

TEAM PERFORMANCE MEASUREMENT: LET'S REWARD TEAMWORK

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The appeal of team working has been of interest to behavioural management theorists since the 1930s but over the last decade the attractiveness of team concepts within the business community has experienced a renaissance. Traditional team philosophies consolidate the objective of the task with the well-being of the employee, part altruistic in its intent and tactical in its application. Today the objective is strategic, better performance - faster, delivering a corporate edge in a competitive, dynamic and fluid commercial environment. Whilst team working is advocated as a viable business opportunity present-day performance management principles align with a more orthodox, individualistic perspective of organisational wellbeing. The management and reward of team performance remains the exception rather than the rule, perpetuating a contradiction in action (team work) and HRM policy (the individual). Disparity between corporate structure and team ethos has the potential to frustrate the management of collaborative working practices upon which the construction sector relies. The research, in cooperation with three major UK contractors collated site project information related to both the team dynamic and corresponding project performance. Team attributes were assessed using attitude questionnaires issued to all permanent site team members. Project performance was measured by employing Kaplan and Norton's balanced scorecard framework in concurrence with seven carefully selected Key Performance Indicators taken from the Constructing Excellence suite of KPI's. The statistics disclose a significant level of confidence in the authenticity of the team - performance equation. The innovative capture of team - performance data and the resultant empirical evidence presents a rational argument for the implementation of a sound and organisationally transparent team related performance incentive. The potential for managing teams and rewarding their performance has never been more opportune and will in all probability support the pursuit of High Performance Cross-Functional Team (HPXfT) working in construction.

Keywords: construction, management, performance, rewards, teams.

INTRODUCTION

The theory and practice of team working is an enduring topic. Over the past decade construction firms have become receptive to the changing nature of management and organisational behaviour. The unremitting endorsement of 'best practice' and 'improved performance' via government sponsored schemes such as 'Constructing Excellence in the Built Environment' has resulted in construction managers becoming increasingly conscious of alternative methods of working, in some cases 'creatively swiped' from other industry sectors. Several commentators believe that "construction

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should not be regarded as any different from other industries and that what works for the automotive industry, for example, can equally work for construction,” (Egan 1998, Fowler 2006). In recent times the prime catalyst for progressing an enlightened outlook and accelerating the need for change was the government sponsored industry review of procurement and contractual arrangements in the UK construction industry, entitled ‘Constructing the Team’ by Sir Michael Latham (1994). This was followed-up four years later with a report from the construction taskforce entitled ‘Rethinking Construction’ by Sir John Egan (1998). Both reports as well as subsequent government initiatives (Construction Best Practice Programme, Movement 4 Innovation and Accelerating Change) have reiterated the belief that a central theme to the future success of the UK construction industry as a competitive global force of building excellence is ‘teamwork’. Sir Michael Latham (1994) in his foreword identifies the need to provide clients with high quality projects, “that requires better performance, but with fairness to all involved...it needs teamwork.” The mantra is continued with Egan (1998) reinforcing the need for better collaborative strategies and presents further endorsement of integrated team working philosophies. Better management of inter-company dependencies is absolute. A genuine commitment to team working can remodel organisational relationships that better transgress the short-term site environment representative of a project-based industry in to long-term strategic partnerships that will benefit both the client and the provider over several projects.

Research Rationale

The original premise of the construction research programme was to examine the assertion that ‘better performing teams produce better performing projects’. Katzenbach and Smith (1993) in their seminal team article “The Discipline of Teams” stated that “teams and good performance are inseparable; you cannot have one without the other.” The construction site team - project performance equation was explored by calculating perceived levels of team efficiency compared and contrasted against quantifiable indicators of project performance. Statistical analysis of the outcome demonstrates a significant level of association between the two management variables, teams and performance. Notwithstanding the empirical evidence supporting the notion of team-based working most organisations endorse a reward management ethos focused on the individual rather than the group. The line of reasoning is straightforward; companies promote teamwork and yet reward individuals. “Focusing on individual performance goals in such situations can undermine team spirit and cooperation,” (Storey and Sisson 2001).

TEAMS

Teams come in many guises but can be united with a common definition. “A team is a small number of people with complementary skills who are committed to a common purpose, set of performance goals, and approach for which they hold themselves mutually accountable,” (Katzenbach and Smith 1993). Today, teams are regarded as a fundamental feature of modern management theory and practice, (McCabe and Black 1997). Although, the corporate ideology supporting team working in today’s business environment differ from the philosophies first developed by the early behavioural scientists. Traditional approaches to team working matched the needs of the business more closely with the health and welfare of the employee, in essence part commerce and part altruistic. Contemporary team working is strategic, striving for economic efficiencies in a highly competitive market. Implying that the prime corporate

motivation for team working is profit, “the pay-off must be financial in the first instance,” (Cornick and Mather 1999).

PERFORMANCE MANAGEMENT

For Katzenbach and Smith (1993), the definitive characteristic that differentiated team work from any other socially inclusive working relationship is ‘performance’. The conventional corporate performance model has been preoccupied with evaluating historic company data where “performance indicators traditionally have concentrated on finances,” (Kagioglou *et al.* 2001). Modern performance management and measurement procedures adopt a more holistic outlook. The financial information is important but reflects a lagging viewpoint of performance attainment and needs to be offset with leading indicators that display the potential for predicting future corporate achievements. The Balanced Scorecard developed and advocated by Kaplan and Norton (1992), is a renowned present-day performance management framework. Comprising of four distinct business perspectives the balanced scorecard presents a ‘rounded’ approach to company performance appraisal, encapsulating both lagging and leading key performance indicators (KPI’s).

Reward Management of Teams

The maturity of performance management creates a unique opportunity to better manage team performance measurement. The concept of team rewards is not groundbreaking, numerous management articles advocate the need to match corporate compensation systems with team effort, (Caudron 1994, Thompson 1995). Today, the evidence suggests that in the majority of UK corporate management still endorse an individualistic approach to performance rewards, “relatively few organisations made specific arrangements for team performance management- it seems to us that performance management for teams deserves more attention,” (Armstrong and Baron 1998). The scope for developing the management and reward of team performance is realistic. The design of an innovative team – performance diagnostic toolkit permits the assessment of group efficiency to be compared alongside the measured accomplishment of the project.

METHODOLOGY: TEAM AND PERFORMANCE

Team Methodology

A fundamental ambition of the research methodology was to establish a framework for the capture of quantifiable performance measurement data for both the team and project that would facilitate statistical inquiry between the two variables. The preliminary idea was not to develop another team building course that would ‘guarantee’ high performance team working. The initial concept was to develop a diagnostic tool bag that would deconstruct the unique group / team synergy back to its elemental building blocks. This would permit investigation in to the current team status, eliciting the existing strengths and weaknesses of the group being studied and generate empirically founded information for management to select an appropriate curriculum of ‘team-building’ courses rather than the customary casual ‘management hunch’. For convenience and as a checklist for an encapsulating assessment criterion the selected variables were categorised under three broad contextual headings, Group Compatibility & Diversity, Organisational Context and Industry Context. The seven selected variables for the investigation of team ‘efficiency’ were: interdependency, membership diversity, team dynamics, trust, corporate intent, systems policies and

customs, culture. The appraisal format has two discreet measures, scope and depth. The range of variables gives breadth to the team evaluation whilst the individual variables provide an insight in to the micro-analysis of the group / team performance, collectively they will represent a team 'rating'.

Project Methodology

For the team deconstruction to be meaningful it was essential to compare the team 'rating' with a corresponding project performance 'measure'. A similar design was adopted for the measurement of performance as used for the team variable rating. The intention being that a holistic methodology could be utilised by embracing already established construction industry key performance indicators (KPI's). The indicators would assimilate a range of business categories commonly accepted within present-day performance management systems. Kaplan and Norton's Balanced Scorecard provided the prototypical template for the various perspectives of performance measurement whilst the KPI's endorsed by Constructing Excellence exposed an ideal opportunity to present the research findings in a format similar to current construction industry performance management practice. The successful measurement of project performance was critical for addressing the research question, do better performing teams lead to better performing project? If the answer is yes, then the resultant team – performance toolkit would have merit in that it could identify team virtues as well as shortcomings. Providing management with a team performance directory on which they could found their team management decisions. If the answer was no, then the results would contradict conventional team wisdom and challenge the authenticity of team working practice as a panacea for addressing corporate performance. Either way, the outcome would be noteworthy, advancing construction management understanding of team theory and practice within the built environment. By carefully selecting indicators from the Constructing Excellence Construction Industry KPI pack (2004) and mapping them on to the Kaplan and Norton Balanced Scorecard framework a customised suite of distinctly project related performance measures was established. The seven selected KPI's for the study of project performance were: predictability – construction cost, predictability – construction time, client satisfaction – service, client satisfaction – product, employee satisfaction, hours worked (per week) and training days (per year). The resultant project performance model aligned with contemporary performance management ideals and exploits both lagging and leading categories of indicator. Creating a unique multi-dimensional project performance model specific to site management team efficiency and effectiveness i.e. team working.

CASE-STUDY

The case-study and data collection phase of the research project was carried out between June 2004 and April 2005. The research data compilation involved the cooperation of three major UK construction contractors (company B, C, and D) and the participation of thirteen individual construction project case-studies. The initial pilot case-study (company A) has been excluded due to the experimental nature of the developing research methodology. In total eighty two research questionnaires were completed. This included fifty six 'Team Member' questionnaires, thirteen 'Team Leader' questionnaires and thirteen 'Client / Client Representative' questionnaires. The response rate for 'Team Member' questionnaires was just under 96%, three team questionnaires were returned uncompleted or partially completed. The response rate

for both 'Team Leader' questionnaires and 'Client / Client Representative' questionnaire was 100%.

RESULTS

Table 1

Rank	Project No.	Team Rating	Project Performance
1 st .	Project C/1	80% (rank 1 st .)	70% (rank 2 nd .)
2 nd .	Project D/4	79% (rank 2 nd .)	74% (rank 1 st .)
3 rd .	Project C/2	77% (rank 3 rd .)	59% (rank 5 th .)
4 th .	Project D/2	77% (rank 3 rd .)	42% (rank 10 th .)
5 th .	Project D/3	76% (rank 5 th .)	63% (rank 3 rd .)
6 th .	Project B/5	74% (rank 6 th .)	61% (rank 4 th .)
7 th .	Project B/1	72% (rank 7 th .)	54% (rank 7 th .)
8 th .	Project D/1	72% (rank 7 th .)	40% (rank 11 th .)
9 th .	Project D/5	70% (rank 9 th .)	59% (rank 5 th .)
10 th .	Project B/4	70% (rank 9 th .)	43% (rank 9 th .)
11 th .	Project C/3	69% (rank 11 th .)	39% (rank 12 th .)
12 th .	Project B/2	68% (rank 12 th .)	48% (rank 8 th .)
13 th .	Project B/3	62% (rank 13 th .)	29% (rank 13 th .)

The research results for both 'Team Rating' and 'Project Performance' have been ranked in order of merit. Table 1 is based on the mean construction site team rating (highest first), with the corresponding project performance.

Strength of Relationship

Pearson's Correlation Coefficient	+0.80	Strong
Spearman Rank Correlation Coefficient	+0.70	Moderate / Strong

ANALYSIS

A number of statistical investigations were undertaken, assessing various combinations of organised research data to ascertain the relevance of the results. The majority of the outcomes substantiated, with a significant level of confidence the notion that better performing teams invariably produce better performing projects. The participating construction companies disclosed unique corporate characteristics that produced a slightly dissimilar set of results. For example, both company B and C exhibited very strong positive levels of correlation between team rating values and corresponding project performance scores, +0.80 and +1.00, respectively. Whereas, Pearson's correlation coefficient for company D was more muted, recording a value of +0.40 (weak to moderate). Taking in to account the thirteen individual case-studies the mean values for team rating and project performance produce a Pearson's correlation coefficient of +0.80 (strong). This demonstrates a discernible relationship between the two principal constituents. A Spearman Rank Correlation coefficient calculated at +0.70 (moderate / strong) supports the initial findings. It may therefore be concluded that despite slight discrepancies between individual company profiles the inclusive resultant empirical evidence supports the widely acknowledged belief that there is a considerable degree of association between the level of team efficiency and the probability of project success.

DISCUSSION

The case-study findings concur with the majority of mainstream team management literature and in particular validate within a construction setting, the frequently cited assertion by Katzenbach and Smith (1993) that what distinguishes a team from any other form of collaborative alliance is the level of performance achieved. The team – performance diagnostic toolkit successfully deconstructs the team synergy in to ‘convenient’ parts that can then be isolated and managed. In essence the diagnostic toolkit offers construction project leaders a team-building ‘roadmap’ designed to challenge specific aspects of ailing group / team work. The integrated team framework would compliment the strategic intent for improved overall corporate performance. From the comprehensive set of case-study results different team performance trends can be identified. Team variables such as ‘Interdependency’ and ‘Team Dynamics’ rate highly whereas ‘Corporate Intent’ across all three companies records lower than average team ratings. Further discussion spotlights on the probable reasons for corporate intent being consistently rated the lowest of the seven variables (based on a cross-project mean) and the importance of organisational fit between corporate strategy, organisational policy and project team management.

Communicating Corporate Intent

The problem with corporate intent is primarily a breakdown in communication between the parent organisation (senior management) and project site teams (construction professionals). In terms of corporate homogeneity and organisational compatibility an apparent mismatch between business strategy and company procedure can create mixed messages. “As an example of such a mismatch... firms starting to use cross-functional teams, often keep their bureaucratic measurement and payment systems,” (Lindkvist 2004). Addressing the disparity between the team ethos and individual remuneration may reaffirm corporate intention for employing and sponsoring collaborative working practices. Motivating group unity via a team reward system will also reinforce the need for a common agenda, promote team working and “may also be more effective in making the link between the individual team member and the wider concerns of both the team and the organisation as a whole.” (Thompson 1995). In other words “compensation is not just about money...it’s about communication,” (Caudron 1994).

Reward Management

“The greatest single obstacle to the success of today’s organisations is the giant mismatch between the behaviour we need and the behaviour we reward,” (LeBoeuf 1985). With respect to team management “the aim of team reward processes is to reinforce the behaviours that lead to and sustain effective team work,” (Armstrong 2000). To date team reward management appears to have received only limited interest. This is unexpected given that “rewarding teamwork will support a paradigm of collaboration, enabling full utilisation of people’s talents,” (Logan 1995). In 1995 the Institute for Employment Studies published a report on ‘Team Working and Pay’ as a direct response to the increasing number of companies adopting team working practices. The report concluded that “it would appear that the practice of team pay that is emerging in the UK is still firmly rooted in individualised pay systems, and is being shaped by these pay structures. In many ways it is a ‘pseudo team pay’ where the fiction of teams’ is being created before the reality of team working actually exists,” (Thompson 1995). Over a decade later the actuality appears to remain little changed although the acceptance of contemporary business theory has created capacity for

future development. Whilst team working is advocated as a viable business opportunity present-day performance management principles align with an orthodox, individualistic perspective of organisational wellbeing. The management and reward of team performance remains the exception rather than the rule, perpetuating a contradiction in strategy (team work) and HRM tactics (the individual). Michael Armstrong (2004), in his book 'Employee Reward' augments earlier observations on team performance management and remuneration by stating that "team pay as a means of improving team performance does appear to promise much...but relatively few organisations seem to believe that it is relevant to them or that it will achieve its promise." For an industry profoundly reliant on collaborative arrangements, the implementation of a 'team – performance diagnostic toolkit' has the potential to directly link team pay with project performance. A team management reward framework may be pioneering for construction companies wishing to escape the team metaphor in exchange for 'real' team working. Interestingly for construction site management teams the concept of team related pay is probably the least burdensome to put into practice. "In many ways, a temporary team's performance is the easiest to reward. Objectives are usually very clear, often measurable and the time period for performance is understood by all concerned. For example...construction teams responsible for design and build projects, have clear deadlines and various stages of the work can be broken down, measured and set within a timeframe," (Thompson 1995).

Team Performance Pay

"Expectancy theory carries the clear implication that if a system is to promote effort leading to superior performance, people must feel confident that by adjusting their behaviour they will be able to affect the performance measures which have been established," (Mabey *et al.* 1998). Much of cotemporary motivational thinking concentrates on the individual yet business literature increasingly places emphasis on team working philosophies. The contention is a simple one. Company structure endorses the need for team working and whilst corporate language aligns with the team working ethos the familiar reality is that the hard model of HRM policy and fiscal control remains prevalent. Most construction organisations have incentive schemes in place for individuals but in line with most UK companies appear to make minimum effort to reward team working. Research findings verify the lack of team-based remuneration. The majority of team members questioned felt that there was little or no explicit corporate policy linking individual pay to the combined efforts of the team. In response to the questionnaire statement "the company has an explicit policy for linking recognition and rewards to team performance," only 3% of respondents felt confident that this was "completely true". "Focusing on individual performance goals in such situations can undermine team spirit and cooperation. At the very least, employees may focus their attention on individual targets (especially if they are artificially contrived for the pay system) at the expense of the performance of the unit. Even so, there currently appears to be a widespread insistence on having individual performance related pay – come what may," (Storey and Sisson 2001). The motivation for the resolution of organisational misfit between collectivism and individualism resides with senior management and their rationale for future corporate success.

CONCLUSION

Taking in to consideration the complexity of behavioural studies in a team setting, the risk of research contamination from the simple act of being observed (the Hawthorne effect) and the provisional characteristic of the construction site team, the research findings are a notable achievement. The research programme has derived from first principles a pioneering procedure for detecting characteristics of functional and in some cases dysfunctional construction site management team working. The team performance diagnostic toolkit is not another team building programme, on the contrary the results present management with a roadmap for the potential enhancement of construction site management teams. From the team – performance data project leaders can select the appropriate curriculum of existing ‘team-building’ models, tailored to address ailing facets of team efficiency. The ability to identify and challenge specific aspects of team building provides scope for future developments within the team management theme, namely team reward management and team performance related pay. Not a new topic but frequently rejected in favour of an orthodox, individualistic approach to managing people albeit in a team setting. The contradiction between the behaviour management wish and the behaviour they reward may subvert the corporate desire for real team working. To summarise, the study examined the potency of team synergy within an industry that often conspires to undermine team working philosophies. Regardless of the short-term timeframes, transient team members and dynamic business environment it is satisfying to conclude that the outcome of the underlying research premise is unequivocal – ‘the construction team works’.

Future Study

The two distinctive management themes central to this research programme namely teams and performance appear to be inextricably linked yet rarely acknowledged in terms of team measurement and reward. Further refinement of the team rating – project performance appraisal toolkit linked to the development and implementation of a team performance remuneration scheme would appear to be a logical and challenging direction for the future study of team working in the construction industry.

ACKNOWLEDGEMENTS

The author would like to thank the construction companies for their co-operation and in particular, the Project Managers and their site team(s) for participating in this research project. Their time and contribution is greatly appreciated.

REFERENCES

- Armstrong, M (2004) *Employee Reward* Chartered Institute of Personnel and Development, 3ed.
- Armstrong, M (2000) *Rewarding Teams* Chartered Institute of Personnel and Development – Good Practice.
- Armstrong, M and Baron, A (1998) *Performance Management – the new realities*. Institute of Personnel Development.
- Caudron, S (1994) *Tie Individual Pay to Team Success* Personnel Journal, October, 40–46.
- Constructing Excellence (2004) *KPI Pack 2004* London DTi.

- Cornick, T and Mather, J (1999) *Construction project teams: making them work profitably* Thomas Telford Publishing Ltd.
- Egan, J (1998) *Rethinking Construction* HMSO, London.
- Fowler, N (2006) One Man's Meat. *Construction Manager*, April, 17–18.
- Kagioglou, M, Cooper, R and Aouad, G (2001) Performance Management in construction: a conceptual framework *Construction Management and Economics*, **19**, 85-95.
- Kaplan, R S and Norton, D P (1992) The balanced scorecard – Measures that drive performance *Harvard Business Review*, Jan / Feb. 71–79.
- Katzenbach, J and Smith, D (1993) The Discipline of Teams. *Harvard Business Review*, March / April, 111–120.
- Latham, M (1994) *Constructing the Team* HMSO.
- LeBoeuf, M (1985) *The Greatest Management Principle in the World*. Berkley Books, New York.
- Lindkvist, L (2004) Governing Project-based Firms: Promoting market-like Processes within Hierarchies *Journal of Management and Governance*, **8**, 3–25.
- Logan, L (1995) A Natural Synergy *Team Performance Management an International Journal*, **1**(1), 12–17.
- McCabe, D and Black, J (1997) Something's gotta give: trade unions and the road to team working. *Employee Relations*, **19**(2), 110–127.
- Mabey, C, Salaman, G and Storey, J (1998) *Human Resource Management – A Strategic Introduction*. Blackwell Publishing.
- Storey, J and Sisson, K (2001) Performance-related Pay. *Strategic Human Resource Management* edited by Mabey, C., Salaman, G. and Storey, J. SAGE Publications. 144–151.
- Thompson, M (1995) *Team Working and Pay* The Institute for Employment Studies, Report 281.