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LEVERAGING THE JOB OWNERSHIP STRUCTURE BY WORKER CO-OPERATIVES

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Abstract:
This study examined the causal link between the job ownership structure and increased commitment and motivation in worker co-operatives. The separation of job ownership from management and the effective alignment of the interests of job managers and the owners have generated a lot of discussion in the past. Proponents of the agency theory have, on the one hand, recommend actions that maximize shareholders value. On the other hand, the adoption of sweeping statements of purpose by many business organizations, have led to the recommendation of the stakeholder and the stewardship theories as being the appropriate guides to corporate actions. However, given the complexities of modern business organizations where the expectations of the workers and job owners are increasingly getting blurred, reliance on these theories does not provide a satisfactory solution. Survey questionnaires were the main instrument for primary data collection in this study. Semi-structured follow-up interviews were also conducted to supplement the method. The research design included three phases of data collection and analysis. Phase one was a qualitative method of informal, semi-structured interviews while phase two was a quantitative survey, the findings of which were used to construct further semi-structured follow-up interviews with worker co-operative stakeholders. The study concluded that the job ownership structure adopted by worker co-operatives has resulted into increased commitment and motivation which has in turn lead to increased productivity and improved performance.

JEL: E24, J24, O15

Keywords: job ownership, ownership structure, worker co-operatives, democratic control

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1. Introduction

It has been argued that when employees invest firm-specific human capital in the firm, their contribution is just as important as, or even more important than, the shareholders' investment of finance capital and thus recognition should be given to employee property rights in the firm equivalent to that of shareholders (Wanjiru, 2004). The concept of employee ownership signifies that workers, just like shareholders, can have a claim on the firm's resources which is protected by property rules. According to Deakin and Slinger, as quoted by Wanjiru (2004), the employees' proprietary interest in a firm is normally acquired when they contribute firm-specific human capital which refers to the time, skill and knowledge invested by employees in the firm. It is rationalized by the shareholder primacy norm that it is the shareholders who bear the residual risk and that shareholders' return is realized only after the firm's other liabilities (to workers and creditors) are satisfied, hence the firm is not bound to owe any obligations towards them (Wanjiru, 2004). This study, however, examines an alternative job ownership model in which employees can also bear the residual risk in addition to investing time and effort into acquiring the skills needed in their jobs.

A standard worker co-operatives model results into business entities that are owned and controlled by their members, the people who work in them. In a worker co-operative, ownership and control of the business derive from working in the company, rather than from simply investing capital in it. A central element of the business structure is that labour should hire capital rather than that capital should hire labour (Cockerton *et al*., 1980). A worker co-operative model of enterprise is therefore one form of job ownership structure that prohibits non-workers from holding membership voting shares, thus retaining control of the firm within the workforce. Profits and losses from the business are allocated to worker-owners according to either the hours worked or gross pay. Skill and seniority determine wage rates, which are often set by an equitable ratio between the highest and lowest paid worker-owners (Cockerton *et al*., 1980; Hansen *et al*, 1997). The central characteristics of worker co-operatives include the fact that workers invest in and own the business and that decision-making is democratic, generally adhering to the principle of one worker-one vote. That is, workers combine their skills, experience and financial resources to achieve mutual goals.

The worker co-operative model for business enterprise assures any group of individuals an effective means to combine their resources, however small. It permits a larger resource mobilization than that within the capacity of most individuals and small enterprises. As direct beneficiaries, worker co-operative members have a strong incentive for efficient operation and continuous innovation in response to changing business environments achieving thereby high rates of both initial success and long

term viability. This model favours the long term development of an enterprise compatible with the interests of the communities in which it operates. The stability it assures within local communities itself induces further entrepreneurial expansion (United Nations, 1996).

Most enterprises have adopted governance principles that have evolved and reflect what was considered as the best practice in the UK and USA. In line with the underlying assumptions of the agency theory, these principles primarily focused on enhancing shareholder value and, in the process, richly rewarded top executives and have been the principal basis for governance codes around the world. Similarly, the stakeholder view of corporate governance, is often associated with Japanese and continental European practice (mainly Germany) where law has required that half the seats on supervisory boards go to representatives of the workforce and where custom has long mandated that a company's bankers and large-block shareholders have seats on the board.

The stewardship theory, on the other hand, suggests that management and board members in an organization will be motivated by some larger force than the desire for personal wealth. Drawing on organizational psychology, it suggests that self-esteem and fulfillment loom large in their decision-making, as had suggested in Maslow's hierarchy of needs. Unlike the agency theory, the stewardship theory does not stress on the perspective of individualism, Donaldson & Davis (1991), but rather on the role of top management, as stewards, playing the role of integrating their goals with that of the organization. The stewardship perspective suggests that stewards are satisfied and motivated only when organizational success is attained.

Corporate governance practices employed by worker co-operatives are, however, guided by the co-operative principle of democratic control. Decisions as to how the business is run are made democratically by the co-operative system of one member - one vote and the workers collectively develop the policies that determine the co-operative's daily and long-term operation. By democratizing the workplace, individuals are able to participate in routine decision-making affecting their immediate work environment, an arena in which they have first-hand knowledge. Pateman (1970) argues that the effect of democratizing a workplace escalates beyond the factory gate as workers find that they can exercise greater control over their working lives, they seek to shape other aspects of their lives by participating in civic and political institutions. Moreover, the author notes that having learned to participate at work they will have acquired the confidence, skills and desire to participate in civic society. In short, workplace democracy will turn workers into responsible citizens (Pateman, 1970).

The distinction between worker co-operatives and other forms of employee owned business initiatives, such as Employee Stock Ownership Programs (ESOPs), can be confusing. ESOPs have now become a common form of employee ownership in the United States, Canada, Europe and Japan. ESOPs allow the employees of a business to invest in that business. They often form so that the company can receive tax benefits and/or because of the belief that employees are more efficient if they have a vested interest in the business. Some companies in crisis also develop ESOPs. The workers' investment, through buying shares in the company, helps pull the company through the crisis, thus securing the workers' employment. ESOPs, like worker co-operatives, can also take many different forms. However, the main difference between an ESOP company and a worker co-operative is in democratic structure. A worker co-operative is governed on the principle of one member-one vote (Michie, Oughton, and Bennion, 2002; Bradley & Gelb, 1983).

2. Literature Review

Job-ownership researchers (Postlethwaite, Michie, Burns, & Nuttall, 2005; Hansen *et al*, 1997; Bibby, 2004) point out that worker co-operatives are unique both as co-operatives and as businesses. They provide the worker-members with employment and income along with the ownership and control of the enterprise. Through their ownership and control, the worker-members receive a fair share of the profits and enjoy workplace democracy. The difference between worker co-operatives and other types of co-operatives is the fact that members of worker co-operatives both own and work for their co-operative. In contrast, members of a consumer co-operative own the store they shop at, but do not necessarily work at the store. In the best of all worlds, worker co-operatives can integrate members' economic activities to obtain efficiencies in ways that no other form of business can match (Valentinov, 2004; Fairbairn, 2003; Fukuyama, 1999). A study by Michie *et al*, (2002) concluded that employee involvement and participation in worker co-operatives does increase employee commitment and motivation.

Postlethwaite *et al* (2005) note that the employee and co-owned business sector in the UK has grown too big, too diverse and too effective to be ignored. They estimate the turnover of the co-owned sector as exceeding £20-25 billion. A research study by Michie *et al* (2002) indicates that the co-operative ownership structure motivates employees. People have a sense of ownership and are prepared to put in extra effort because they like the ethos of the organization. Collective ownership makes people feel they have an influence over big (strategic) questions. Ownership over the company's values gives meaning to jobs. People take responsibility to make things happen (Postlethwaite *et al*, 2005; Michie *et al*, 2002).

Worker co-operatives are enterprises in which the workforce takes collective responsibility for the business which employs them, while enjoying fair reward from the profits which they create (Postlethwaite *et al* 2005; Hansen *et al,* 1997; Cockerton *et al*., 1980; Oakeshott, 1978). According to Hansen, Coontz and Malan (1997), worker co-operative members are accepted according to criteria set by the co-operative, by working in the business, and through the purchase of a membership share. Each member of the worker co-operative becomes an owner with rights and obligations, including participating in workplace decisions, contributing labor and skills, and receiving an equitable share of profits.

Many writers (Postlethwaite *et al* 2005; Hansen *et al,* 1997; Cockerton *et al*., 1980; Oakeshott, 1978; Spear, 2002) admit that worker co-operatives embody the concepts of worker participation and ownership, people-centered economic development, social well-being and quality of life. They involve their member-workers at all the levels of risk-taking, management, operations and added-value distribution. A private company can also be turned into a worker co-operative if the owner wants to leave the business due to retirement, illness, etc. The employees buy shares from the owner and assume control of the business. This form of mutualisation often appeals to the former owners, as it allows them to become members and remain active in the company (Bradley & Gelb, 1983).

Postlethwaite *et al* (2005) contend that employee owned companies are now arguably setting the pace on at least one of the most prized yardsticks for competitiveness: the ability to harness the true commitment and creativity of their employees. Other enterprises have looked at the co-owned sector and concluded that the secret is simply employee share ownership, perhaps simply good communication, or clever participation systems. They have consequently tried to copy different aspects of the employee-ownership model (Postlethwaite *et al*, 2005).

Many writers (e.g. Bradley & Gelb, 1983; Hansen *et al*, 1997; Michie *et al,* 2002) argue that extensive employee stake-holding tends to foster a sense of individual enterprise that directly fuels productivity. Employees in co-owned companies tend to be relatively entrepreneurial because they are owners. They typically have a more creative attitude to their own work and the future of the business. They are more comfortable taking responsibility for decisions and accepting a lot of discretion about the way they carry out work tasks (Postlethwaite *et al*, 2005).

The relatively high levels of trust and consultation in co-owned companies also mean they tend to be highly innovative. Whereas change is often seen as a threat, not to mention a surprise, in other kinds of companies, co-owned companies routinely do the kind of communication and consultation that allows employees to see the purpose of

change and adapt to it successfully (Postlethwaite *et al*, 2005; Michie *et al*, 2002; Bradley & Gelb, 1983).

Also, the way employee owned companies are structured means they achieve high standards of accountability and corporate social responsibility. The employee co-owners, as shareholders, tend to demand and impose relatively exacting levels of corporate transparency and integrity (Postlethwaite *et al*, 2005; Hansen *et al*, 1997; Michie *et al*, 2002). It has been argued further by Postlethwaite *et al* (2005) that aside from the employee-ownership 'micro' effects at the level of the individual companies, the society also benefits from having the additional, different and vibrant business paradigm. The employee owned business sector enriches the diversity of ownership models capable of operating successfully – widening choice for consumers, funders, job seekers, suppliers and purchasers. Studies by different researchers (Bradley & Gelb, 1983; Hansen *et al*, 1997; Michie *et al*, 2002; Postlethwaite *et al*, 2005) conclude that many employee-owned companies out-perform those owned entirely by external shareholders and often demonstrate higher productivity, greater innovation, increased customer loyalty, and enhanced talent recruitment and retention. This is because successful employee ownership plans combine three key factors; financial incentives, employee involvement mechanisms and an 'ownership culture' to foster an environment where employees are motivated and empowered to act in the best interests of the organization.

Worker co-operatives also constitute a vital form of workplace democracy in a society where workers do not often have control over their work settings. Pateman (1970) argues that democratic control and participation in workplace decision-making can spill over into wider society by increasing the probability of participation in decision making beyond the workplace. The primary focus is on worker cooperatives because they are organizations owned and controlled by the workforce and in which participation is most extensive and regular and therefore have most impact on individual members. Individual attitudes and behaviour are shaped by the institutions within which they act. So, where individuals actively engage in democratic institutions they are more likely to develop the necessary attitudes, skills and psychological qualities that contribute to individual decision-making efficacy, which in turn will increase greater civic participation. Carter (2006) and Pateman (1970) are in agreement that most people spend a large part of their daily lives in the workplace, usually in authoritarian organisations where they exercise little influence over their work. The hierarchical, bureaucratic organisations in which they work give them little opportunity to hone their democratic skills.

According to Carter (2006), many workers clearly do prize the co-operative experience. Mondragon workers display high levels of vertical trust between managers and workers, and high commitment, involvement and motivation. He adds that workers in American plywood co-ops and Israeli kibbutzim value participation. Similarly, in grass-root co-operatives in the US and the UK, members are strongly committed, involved and satisfied in their work (p. 418). Carter (2006) explains that participation and efficacy in decision-making may be undermined when a small elite exercises informal control and the majority of workers do not engage actively in decision-making or when positive expectations of the process of participation are not fulfilled. Indeed, many co-operatives experience a process of organizational degeneration whereby control becomes increasingly concentrated in the hands of a few in which case the elected leaders become ruling elite (Carter, 2006).

3. Research Methodology

The research study utilized mainly the quantitative data collection and analysis methods. However, reasonable use of qualitative techniques was made in data collection to supplement the quantitative methods. The investigation therefore used methodological triangulation. In particular, it used the "*between-methods triangulation*" technique in which one method complements and / or supplements the other. Triangulation, in many cases, produces more valid and reliable results than the use of single methods. Reinharz (1992) confirms that triangulation increases "*the likelihood of obtaining scientific credibility and research utility*" (p. 197).

The data collection process began by first carrying out informal, open-ended interviews with officials of co-operative and job ownership organizations that are involved in promotion work and in research and development projects concerning worker co-operatives and other job ownership enterprises. The organizations selected for the informal interviews included the Co-operative-UK, the umbrella body for worker co-operatives, the Job Ownership Limited, the Industrial Common Ownership Movement, the Industrial Common Ownership Finance (Cambridge office) and the Co-operative College. The officials interviewed included a chief executive, a national strategy coordinator, and project managers.

The objective of this phase was to collect relevant background information regarding the past, present and future opportunities and threats as well as strengths and weaknesses influencing the performance of worker co-operatives in Britain. Both personal (face-to-face) and telephone interviewing methods were employed in this phase. Notes were taken during the interviews and the information gathered formed a good background material for the construction of survey questionnaires in phase two.

Available literature and case studies on worker co-operatives including the failed co-operative enterprises were also reviewed for relevant material for the survey questionnaires.

According to Co-operatives-UK, it was estimated that there were approximately 390 worker owned and controlled co-operatives in Britain. Mail-survey questionnaires were therefore sent out to the entire population of worker co-operatives in Britain as maintained in the directory of their umbrella organization, the Co-operative –UK. In total, the entire 390 worker co-operatives were surveyed on various issues relating to the research hypothesis. A total of 142 responses were eventually obtained from the 390 worker co-operatives surveyed. Eleven (11) of the responses were not very useful since the respondents were either dormant, under liquidation or had converted to non-co-operative enterprises. The overall result was therefore a sample of 131 active worker co-operatives out of a population of 379 active worker co-operatives. This is a response rate of 35%. The responses were from a wide spectrum of worker co-operatives in terms of the economic and social sectors represented. These sectors included consultancy and professional services, wholefoods, arts and the media, printing and publishing, care and support services, crafts and woodwork, leisure, and other retail services.

To test non-response bias, a sample comprising the first forty seven respondents was compared to the one of 47 respondents who submitted their questionnaires after the reminder. Chi-square tests (χ^2) were used for the non-response bias. It is the contention of many writers (Bryman and Cramer, 2005; Kinnear and Gray, 2004; Field, 2005; Sarantakos, 2003; Berg, 2002) that chi-square tests are the most popular and most frequently used tests of significance in the social sciences. Normally there are two types of chi-square tests, being the goodness-of-fit test and the test of independence. Tests of independence were used in this study for the non-response bias. The results of the tests are shown in Tables 1 – 3 below:

Table 1: Chi-square Test for the Type of Business Activity

Table 1 – 1: BusType * Group Crosstabulation

		Group		Total
		EarlyRes	LateRes	
BusType				
	Consult	9	9	18
	Prnting	9	9	18
	HlthFood	8	3	11
	Arts	4	6	10
	HlthLeisr	5	2	7

	CareSppt	1	4	5
	MiscRtl	5	2	7
Others	6	12	18	
Total		47	47	94

Table 1 - 2: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.044(a)	7	.250
Likelihood Ratio	9.384	7	.226
Linear-by-Linear Association	.841	1	.359
N of Valid Cases	94		

Table 2: Chi-square Test for the Number of Members

Table 2 - 1: NumMbrs * Group Crosstabulation

		Group		
		EarlyRes	LateRes	Total
NumMbrs				
	0 - 7	9	5	14
7 -10	20	29	49	
Over 10		18	13	31
Total		47	47	94

Table 2 – 2: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.203(b)	1	.273		
Continuity Correction(a)	.770	1	.380		
Likelihood Ratio	1.207	1	.272		
Fisher's Exact Test				.380	.190
Linear-by-Linear Association	1.190	1	.275		

Table 3: Chi-square Test for the Level of Performance Satisfaction

Table 3 – 1: Satisfd * Group Crosstabulation

		Group		
		EarlyRes	LateRes	Total
Satisfd				
	satisfd	22	17	39

	Somewhat	17	18	35
Not	8	12	20	
Total		47	47	94

Table 3 – 2: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.470(a)	2	.480
Likelihood Ratio	1.477	2	.478
Linear-by-Linear Association	1.453	1	.228
N of Valid Cases	94		

All the results in tables 1 – 3 show that the value of the chi-square is not significant ($p > .05$). Therefore, there are no significant differences between the early and the late responses as regards the five variables listed above. It is therefore reasonable to assert that the characteristics of those who responded before the reminder and those who responded after the reminder are not different.

Reliability of the questionnaire was tested using the *Cronbach's alpha,* which is the most commonly used measure of questionnaire reliability (Field, 2005; Moser and Kalton, 1989; Bryman and Cramer, 2005). Only the variables relating to the co-operative environment and the internal environment were tested for their internal reliability. The results are shown in table 4 and table 5 below.

Table 4: Reliability Analysis of the Co-operative Environment Variables

Table 4 – 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.846	.846	7

Table 4 – 2: Inter-Item Correlation Matrix

	Princpls	MbCommit	Commnity	FairTrad	Communty	Prncples	FairTrde
Princpls	1.000	.389	.481	.504	.404	.527	.438
MbCommit	.389	1.000	.306	.369	.216	.479	.330
Commnity	.481	.306	1.000	.539	.537	.458	.553
FairTrad	.504	.369	.539	1.000	.694	.491	.467
Communty	.404	.216	.537	.694	1.000	.390	.358
Prncples	.527	.479	.458	.491	.390	1.000	.314
FairTrde	.438	.330	.553	.467	.358	.314	1.000

The covariance matrix is calculated and used in the analysis.

Table 4 – 3: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Princpls	10.08	12.062	.629	.412	.820
MbCommit	10.15	12.992	.463	.289	.845
Commnity	9.99	12.069	.665	.487	.815
FairTrad	10.17	11.895	.715	.594	.808
Communty	10.05	12.306	.589	.527	.826
Prncples	9.96	12.299	.607	.429	.824
FairTrde	10.08	12.431	.556	.381	.831

Table 5: Reliability Analysis of the Internal Environment Variables

Table 5 – 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.822	.823	7

Table 5 – 2: Inter-Item Correlation Matrix

	Fnancial	Physcal	Skills	Mgt	Training	DecsnMkg	CoopMgt
Fnancial	1.000	.794	.551	.112	.418	.125	.099
Physcal	.794	1.000	.576	.051	.404	.105	.077
Skills	.551	.576	1.000	.222	.727	.310	.256
Mgt	.112	.051	.222	1.000	.437	.744	.661
Training	.418	.404	.727	.437	1.000	.437	.423
DecsnMkg	.125	.105	.310	.744	.437	1.000	.864
CoopMgt	.099	.077	.256	.661	.423	.864	1.000

The covariance matrix is calculated and used in the analysis.

Table 5 – 3: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Fnancial	12.18	11.858	.484	.648	.813
Physcal	12.00	12.138	.466	.664	.815
Skills	12.05	11.374	.631	.643	.788
Mgt	11.62	11.653	.517	.591	.807
Training	11.86	11.073	.687	.620	.778
DecsnMkg	11.77	11.378	.616	.807	.790
CoopMgt	11.69	11.724	.563	.753	.799

The Cronbach's alpha for both the co-operative environment variables and the internal environment variables is greater than .8. Since the values of Cronbach's alpha between .7 and .8 indicate good reliability (Field, 2005; Moser and Kalton, 1989; Bryman and Cramer, 2005), it is reasonable to assert that the questionnaire used in this study is reliable.

4. Findings and Conclusions

The study sought to investigate the causal link between the job ownership structure and increased commitment and motivation in worker co-operatives. It first examined the extent to which members commitment and members participation helped in fostering the achievement of the worker co-operatives' objectives. As shown in table 6 below, members' commitment and participation were considered by the respondents as major strengths in achieving the organizations objectives. Since worker co-operatives are social capital based organizations, they draw their strengths from the multi-dimensional relationships with their members, commitment from the members and the direct participation by the members in both the benefits and the governance of the enterprise.

Table 6: Members commitment, participation and performance

	Major Strength (%)	**Minor Strength (%)**	**Not Strength (%)**	**Total (%)**
Members Commitment	61.1	22.1	16.8	100
Members Participation	57.3	25.2	17.6	100

A test was formulated to assess the association between the worker co-operatives' level of performance satisfaction and the extent of the members' commitment. Spearman's rank correlation, Chi-square and Cramer's V measures were used to test the association between the worker co-operatives' level of satisfaction and the extent of the members commitment. Table 7 below shows the outcome.

Table 7: Members Commitment and Performance Satisfaction

Table 7a: MbCommit * Satisfd Crosstabulation

		Satisfd			
		satisfd	Somewhat	Not	Total
MbCommit					
	MjrStrth	30	41	8	79
	MnrStrth	12	9	5	26
NotStrth	9	3	14	26	
Total		51	53	27	131

Table 7b: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	26.813(a)	4	.000	.000		
Likelihood Ratio	25.388	4	.000	.000		
Fisher's Exact Test	24.590			.000		
Linear-by-Linear Association	6.319(b)	1	.012	.013	.007	.003
N of Valid Cases	131					

Table 7c: Symmetric Measures

		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.	Exact Sig.
Nominal by Nominal	Phi	.452			.000	.000
	Cramer's V	.320			.000	.000
	Contingency Coefficient	.412			.000	.000
Interval by Interval	Pearson's R	.220	.095	2.567	.011(c)	.013
Ordinal by Ordinal	Spearman Correlation	.169	.097	1.952	.053(c)	.053
N of Valid Cases		131				

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Although Spearman's rho has an exact significance of .053 which is greater than the .05 level, the other four measures (Chi-square, Cramer's V, Phi, and Contingency coefficient) have a significance level of less than .05. It is therefore reasonable to conclude that there is a positive association between the worker co-operatives' level of satisfaction with performance and the level of the members commitment (Spearman's rho = .169, $p = .053$; Chi-square = 26.813, $p < .05$; Cramer's V = .320, $p < .05$). Phi coefficient and Contingency coefficient measures also support this conclusion (Phi = .452, $p < .05$ and Contingency coefficient = .412, $p < .05$).

It has been argued (Postlethwaite *et al*, 2005; Michie *et al*, 2002) that employee owned organizations have the ability to harness the true commitment and creativity of their employees. Employees' involvement and participation do increase commitment and motivation whereas the increased commitment and motivation in turn result in improved performance.

One of the worker co-operatives which attribute its excellent performance to the members' commitment and participation is the Tower Colliery[1] of South Wales in Britain. This co-operative was formed by the workers who opted for an employee buyout of the Tower colliery[1] after it was closed by the British Coal in April 1994. Tower Employment Buyout team (TEBO), a group selected by the workers successfully negotiated for the purchase of the mine which re-opened in 1995 as a worker co-operative. By 2005, the worker co-operative had nearly doubled its output that rose from 380,000 tonnes to about 650,000 tonnes. The turnover had also risen to about £26 million. The number of employees also increased from about 237 to 400 workers. "*The co-operative model of business, with its participative and democratic governance practices was credited for this success*", said an official of the worker co-operative.

A leader of another worker co-operative with satisfactory performance, SUMA wholefoods, in West Yorkshire, was also interviewed. The enterprise is a wholesaler and distributor of fair trade, organic and vegetarian foods whose turnover is about £21million. It has 120 employees. SUMA was started by one man in 1974 in Leeds and was converted and registered as a worker co-operative in 1977. A SUMA official (insisted to be referred to simply as worker) interviewed for this study believes that SUMA has "*grown consistently for thirty years in a fiercely competitive market by providing better service to the customers and better jobs to the workers*".

According to the official interviewed, there is no "boss" at SUMA because management decisions are taken as far as possible by democratic consensus. The General Meeting of all the members is held six times in a year and decides on business

[1] Information received at the time of this thesis submission is that Tower Colliery has closed down due to the depletion of coal deposits in their mines.

strategies, plans, and major policy decisions. A Management Committee of six people (with two places reserved for women) is elected by the General Meeting to implement its policies and decisions. The Management Committee then appoints the co-operative's executive officers who attend the management committee meetings on advisory capacity. "*The power therefore rests with the elected representatives (directors) and not with the executives*" concluded the official (worker).

Members' loyalty and commitment has also been given by a co-operative official as the main strength behind the success of Savant Enterprises Worker Co-operative. Savant was formed in 2001 in Carnforth, Lancashire to deal in software development and information technology consultancy. According to the co-operative's official, software development requires a great deal of team work and is a people-based business. He added that job-ownership model fosters this team culture and ensures that employees get recognition for their efforts. As a result of members' loyalty and commitment, staff turnover at Savant is very low. This results in a strong software development team whose skills and experience are continually growing. According to the co-operative official, the current structure and ownership at Savant is a two-way street. The co-operative gains commitment from the staff and encourage their involvement, while at the same time, the staff gain satisfaction and reward for their efforts. Savant counts excellent communication, employee empowerment and unparalleled commitment as the secret behind their success.

To establish whether the co-operative environmental factors correlate maximally with the level of performance satisfaction in the worker co-operatives, a multiple regression model was used in which all the co-operative environmental factors were utilized as predictors. The resultant regression analysis is shown in table 8 below.

Table 8: Regression Analysis – Co-operative Environmental Factors

Table 8a: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.598(a)	.358	.310	.625	.358	7.500	9	121	.000

a Predictors: (Constant), Alliance, Collbrtn, MbEductn, ComOwner, Commnity, MbCommit, Princpls, FairTrde, MbPtcptn

Table 8b: ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.357	9	2.929	7.500	.000(a)
	Residual	47.246	121	.390		
	Total	73.603	130			

a Predictors: (Constant), Alliance, Collbrtn, MbEductn, ComOwner, Commnity, MbCommit, Princpls, FairTrde, MbPtcptn

b Dependent Variable: Satisfd

Table 8c: Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	Constant	.667	.372		1.795	.075					
	ComOwner	.017	.078	.017	.220	.826	.074	.020	.016	.843	1.186
	Princpls	.304	.087	.318	3.503	.001	.490	.303	.255	.642	1.557
	MbCommit	-.201	.156	-.205	-1.288	.200	.178	-.116	-.094	.210	4.755
	MbPtcptn	.209	.159	.215	1.314	.191	.258	.119	.096	.199	5.022
	MbEductn	-.095	.080	-.093	-1.196	.234	.051	-.108	-.087	.874	1.145
	Commnity	.295	.090	.308	3.273	.001	.483	.285	.238	.601	1.665
	FairTrde	.105	.086	.115	1.229	.222	.386	.111	.089	.608	1.646
	Collbrtn	-.030	.079	-.029	-.375	.708	.122	-.034	-.027	.892	1.122
	Alliance	.069	.092	.059	.752	.453	-.049	.068	.055	.858	1.165

a Dependent Variable: Satisfd

The result shows that R, which is the multiple correlation coefficient between the predictors and the outcome is .598 while R^2, which is the measure of how much of the variability in the outcome is accounted for by the predictors is .358. This means that co-operative environmental factors account for 35.8% of the variation in the worker co-operatives' performance satisfaction.

Table 8a and Table 8b give the value of *F-ratio* as 7.500. They also indicate the value of *Sig. F Change* to be .000. This means that *p-value* = .000. Since the *F-ratio* is greater than 1 and the *p-value* < .05, the predictors make a significant contribution to predicting the outcome. Since *p-value* < .05, the *F-ratio* of 7.500 is significant and is not likely to have occurred by chance. Therefore, the co-operative environmental factors do

make a significant contribution to predicting the level of performance satisfaction in worker co-operatives.

Table 8c gives information on the *B* coefficients and the collinearity statistics. The *B* coefficients show the relationship between performance satisfaction and each predictor. Most of the VIF values are below 10 and most of the tolerance statistics values are above .2. However, the VIF values for *members' commitment* and for *members' participation* are significantly high. The collinearity statistics for *members' commitment* and for *members' participation* are, on the other hand, significantly low. This suggests that there could be collinearity within the data used and that there could be strong correlation between *members' commitment* and *members' participation* in the regression model used.

From the literature review, many writers (Postlethwaite *et al*, 2005; Michie *et al*, 2002) contend that employee owned organizations have the ability to harness the true commitment and creativity of their employees. It has also been argued that employees' involvement and participation do increase commitment which in turn results in increased productivity. In order to establish whether the factors related to employee-ownership correlate maximally with the level of performance satisfaction in the worker co-operatives, a regression analysis was carried out in which the factors related to employee-ownership were used as predictors. The outcome is shown in Table 9 below.

Table 9: Regression Analysis – Factors Related to Employee Ownership

Table 9a: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.352(a)	.124	.059	.730	.124	1.905	9	121	.057

a Predictors: (Constant), ExtnFund, WorkSati, EmpDiscp, EmplRela, DecsnMkg, InfoShar, StaffRec, EmplComt, EmplProd

Table 9b: ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.133	9	1.015	1.905	.057(a)
	Residual	64.470	121	.533		
	Total	73.603	130			

a Predictors: (Constant), ExtnFund, WorkSati, EmpDiscp, EmplRela, DecsnMkg, InfoShar, StaffRec, EmplComt, EmplProd

b Dependent Variable: Satisfd

Table 9c: Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	Constant	2.407	.362		6.641	.000					
	EmplProd	-.073	.138	-.066	-.526	.600	.054	-.048	-.045	.463	2.159
	EmplComt	-.121	.144	-.099	-.842	.401	.049	-.076	-.072	.528	1.893
	WorkSati	.331	.131	.291	2.534	.013	.221	.224	.216	.547	1.827
	EmplRela	-.135	.104	-.113	-1.297	.197	-.115	-.117	-.110	.957	1.045
	InfoShar	-.148	.094	-.147	-1.582	.116	-.207	-.142	-.135	.843	1.186
	DecsnMkg	-.073	.084	-.077	-.867	.388	-.164	-.079	-.074	.909	1.100
	EmpDiscp	-.043	.107	-.036	-.404	.687	-.082	-.037	-.034	.913	1.096
	StaffRec	-.002	.086	-.002	-.026	.979	-.070	-.002	-.002	.787	1.271
	ExtnFund	-.069	.086	-.076	-.801	.425	-.117	-.073	-.068	.801	1.249

a Dependent Variable: Satisfd

Table 9 shows that R, which is the multiple correlation coefficient between the predictors and the outcome is .352 while R^2, which is the measure of how much of the variability in the outcome is accounted for by the predictors is .124. This means that the factors related to employee-ownership account for 12.4% of the variation in the worker co-operatives' performance satisfaction.

Table 9c gives information on the *B* coefficients and the collinearity statistics. The *B* coefficients show the relationship between performance satisfaction and each predictor. It is also noted that the VIF values are all below 10 and the tolerance statistics values are all above .2. It can be concluded therefore that there is no collinearity within the data used and therefore there is no strong correlation between two or more predictors in the regression model used.

It has been shown (table 6) that successful worker co-operatives consider members' loyalty and members' commitment as the main secrets behind their satisfactory performance. Savant Enterprises in Lancashire, a software development worker co-operative, is very competitive in a technology-intensive sector due to the loyalty and commitment of its 32 member-workers. An official of the worker co-operative attributed their success to excellent communication, employee empowerment and unparalleled commitment from their members. Other successful worker co-

operatives also emphasize commitment and greater participation from all the member-workers. They involve their member-workers at all the levels of risk-taking, management, operations and added-value distribution. Members keep their commitments and reliably perform their duties if the worker co-operatives are made transparent by good communications and by structures and operations that members can see as designed around their own needs. Cohen and Prusak (2001) point out that transparency breeds trust and trust lowers contract, monitoring, and agency costs, effectively reducing the barriers between a worker co-operative and its members.

Stiglitz (2002) has pointed out that participation leads to commitment and commitment, in turn, leads to greater effort from workers. Worker co-operatives like Savant Enterprises have performed well because of the existence of both personal and collective incentive for greater effort. Since the workers own their own enterprise, they share directly in the success and the failure of the firm. This produces a strong personal incentive to be productive. It also leads to peer pressures on colleagues to do their part. The result is low labour turnover, low absenteeism and reduction in the need for supervision when compared to investor-owned firms. De-Miguel, Pindado and De-La-Torre (2004) concur that the value of an enterprise actually increases with insider ownership due to the convergence of interest between control and ownership. Members of worker co-operatives are brought together by common interests, experiences, goals, or tasks that imply regular communication and bonds characterized by some degree of trust and altruism.

The level of loyalty and commitment from the worker co-operative members will depend on the level of transparency that exists within the enterprise. Successful worker co-operatives in Britain, like Suma, Savant, and Tower colliery, have achieved meaningful transparency by educating and regularly informing their members about their co-operative's business, products and services, and financial results. A research study by Michie**,** *et al* (2002) which surveyed 53 employees of worker co-operatives also concluded that employee involvement and participation does increase employee commitment and motivation and that increased commitment and motivation results in increased productivity.

Another key finding in this study is the notion that a non-hierarchical management structure works for the worker co-operatives. The success of SUMA and the success of the other worker co-operatives described above (Tower Colliery, Unicorn, Savant, etc) confirm strongly that a non-hierarchical management structure based on the principles of democratic control actually works. It has been stated there is no "boss" at SUMA because management decisions are taken as far as possible by democratic consensus. Since the members collectively develop the policies that determine their worker co- operative's daily and long-term operation, trust, better communication and

co-operation become an integral part of the worker co-operative. These virtues are vital to the success of any worker co-operative.

The study also established that many worker co-operative members lack business management skills in the areas of decision-making, internal grievance procedures, marketing techniques and many other managerial techniques. The boards of directors / management committees are, in such cases, allowed the authority and responsibility for the day-to-day operations and decision making. However, in order to cultivate the members' trust, commitment, creativity and innovation, members are encouraged to proactively express their views on how the business ought to be run for their own benefit and they are also kept informed about what is happening within their business. Members are made to feel that their participation is welcome and that their views are respected.

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