

In summary, the aims of this paper are to explore the dimensionality of work locus of control as measured by the WLCS, determine the extent to which work locus of control is a trait or state measure and to explore the well-being related correlates of work locus of control.

## METHODS

### **Respondents.**

Respondents were drawn from two samples. The first consisted of 221 university staff (response rate = 38.5%). This sample had a modal age value of 41 to 50 years and 57.0% were male. The second sample consisted of 399 accountants (response rate = 28.5%), of which 244 responded to a follow-up questionnaire one month later. This sample had an average age of 39.1 years (std dev = 9.5), and 334 (83.7%) were male. The low response rates for the second sample may be attributed to the length of the questionnaires mailed to the target sample, including a long follow-up questionnaire. Daniels (1992) reports analyses which suggest that both samples are representative of the populations under study.

### **Questionnaire design.**

The sample drawn from the university establishment were administered the WLCS, a fifteen item frequency of stressor scale and the 12 item version of the general health questionnaire (GHQ12, Goldberg & Williams, 1988, alpha = 0.82), in which high scores indicate poor psychological well-being. The fifteen item stressor scale, designed especially for the study of university staff, has been shown to consist of two factors (Daniels & Guppy, 1992); work load stressors (alpha = 0.74) and managerial and role stressors (alpha = 0.63). Full psychometric details of the scales used can be found in Daniels and Guppy (1992).

The sample of accountants were administered the WLCS along with a fifteen item social support scale (three dimensions; help support {alpha = 0.80}, esteem support {alpha = 0.71} and social dependability {alpha = 0.90}), an eighteen item stressor frequency scale, an eighteen item stressor intensity scale (both with three dimensions, quantitative work load stressors {alphas = 0.71/0.82}, professional/administrative interface stressors {alphas = 0.76/0.78} and nuisance stressors {alphas = 0.57/0.60}), an eight item index of task autonomy (alpha = 0.87) and a nine item environmental clarity scale (alpha = 0.81). This latter scale assesses the extent to which communications and job requirements are clear within the organisation. All these scales were designed especially for the study of stress in

accountants. In addition, the GHQ12 (alpha = 0.87), Warr's (1990) measures of job pleasure (alpha = 0.91), contentment (alpha = 0.86) and enthusiasm (alpha = 0.88) and Aiken and Hage's (1968) four item measure of participation in decision making were also administered (alpha = 0.91). Full psychometric details of these scales can be obtained in Daniels (1992).

## RESULTS

### **Descriptive statistics.**

The uni-dimensionally scored WLCS was found to have a mean of 42.48 for the university sample (std dev = 9.34, alpha = 0.77). For the accountants' sample, the WLCS was found to have an overall mean of 39.80 (std dev = 9.47, alpha = 0.82). The high coefficients of reliability may suggest that it is acceptable to score the WLCS as a uni-dimensional measure of generalized perceived control in the work place.

### **The psychometric properties of the WLCS.**

The WLCS was subjected to principal components analysis (PCA) for each sample separately. In both cases a varimax rotation was used. A number of statistics were used to judge the acceptability of the PCA solutions (listed in Norusis, 1988). The Bartlett test of sphericity came to 977.04 for the university sample and 1628.23 for the sample of accountants. Both these values were significant at  $p < 0.00001$ , indicating suitability for



PCA. The Kaiser-Meyer-Olkin test of sampling adequacy came to 0.74 for the university sample and 0.84 for the sample of accountants. These statistics again indicate suitability for PCA.

In both analyses, Cattell's scree plot (1966) indicated a two factor solution would fit the data sets. Accordingly, two factors were extracted in both analyses. For the university sample, prior to rotation, the first factor accounts for 24.6% of the variance (eigenvalue = 3.93) and the second factor accounts for 14.7% of the variance (eigenvalue = 2.35). These two factors account for 39.3% of the variance in combination. For the sample of accountants, prior to rotation, the first factor accounts for 28.3% of the variance (eigenvalue = 4.53) and the second factor for 13.2% of the variance (eigenvalue = 2.11). Together, these factors account for 41.5% of the variance.

Items with a post-rotation value of greater than 0.35 in absolute value for both analyses were chosen to load upon a particular factor. Table 1. shows the post-rotation factor loadings. Items are arranged according to which factor they load upon.

INSERT TABLE 1 HERE

As can be seen from table 1., items that load upon the first factor relate to external agents of control, items

that load on the second factor relate to perceptions of control in the personal domain. Therefore, the first factor may be called *external agents control*, and the second factor *personal control*. The means, standard deviations, reliabilities and inter correlations are shown in table 2. Note that high scores represent an external locus of control.

INSERT TABLE 2 HERE

The test-retest reliabilities of the scales give an indication of how the scales vary with time, and hence whether they are best thought of as a trait or state measure. The sample of accountants was measured at a one month follow-up (n=244). For the external agents control dimension, the test-retest reliability came to  $r = 0.77$ . For the personal control dimension, the test-retest reliability came to 0.65. The former figure does indicate some degree of stability, although only 59.3% of the variance in the follow-up measures is accounted for by the initial measures. This figure is 42.3% for the personal control dimension. Therefore, it appears that the WLCS is measuring a state of locus of control, or perceived control at work at a given point in time.

The correlates of external agents control and personal control.

Locus of control has been shown to correlate with a wide range of measures of well-being, and variables related to well-being (see introduction). Therefore, it may be expected that the both work locus of control dimensions correlate positively with measures of work stress and the GHQ12 and negatively with measures of autonomy at work, social support and work related psychological well-being. Table 2 shows the correlations between such variables and the two locus of control dimensions for each sample. As can be seen from table 2, the correlations conform approximately to the expected pattern (detailed comments on the correlations are given below).

## DISCUSSION

Principal components analysis revealed that the WLCS has two dimensions, external agents control and personal control. The result converges with theoretical developments by Levenson (1981), in that locus of control is seen to be multi-dimensional, differentiating personal control (internality) from external agents of control (luck or powerful others). The results reported here differ from those of Levenson's model, in that Levenson suggests luck and powerful others should emerge as separate dimensions. In the PCA of the WLCS reported here, that was not the case. It may be that the dimensions that emerged were differentiating between the

control over the personal domain and control over the extra-personal domain (cf. Paulhus & Christie, 1981).

It is also possible that the dimensions emerged due to acquiescent response set. The WLCS consists of 16 items, eight of which are reversed scored. These reversed scored items formed the second factor. Thus neither of the factors contained any negative loadings of any significance. However, it is difficult to gauge the extent to which acquiescent response set has affected the findings, since both dimensions were substantively interpretable.

The test-retest correlations indicate that both these dimensions may be best treated as work specific state rather than trait measures. This result converges with Rees and Cooper (1992), who suggest that the work specific locus of control scale in the Occupational Stress Indicator is a state measure.

The correlations of the two dimensions were generally in the directions expected, although not all correlations reached significance. For the university sample, both dimensions correlated to the about same extent with GHQ12 score. Interestingly, external agents control did not correlate with work load stressors, but did correlate with managerial and role stressors. Work load stressors may be thought of as being more in the personal sphere of control than managerial and role stressors, which may be

more interpersonal in their nature. Accordingly, personal control correlated more strongly with work load stressors than managerial and role stressors. These results provide some evidence for the divergent validity of the two dimensions.

For the sample of accountants, personal control exhibited far stronger correlations with the measures of well-being, social support, stressors and work autonomy than external agents control. These results may be reflective of attitudes instilled by professional training. The professional, because of training, may value control and seek control in the personal sphere, since his/her professional work is primarily due to his/her own competence. Therefore, well-being and related variables should be more strongly related to personal control for accountants than external agents control.

Overall, the pattern of the correlations reported for both samples is indicative of the validity of the two dimensions, since they conform to the pattern of correlations suggested in the introduction. The differential pattern of the correlations and the differences between the two samples also indicates that work locus of control may be treated as a multi-dimensional construct.

The high internal reliability for the uni-dimensionally scored WLCS suggests that this scale may be used as an overall measure of generalized perceived work control. Indeed, since the factor structure reported here may be an artifact of acquiescent responding, it may be prudent to score WLCS uni-dimensionally.

There exist several avenues for future research with the locus of control construct as applied to the work place. It was noted in the introduction that an internal locus of control is associated with better job performance. It may be the case the personal control dimension is associated more with performance in solitary spheres (eg. accounting), but the external agents control dimension may be associated more with performance in jobs requiring extensive inter-personal contact (eg. sales).

A pressing issue for further research is to delineate the extent to which the factor solution reported here is due to real differences or acquiescent responding. This issue may be best addressed by designing work locus of control scales that have been specified *a priori* to be multi-dimensional and then subjected to confirmatory factor analysis (cf. Paulhus, 1985). Such scales should include reversed scored items in the sub-scales.

## REFERENCES

Aiken, M., & Hage, G. (1968). Organizational interdependence and interorganisational structure. *American Sociological Review*, 33, 912-930.

Aronsson, G. (1989). Swedish research on job control, stress and health. In S.L. Sauter, J.J. Hurrell and C.L. Cooper (Eds.), *Job Control and Worker Health*. Chichester: Wiley.

Cattell, R.B. (1966). The meaning and strategic use of factor analysis. In R.B. Cattell (Ed.), *Handbook of Multivariate Experimental Psychology*. Chicago: Rand McNally.

Cooper, C.L., Sloan, S.J., & Williams, S. (1988). *Occupational Stress Indicator Management Guide*. Windsor: NFER-Nelson.

Daniels, K. (1992). *Occupational Stress and Control: Implications for Employee Well-Being*. Unpublished Ph.D Thesis, Cranfield Institute of Technology.

Daniels, K., & Guppy, A. (1992). Stress and well-being in British university staff. Cranfield School of Management Working Paper SWP 21/92.

Goldberg, D., & Williams, P. (1988). *A User's Guide to the General Health Questionnaire: GHQ*. Windsor: NFER-Nelson.

Hartke, R.J., & Kuncze, J.T. (1982). Multi-dimensionality of health related locus of control scale items. *Journal of Consulting and Clinical Psychology, 4*, 594-595.

Kasl, S.V. (1989). An epidemiological perspective on the role of control in health. In S.L. Sauter, J.J. Hurrell and C.L. Cooper (Eds.), *Job Control and Worker Health*. Chichester: Wiley.

Krause, N. (1987). Understanding the stress process: Linking social support with locus of control. *Journal of Gerontology, 42*, 589-593.

Lefcourt, H.M. (1982). *Locus of Control: Current Trends in Theory and Research* (2nd ed.). New York: Halstead.

Levenson, H. (1981). Differentiating among internality, powerful others, and chance. In H.M. Lefcourt (Ed.), *Research with the Locus of Control Construct*. New York: Academic Press.

Norusis, M.J. (1988). *SPSS-X Advanced Statistics Guide*, 2nd ed. Chicago: SPSS Inc.



Parkes, K.R. (1989). Personal control in an occupational context. In A.Stepto and A.Appels (Eds.), *Stress, Personal Control and Health*. Chichester: Wiley.

Paulhus, D. (1983). Sphere-specific measures of perceived control. *Journal of Personality and Social Psychology*, 44, 1253-1265.

Paulhus, D., & Christie, R. (1981). Spheres of control: An interactionist approach to assessment of perceived control. In H.M. Lefcourt (Ed.), *Research with the Locus of Control Construct*. New York: Academic Press.

Rees, D.W., & Cooper, C.L. (1992). The Occupational Stress Indicator locus of control scale: should this be regarded as a state rather than trait measure? *Work and Stress*, 6, 45-48,

Revicki, D.A., & May, H.J. (1985). Occupational stress, social support and depression. *Health Psychology*, 4, 61-77.

Rotter, J.B. (1966). Generalized expectancies for the internal versus external control of reinforcement. *Psychological Monographs*, 80, 1.

Spector, P.E. (1982). Behavior in organizations as a function of employee's locus of control. *Psychological Bulletin*, 91, 482-497.

Spector, P.E. (1986). Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. *Human Relations*, 39, 1005-1016.

Spector, P.E. (1988). Development of the work locus of control scale. *Journal of Occupational Psychology*, 61, 155-162.

Taylor, P.E. (1988). People Without Jobs: Psycho-Social Attitudes, Psychological Well-Being and the Effects of Assessment Programmes. Unpublished Ph.D Thesis, Cranfield Institute of Technology.

Tyler, F.B., Dhawan, N., & Sinha, Y. (1989). Cultural contributions to constructing locus of control attributions. *Genetic, Social and General Psychological Monographs*, 115, 205-220.

Warr, P. (1990). The measurement of well-being and other aspects of mental health. *Journal of Occupational Psychology*, 63, 193-210.

Table 1.

Post-rotation factor loadings. University sample loadings are shown before the slash, accountants sample after the slash.

Item	Factor loading	
	1	2
Getting a job is mostly a matter of luck	.49/.62	.09/.10
Making money is primarily a matter of good fortune	.70/.65	.17/.06
In order to get a really good job, you have to have family members or friends in high places	.70/.70	-.25/.20
Promotions are usually a matter of good fortune	.65/.71	.01/.19
When it comes to landing a good job, who you know is more important than what you know	.66/.75	-.22/.09
To make a lot of money, you have to know the right people	.73/.70	-.12/.03
It takes a lot of luck to be an outstanding employee on most jobs	.54/.52	-.04/.05
The main difference between people who make a lot of money and people who make a little money is luck	.76/.68	-.11/.01

Table 1. continued.

Item	Factor loading	
	1	2
A job is very much what you make of it	-02/.07	.70/.65
On most jobs people can pretty much accomplish what they set out to do	-09/.08	.72/.71
If you know what you want out of a job, you can find a job that gives it to you	-08/.14	.64/.58
If employees are unhappy with a decision made by their boss, they should do something about it	.08/.12	.38/.39
Most people are capable of doing their jobs well if they make the effort	.11/-01	.49/.59
Promotions are given to employees who perform well on the job	-26/.42	.52/.45
People who perform their jobs well generally get rewarded for it	-04/.30	.52/.62
Most employees have more influence over their supervisor than they think they do	-04/-09	.51/.36

Table 2.

*Means, standard deviations, internal reliabilities and inter-correlations of the WLCS factors and well-being related variables.*

---

Sample: University staff

Scale	Mean	Std dev	Alpha
External agents control	22.95	7.30	.82
Personal control	22.62	5.56	.69

Inter-correlation between scales: 0.20 (p<.01)

---

Variable	Correlation	
	External agents control	Personal control
GHQ12	.23**	.24**
Work load stressors	.01	.21*
Managerial and role stressors	.31**	.16*

\*p<.05 \*\* P<.01

---

Sample: Accountants

Scale	Mean	Std dev	Alpha
External agents control	20.13	6.66	.83
Personal control	19.68	4.89	.72

Inter-correlation between scales: 0.33 (p<.001)

Table 2. continued

Variable	Correlations	
	External agents control	Personal control
Quantitative work load		
stressors: intensity	.09	.12
: frequency	-11	-10
Professional/ administrative interface		
stressors: intensity	.12	.16*
frequency	-13	-12
Nuisance stressors:		
intensity	.12	.16*
frequency	.14	.16*
Help support	.01	-12
Esteem support	-10	-14
Social dependability	-17**	-27**
Participation in decision making	-18**	-30**
Task autonomy	-24**	-38**
Environmental clarity	-17*	-32**
GHQ12	.23**	.35**
Job pleasure	-20*	-40**
Job enthusiasm	-30**	-43**
Job contentment	-16	-33**

\* p&lt;.01    \*\* P&lt;.001

## **Cranfield School of Management**

Cranfield Institute of Technology

Cranfield Bedford MK43 0AL England

Telephone National Bedford (0234) 751122

International +44 234 751122

Telex 826559 CITMAN G

Telefax (0234) 751806



The Cranfield School of Management Working Papers Series has been running since 1987, with approximately 300 papers so far coming from the seven major academic subject areas of the School: Enterprise and Small Business Development in the UK and overseas; Finance, Accounting and Economics; Human Resources and Management Development; Information Systems Management; Marketing and Logistics; Operations and Project Management; and Strategic Management. In 1991, the School merged with the Cranfield School of Policy Studies, resulting in two new subject areas, the Social Policy faculty being reformed into the new Public Sector Management Group, and a Centre for Logistics and Transport Studies. From 1992, papers from all groups will be included in the Series. From 1992, papers are reviewed by senior members of faculty before acceptance into the Series.

For copies of papers (up to three free, then £2 per copy, cheques to be made payable to the Cranfield School of Management), please contact Mrs Val Singh, Research Administrator, at the above address.

February 1992

### **SCHOOL WORKING PAPER SERIES**

#### **List No 4, 1990**

SWP 1/90 Sue Birley, David Norburn, Kingsley Manning  
"Developing a New Ventures Strategy"

SWP 2/90 Sue Birley  
"The Small and Medium-sized Enterprise - Is there a European Dimension?"

SWP 3/90 David Ballantyne  
"Management of the Diagnostic Review Process in Service Quality Management: ANZ Bank - A Case Outline"

SWP 4/90 David Ballantyne  
"Turning the Wheel of Quality Improvement - Continuously"

SWP 5/90 Bob Spink  
"Overtime: The Problem that won't go away."

SWP 6/90 Sue Birley & Paul Westhead  
"Growth and Performance Contrasts between Types of Small Firms"

SWP 7/90 David Parker  
"The 1988 Local Government Act and Compulsory Competitive Tendering"

SWP 8/90 Sue Davison

"Cultural Mapping - What is it, and How does it relate to Previous Research?"

SWP 9/90 Andrew Myers, Ian Oram, Michael Sweeney, Alan Warr

"Managing Learning the Need to Change - Some General Findings from a Study of Applying Information Technology to Aid Learning in a Business School"

SWP 10/90 David Parker

"The Importance of Ownership"

SWP 11/90 John Hailey

"Financing Small Enterprise in Developing Ministates"

SWP 12/90 Malcolm Harper & John Hailey

"Management Development for Enterprise Promotion: NGOs and the Development of Income Generating Enterprise"

SWP 13/90 John Grierson

"Sustainability, Self-Sufficiency and Management Simplicity"

SWP 14/90 Sue Birley & Paul Westhead

"Private Business Sales Environments in the UK"

SWP 15/90 Malcolm McDonald & Hugh Wilson

"State of the Art Developments in Expert Systems and Strategic Marketing Planning"

- SWP 16/90 Yochanan Altman  
"The Organisational Culture of the Armed Forces: The Case of the Israeli Army"
- SWP 17/90 Paul Burns  
"Managing a Partnership for Business Success"
- SWP 18/90 Sue Birley & Paul Westhead  
"Spatial Variations in Private Advertised Sales in the UK, 1983-1988"
- SWP 19/90 Keith Ward, Sri Srikanthan, Richard Neal  
"Strategic Brand Accounting"
- SWP 20/90 Yochanan Altman  
"The Relocations of Companies: The Human Resources Perspective"
- SWP 21/90 Sue Birley & Kingsley Manning  
"Public Sector Venturing"
- SWP 22/90 Malcolm McDonald  
"Marketing Technique Interrelationships and the Pursuit of Relevance in Marketing Theory"
- SWP 23/90 Sue Birley, Stan Cromie & Andrew Myers  
"The Relationships between Incubator Experience Entrepreneurial Networks in Northern Ireland - Some initial findings."
- SWP 24/90 Sue Birley, Stan Cromie, & Andrew Myers  
"Entrepreneurial Networks: Their Creation and Development in Different Countries"
- SWP 25/90 Sue Birley & Paul Westhead  
"Discriminating Factors in the Strategic Profile of 'Small' and 'Large' Small Firms"
- SWP 26/90 Andy Bytheway  
"Electronic Data Interchange: The Longer Term Effects on International Trade - A Selected Glossary of EDI Terms and Acronyms"
- SWP 27/90 Andy Bytheway  
"Electronic Data Interchange: Technical Opportunity or Business Necessity?"
- SWP 28/90 Andy Bytheway & Chris Barrington-Brown  
"Survey of Electronic Data - Interchange Users and Service Providers in the UK"
- SWP 29/90 Andy Bytheway  
"An Update Report from the EDI 1989 Conference in London"
- SWP 30/90 Andy Bytheway  
"Electronic Data Interchange and Advanced Information Processing - The Way Ahead"
- SWP 31/90 Andy Bytheway  
"EDI Standards and the Single European Market"
- SWP 32/90 Andy Bytheway  
"The Effects of EDI on the Financial Sector"
- SWP 33/90 Mike Sweeney & S Carter  
"JIT (Just in time) Manufacturing - But at What Cost?"
- SWP 34/90 Mike Sweeney  
"CIM (Computer Integrated Manufacture) - Buy Now or Pay Later"
- SWP 35/90 Paul Westhead  
"Managing the Construction of a Manufacturing Establishment Data-Bank"
- SWP 36/90 Yochanan Altman  
"The Role of Personal Social Support Networks in Soviet Type Centralised Command Economies: Social Networks at Work in Soviet Georgia"
- SWP 37/90 David Parker, Keith Hartley, & Stephen Martin  
"Organisational Status, Ownership and Productivity"
- SWP 38/90 Mike Sweeney  
"Breakthrough to World Class Manufacturing - A Strategy for the Transformation"
- SWP 39/90 Colin Armistead & Graham Clark  
"After Sales Support Strategy"
- SWP 40/90 Colin Armistead  
"Competitive Service Strategy and the Service Operations Task"
- SWP 41/90 Susan Segal-Horn & Heather Davison  
"Global Markets, The Global Consumer and International Retailing"
- SWP 42/90 John Mcgee & Susan Segal-horn  
"Strategic Space and Industry Dynamics"
- SWP 43/90 David Parker, Keith Hartley, & Stephen Martin  
"Do Changes in Organisational Status Affect Financial Performance?"



SWP 44/90 Keith Ward, Sri Srikanthan, Richard Neal  
"Life-Cycle Costing in the Financial  
Evaluation and Control of Products and  
Brands"

SWP 45/90 Adrian Payne, Deborah Walters & Gordon  
Foxall  
"A Study of the Cognitive Styles of Australian  
Managers"

SWP 46/90 Graham Elkin  
"Organisational Behaviour: People, Groups  
and Organisations at Work"

SWP 47/90 Graham Elkin  
"Physical Therapy and Management  
Consulting"

SWP 48/90 Graham Elkin  
"Executive Challenge: Using the Outdoors to  
Develop the Personal Action Skills of MBA  
Students"

SWP 49/90 Graham Elkin  
"Career - A Changing Concept"

SWP 50/90 Graham Elkin  
"Competency Based Human Resource  
Development - Making Sense of the Ideas"

SWP 51/90 Graham Elkin  
"The Admission of Mature Adult Students to  
Executive MBA Programmes"

SWP 52/90 Graham Elkin  
"Exploring the Environment, Discovering  
Learning Resources and Creating Low Cost  
Training & Development - Part 1"

SWP 53/90 Graham Elkin  
"Exploring the Environment, Discovering  
Learning Resources and Creating Low Cost  
Training & Development - Part 2"

SWP 54/90 Kim James & Donna Lucas  
"Managing Learning in an Organisation that  
Understands Teaching"

SWP 55/90 Graham Elkin  
"Eldercare: A Growing Issue for Employee  
and Employer"

SWP 56/90 Robert Brown & Andy Burnett  
"Graduate Enterprise Programme IV, 1990 -  
Recruitment and Selection Report, East  
Midlands Region"

## SCHOOL WORKING PAPERS

LIST NO 5, 1991

SWP 1/91 Colin Barrow  
"How Green are Small Companies? A Survey  
by Cranfield School of Management"

SWP 2/91 Graham Clark  
"Strategies for Product and Customer Support  
- A Research Report"

SWP 3/91 David Parker  
"Tackling Tax Evasion in the UK"

SWP 4/91 John McGee and Susan Segal-Horn  
"Strategic Space and Industry Dynamics: The  
Implications for International Marketing  
Strategy"

SWP 5/91 Chris Brewster  
"Culture: The International Dimension"

SWP 6/91 Chris Brewster and Helen Peck  
"Management Changes in China and Eastern  
Europe: Dubious Parallels"

SWP 7/91 Keith Ward, Sri Srikanthan, Richard Neal  
"Marketing Investment Analysis: The Critical  
Success Factors for Financially Evaluation and  
Effectively Controlling Marketing Investment  
Decisions."

SWP 8/91 Andy Bytheway and Bernard Dyer  
"Electronic Data Interchange: Persuading  
Senior Management"

SWP 9/91 Alan Warr  
"Strategic Opportunities and Information  
Systems Management"

SWP 10/91 Alan Warr  
"Bridging the Gap - Implementing Information  
Systems Strategies"

SWP 11/91 Alan Warr  
"Mapping the Applications Portfolio onto the  
Projects Portfolio"

SWP 12/91 Siobhan Alderson & Andrew Kakabadse  
"The Top Executive Competencies Survey - A  
Literature Review"

SWP 13/91 Mike Sweeney  
"Determining a Technology Strategy for  
Competitive Advantage"

- SWP 14/91 Len Holden and Helen Peck  
"Bulgaria, Perestroika, Glasnost and Management"
- SWP 15/91 Robert Brown & Andy Burnett  
"Do we need Enterprising Graduates?"
- SWP 16/91 Ian Oram & Clare Tagg  
"Using an IS Strategic Model to give a Strategy for Teaching IS"
- SWP 17/91 Len Holden  
"Employee Communications in Europe"
- SWP 18/91 Susan Segal-Horn  
"The Globalisation of Service Industries"
- SWP 19/91 David Ballantyne  
"Coming to Grips with Service Intangibles, using Quality Management Techniques"
- SWP 20/91 Colin Armistead  
"Resource Productivity in the Services Sector"
- SWP 21/91 David Parker & John Burton  
"Rolling back the State? : UK Tax and Government Spending Changes in the 1980s"
- SWP 22/91 Simon Knox & David Walker  
"Involvement, Cognitive Structures and Brand Loyalty: The Empirical Foundations for a Unifying Theory"
- SWP 23/91 David Ballantyne  
"Internal Marketing, Collaboration and Motivation in Service Quality Management"
- SWP 24/91 Chris Brewster  
"Starting again: Industrial Relations in Czechoslovakia"
- SWP 25/91 Cliff Bowman & Gerry Johnson  
"Surfacing Managerial Patterns of Competitive Strategy: Interventions in Strategy Debates"
- SWP 26/91 Malcolm Harper  
"Cooperatives and Other Group Enterprises: What are the Critical Factors for Success? A Survey of Informed Opinion."
- SWP 27/91 Mike Sweeney  
"The Strategic Management of Manufacturing: From Waste to Haste"
- SWP 28/91 Mike Sweeney  
"How to Achieve Competitive Edge by Simultaneous Process Engineering"
- SWP 29/91 Mike Sweeney  
"Towards a Unified Theory of Strategic Manufacturing Management"
- SWP 30/91 David Ballantyne, Martin Christopher & Adrian Payne  
"The Pathology of Company-Wide Quality Initiatives: Seven Prescriptions for Failure"
- SWP 31/91 Martin Christopher, Adrian Payne & David Ballantyne  
"Relationship Marketing: Bringing Quality, Customer Service and Marketing Together"
- SWP 32/91 Mike Fleming & Joe Nellis  
"The Development of Standardised Indices for Measuring House Price Inflation Incorporating Physical and Locational Characteristics"
- SWP 33/91 Cliff Bowman  
"Charting Competitive Strategy"
- SWP 34/91 Roland Calori, Gerry Johnson & Philippe Sarnin  
"French and British Top Managers' Understanding of the Structure and the Dynamics of their Industries: A Cognitive Analysis and Comparison"
- SWP 35/91 Michael Sweeney  
"Manufacturing-Led Competitiveness: Use Maths not Myths"
- SWP 36/91 Robert Brown, Andrew Norton & Bill O'Rourke  
"Case Study - Beverley plc"
- SWP 37/91 Malcolm Harper & John Hailey  
"Management Development for Enterprise Promotion: Non-Governmental Organisations and the Development of Income Generating Enterprise"
- SWP 38/91 Shaun Tyson & Noeleen Doherty  
"The Redundant Executive: Personality and the Job Change Experience"
- SWP 39/91 Yochanan Altman  
"On Managing Volunteers - Absence of Monetary Compensation and its Implication on Managing Voluntary Organisations: The Issues of Motivation, Control and Organisational Structure."
- SWP 40/91 David Parker  
"Privatisation Ten Years On: A Critical Analysis of its Rationale and Results."

- SWP 41/91 Ian Oram  
"Implications of an IS Strategic Model for IS Development"
- SWP 42/91 Shaun Tyson  
"1992: An Investigation of Strategies for Management Development"
- SWP 43/91 Malcolm McDonald  
"The Changing Face of Marketing"
- SWP 44/91 Malcolm McDonald  
"Teaching by Degrees"
- SWP 45/91 Malcolm McDonald & John Leppard  
"Marketing Planning and Corporate Culture"
- SWP 46/91 Colin Barrow & Andy Burnett  
"The Single Market and Small Growing Companies in the UK: A Survey by Cranfield School of Management"
- SWP 47/91 Colin Barrow  
"Key Staff Recruitment in Small Firms in the UK: A Survey by Cranfield School of Management"
- SWP 48/91 Yochanan Altman  
"Organisational Consultancy and Clinical Psychology - The Meeting of Two Worlds"
- SWP 49/91 John Hailey & Jon Westborg  
"A New Role for Development Agencies: Non-Government Organisations and Enterprise Development"
- SWP 50/91 Paul Burns & Christine Choisne  
"The Attitudes of Small and Medium-Sized Companies in Britain and France to the Business Environment in the First Half of 1991"
- SWP 51/91 Paul Burns  
"The European Market"
- SWP 52/91 Shailendra Vyakarnam  
"The Mismatch between Academic and Practitioner Constructs of Ethics : Implications for Business Schools"
- SWP 53/91 Cliff Bowman  
"Managerial Perceptions of Porter's Generic Strategies"
- SWP 54/91 Adrian Payne and Flemming Poufelt  
"Increasing the Effectiveness of Mergers and Acquisitions within the Management Consulting Industry"
- SWP 55/91 John Hailey  
"The Small Business Sector in Developing Economies"
- SWP 56/91 Colin Armistead & Graham Clark  
"Capacity Management in Services and the Influence on Quality and Productivity Performance"
- SWP 57/91 Colin New  
"World Class Manufacturing versus Strategic Trade Offs"
- SWP 58/91 Colin Armistead & John Mapes  
"Supply Networks and the Changing Role of Operations Managers"
- SWP 59/91 Brett Collins & Adrian Payne  
"Internal Services Marketing"
- SWP 60/91 Andrew Myers, Mairi Bryce & Andrew Kakabadse  
"Business Success and 1992: The Need for Effective Top Teams"
- SWP 61/91 Malcolm McDonald  
"Strategic Marketing Planning: A State of the Art Review"
- SWP 62/91 Malcolm McDonald  
"Excellent Selling can Seriously Damage a Company's Health"
- SWP 63/91 Graham Clark & Colin Armistead  
"After Sales Support Strategy: A Research Agenda"
- SWP 64/91 Graham Clark & Colin Armistead  
"Barriers to Service Quality: The Capacity, Quality, Productivity Balance"
- SWP 65/91 Ariane Hegewisch  
"European Comparisons in Rewards Policies: The Findings of the First Price Waterhouse/Cranfield Survey"
- SWP 66/91 Andy Bailey & Gerry Johnson  
"Perspectives of the Process of Strategic Decision-Making"
- SWP 67/91 Collin Randlesome  
"East German Managers - From Karl Marx to Adam Smith?"
- SWP 68/91 Paul Burns & Christine Choisne  
"High Performance SMEs: A Two Country Study"

- SWP 69/91 David Parker  
"Ownership, Managerial Changes and Performance"
- SWP 70/91 Graham Elkin (Visiting Fellow)  
"Socialisation and Executive MBA Programmes"
- SWP 71/91 Shai Vyakarnam  
"The New Europe from the Third World"
- SWP 72/91 John Hailey  
"Small Business Development in the Developing World: An Overview of Contemporary Issues in Enterprise Development"
- SWP 73/91 Paul Burns  
"Training Within Small Firms"
- SWP 74/91 Paul Burns & Christine Choisne  
"High Performance SMEs in Britain and France: Strategies and Structures"
- SWP 75/91 Robert Brown et al  
"UK Tax Implications for the Small Business"

**SCHOOL WORKING PAPERS  
LIST NO 6, 1992**

- SWP 1/92 Mike Sweeney  
"How to perform simultaneous process engineering"
- SWP 2/92 Paul Burns  
"The Management of General Practice"
- SWP 3/92 Paul Burns  
"Management in General Practice: A Selection of Articles"
- SWP 4/92 Simon Knox & David Walker  
"Consumer involvement with grocery brands"
- SWP 5/92 Deborah Helman and Adrian Payne  
"Internal marketing: myth versus reality?"
- SWP 6/92 Leslie de Chernatony and Simon Knox  
"Brand price recall and the implications for pricing research"
- SWP 7/92 Shai Vyakarnam  
"Social Responsibility in the UK Top 100 Companies"

- SWP 8/92 Susan Baker, Dr Simon Knox and Dr Leslie de Chernatony  
"Product Attributes and Personal Values: A Review of Means-End Theory and Consumer Behaviour"
- SWP 9/92 Mark Jenkins  
"Making Sense of Markets: A Proposed Research Agenda"
- SWP 10/92 Michael T Sweeney and Ian Oram  
"Information Technology for Management Education: The Benefits and Barriers"
- SWP 11/92 Keith E Thompson (Silsoe College)  
"International Competitiveness and British Industry post-1992. With Special Reference to the Food Industry"
- SWP 12/92 Keith Thompson (Silsoe College)  
"The Response of British Supermarket Companies to the Internationalisation of the Retail Grocery Industry"
- SWP 13/92 Richard Kay  
"The Metaphors of the Voluntary/Non-Profit Sector Organising"
- SWP 14/92 Robert Brown and Philip Poh  
"Aniko Jewellers Private Limited - Case Study and Teaching Notes"
- SWP 15/92 Mark Jenkins and Gerry Johnson  
"Representing Managerial Cognition: The Case for an Integrated Approach"
- SWP 16/92 Paul Burns  
"Training across Europe: A Survey of Small and Medium-Sized Companies in Five European Countries"
- SWP 17/92 Chris Brewster and Henrik Holt Larsen  
"Human Resource Management in Europe - Evidence from Ten Countries"
- SWP 18/92 Lawrence Cummings  
"Customer Demand for 'Total Logistics Management' - Myth or Reality?"
- SWP 19/92 Ariane Hegewisch and Irene Bruegel  
"Flexibilisation and Part-time Work in Europe"
- SWP 20/92 Kevin Daniels and Andrew Guppy  
"Control, Information Seeking Preference, Occupational Stressors and Psychological Well-being"

- SWP 21/92 Kevin Daniels and Andrew Guppy  
"Stress and Well-Being in British University Staff"
- SWP 22/92 Colin Armistead and Graham Clark  
"The Value Chain in Service Operations Strategy"
- SWP 23/92 David Parker  
"Nationalisation, Privatisation, and Agency Status within Government: Testing for the Importance of Ownership"
- SWP 24/92 John Ward  
"Assessing and Managing the Risks of IS/IT Investments"
- SWP 25/92 Robert Brown  
"Stapleford Park: Case Study and Teaching Notes"
- SWP 26/92 Paul Burns & Jean Harrison  
"Management in General Practice - 2"
- SWP 27/92 Paul Burns & Jean Harrison  
"Management in General Practice - 3"
- SWP 28/92 Kevin Daniels, Leslie de Chernatony & Gerry Johnson  
"Theoretical and Methodological Issues concerning Managers' Mental Models of Competitive Industry Structures"
- SWP 29/92 Malcolm Harper and Alison Rieple  
"Ex-Offenders and Enterprise"
- SWP 30/92 Colin Armistead and Graham Clark  
"Service Quality: The Role of Capacity Management"
- SWP 31/92 Kevin Daniels and Andrew Guppy  
"Stress, Social Support and Psychological Well-Being in British Chartered Accountants"
- SWP 32/92 Kevin Daniels and Andrew Guppy  
"The Dimensionality and Well-Being Correlates of Work Locus of Control"
- SWP 33/92 David Ballantyne, Martin Christopher, Adrian Payne and Moira Clark  
"The Changing Face of Service Quality Management"