

## **GOAL-SETTING PARTICIPATION AND GOAL COMMITMENT: EXAMINING THE MEDIATING ROLES OF PROCEDURAL FAIRNESS AND INTERPERSONAL TRUST IN A UK FINANCIAL SERVICES ORGANISATION**

### **Abstract**

This study investigates whether participation in goal-setting within performance measurement and evaluation processes affects goal commitment and if so, whether the effect is mediated by procedural fairness and interpersonal trust. Using a sample of 54 managers within a UK financial services organisation, this study finds that participation in goal-setting is positively associated with goal commitment. Further analysis arising from introducing procedural fairness and interpersonal trust as mediating variables reveals that the association is significantly mediated by procedural fairness. Overall, these findings offer empirical evidence on the importance of procedural fairness on the relationship between participation and goal commitment.

Keywords: Fairness; Goal commitment; Goal-setting participation; Trust

# **GOAL-SETTING PARTICIPATION AND GOAL COMMITMENT: EXAMINING THE MEDIATING ROLES OF PROCEDURAL FAIRNESS AND INTERPERSONAL TRUST IN A UK FINANCIAL SERVICES ORGANISATION**

## **1. Introduction**

The attitudinal and behavioural effects of participative decision-making in organisations, and more specifically, the degree of involvement and influence managers have in setting their budgets, have attracted research attention for over fifty years. The extant literature suggests that participative budgeting has positive behavioural consequences resulting from greater goal clarity, perceived relevance, information exchange, trust in superior, and perceived procedural fairness, and reduced role ambiguity and job-related tension (for a recent review, see Derfuss, 2009). However, the empirical findings are not always consistent, suggesting that the effect of budgetary participation on managers' attitudes and behaviour is not simple, but frequently moderated and/or mediated by various other variables (Lau and Tan, 2006).

One motivation of this paper is to replicate and extend research by Wentzel (2002). Wentzel found that the relationship between budgetary participation and goal commitment is mediated by fairness perceptions. Whilst her study has advanced our understanding of the process by which participation affects goal commitment, some issues merit further investigation. First, Wentzel investigates a US urban hospital experiencing downsizing, but it is not clear whether her findings are generalisable to other contexts and industry sectors. Wentzel acknowledges this: "...the question of whether fairness perceptions are also salient during time of growth and expansion remains unaddressed" (p. 266) and "... additional research is still needed to extend the generalisability of the findings." (pp. 265-266). The first objective of our paper,

therefore, is to examine whether Wentzel's (2002) findings are generalisable to a very different setting, namely, a cross-section of managers in a fast-growing, performance-driven UK-based financial services organisation.

Not only is the sample very different in terms of industry sector and the organisation's financial situation, but the context also differs in terms of the performance measurement system. Our investigation considers participation in relation to both financial and non-financial measures within a performance measurement and evaluation system, and is not restricted to a budgeting context with its strong financial focus. This is particularly important because, arguably, perceived fairness and trust may be enhanced where goals, evaluation and feedback are viewed in a more comprehensive and strategically integrated manner, and where a broader spectrum of performance can be measured. Examples of such are found in balanced scorecard-type approaches (Lau and Moser, 2008). Participation in setting goals relating to long-term viability in such areas as investment in innovation may be very different to the annual budgeting process. If broadly similar results to Wentzel are forthcoming in such contrasting contexts, the case for generalisability of findings will be considerably strengthened. Lindsay and Ehrenberg (1993) emphasise the importance of this kind of research "...not merely to validate one's findings, but more importantly, to establish the increasing range of radically different conditions under which the findings hold, and the predictable exceptions" (p. 217). This is particularly relevant to research relating to fairness and justice. Leung (2005) notes that while there is "a universal concern of justice.... [this] does not mean that all justice effects are necessarily generalisable ..." (p. 557, parenthesis added).

Secondly, while Wentzel (2002) examined the indirect effect of participation on goal commitment, she did not examine whether there is also a direct effect of participation on goal commitment. Hence, it is not clear whether the mediating effect of fairness on the relationship between participation and goal commitment is a *partial* or *full* mediation. The distinction between full and partial mediation is important with different theoretical and practical implications (Baron and Keney, 1985). Consequently, in addition to examining the indirect effect, our study examines the direct effect of participation on goal commitment. Thirdly, Wentzel considers only fairness perception as the mediating variable in the relationship between participation and goal commitment. The literature (e.g. Locke et al., 1988; Oldham, 1975; Gescheidle, 1989; Lau and Buckland, 2001; Lau and Tan, 2006; Maiga and Jacobs, 2007) suggests that trust may also mediate the relationship between participation and goal commitment. Lau and Buckland (2001) and Lau and Tan (2006) found that budgetary participation is associated with trust while Locke et al. (1988), Oldham (1975), Gescheidle (1989) and Maiga and Jacobs (2007) found that trust is associated with goal commitment. Therefore, we include trust in our study to examine whether it also mediates the relationship between participation and goal commitment. Another reason to include trust as the mediating variable in our model is because previous studies (e.g. Lau and Sholihin, 2005; Sholihin and Pike, 2009) found that trust is associated with procedural fairness.

A second relevant study that this paper seeks to replicate and extend is that of Lau and Tan (2006). They examined whether procedural fairness and trust mediate the relationship between budgetary participation and job-related tension. Using a sample of 152 managers, they found that procedural fairness and trust together have a full mediation

effect on the relationship between budgetary participation and job-related tension. However, their sample was derived from functional heads (i.e. heads of management functions) in the Singaporean manufacturing sector. In addition, they did not have sufficient responses to explore variation within firms. It is not clear whether the important roles of procedural fairness and trust are generalisable to performance measurement systems at all management levels, across different countries and sectors using goal commitment rather than job-related tension as the outcome variable. The choice of an organisation within the financial services sector is justified in that this sector represents a major element of the UK economy but was not investigated by Wentzel or Lau and Tan. Arguably, managers in financial services institutions are more focused on and familiar with financial information and measurement than either the medical services or manufacturing sectors, which may affect the relationship between participation in setting financial and non-financial goals and goal commitment.

This paper's main contributions are that it (1) explores similarities between our study and Wentzel (2002) and Lau and Tan (2006), and (2) extends these two studies to broader performance measurement and evaluation processes. It offers a partial replication of Wentzel (2002) and Lau and Tan (2006) which, if the hypotheses hold, permits further generalisation. It extends Wentzel's findings by focusing on the performance measurement and evaluation process rather than the narrower budgeting context, and by examining the direct and indirect effects of participation on goal commitment. It extends Lau and Tan by considering fairness and trust as mediating variables on the relationship between participation and goal commitment rather than job-related tension. Goal commitment is an important motivational construct in goal-setting theory which

postulates that specific, difficult but attainable goals lead to higher performance. However, this effect is contingent on goal commitment (Locke and Latham, 1990; Locke and Latham, 2002; Locke, Latham, and Erez, 1988). Locke et al. (1988, p. 23), for example, contend, “it is virtually axiomatic that if there is no commitment to goals, the goal-setting does not work.” Additionally, extensive studies have consistently identified goal commitment as an important variable in enhancing performance. In a meta-analysis, Klein, Wesson, Hollenbeck, and Alge (1999) found a positive correlation between goal commitment and performance and argued that: “If goal commitment has performance consequences... then attention must also be directed at factors that affect goal commitment” (p. 887).

Our final contribution is seen in the comprehensive nature of the study. While many of the individual hypotheses explored in this paper find support in previous studies, they have not been investigated in a combined single study and considered within a performance measurement and evaluation framework.

The model employed in our study is depicted in figure 1.

### **INSERT FIGURE 1 ABOUT HERE**

Drawing on a sample of 54 managers within a UK financial services organisation, this study finds that goal-setting participation is positively associated with goal commitment. Further analysis arising from introducing procedural fairness and interpersonal trust as mediating variables reveals that the direct effect of goal-setting

participation on goal commitment becomes insignificant. These results suggest that the effect of participation on goal commitment is indirect.

The remainder of the paper is organised as follows. The next section (section 2) will present the relevant literature and hypotheses. This will be followed by the research method in section 3 and analysis, results, and discussion in section 4. The last section (section 5) provides conclusions, limitations and suggestions for future research.

## **2. Literature review and hypotheses**

### *2.1. Participation and goal commitment*

In this study, goal-setting participation refers to the extent to which managers participate in setting their performance goals both financial (budget) and nonfinancial goals. Goal commitment refers to “attachment to or determination to reach a goal” (Locke and Latham, 1990, p. 125) and “willingness to put effort to attain a goal” (Renn, Danehower, Swiercz, and Icenogle, 1999, p. 108). Goal-setting theory suggests that participation may induce goal commitment (Locke, 1968; Locke et al., 1988). Chong and Chong (2002) argue that the opportunity to get involved in and have influence on the process of setting goals increases subordinates’ feeling of control and involvement over the decisions made which may increase the subordinates’ commitment to the goals. Goal theory argues that participation is able to make goals more important to the individual by creating a greater sense of ownership (Locke and Latham, 2002). Prior empirical budgeting studies (for example, Chong and Chong, 2002) confirm that participation is positively associated with goal commitment. We therefore expect that participation is positively associated with goal commitment.

H1: Goal-setting participation is positively associated with goal commitment

## *2.2. Participation and procedural fairness*

The second hypothesis examines the relationship between participation and procedural fairness (Link Part-PF). Procedural fairness can be conceptualised as the judgements on the fairness of those social norms which deal with how decisions are made and how individuals are treated by authorities and other parties (Lind and Tyler, 1988). However, in this study we adopt Folger and Konovsky's (1989) definition of procedural fairness, namely, the perceived fairness of the means and procedures used to determine the amount of reward or compensation the employees receive (i.e. the fairness of all aspects of the organisation's procedures that are used by the superior to evaluate the subordinates' performance, to communicate performance feedback and to determine the subordinates' rewards such as promotion and pay increases).

The concept of procedural fairness was initially developed by Thibaut and Walker (1975; 1978) mainly based on research findings in a legal setting, and primarily deals with the effects of "control" in dispute resolution. Leventhal (1980), however, argued that procedural fairness is an important determinant of perceived fairness not only in legal settings, but also in the context of almost any allocation decisions. He proposed six justice characteristics, or rules, which can be used to evaluate the fairness of allocative procedures. The consistency rule states that to be fair a procedure must be applied consistently across persons and across time. This implies that all parties have the same rights under the procedures and are treated similarly, and that the procedure is enacted the same way each time it is used. The bias-suppression rule stipulates that procedures are fair if the decision maker does not have a vested interest in any specific decision, and if



the decision maker is not influenced by prior beliefs. The accuracy rule states that to be fair procedures should be based on as much good information and informed opinion as possible, while the correctability rule states that opportunities must exist to modify and reverse decisions made. The representativeness rule stipulates that “all phases of the allocative process must reflect the basic concerns, values, and outlook of important subgroups in the population of individual affected by the allocative process” (Leventhal, 1980, p.44-45). This rule is closely related to power sharing and participatory decision making. Finally, the ethicality rule states that to be fair, procedures must be compatible with fundamental moral and ethical values.

Most of the above requirements for procedural fairness can be promoted through participation in goal-setting. For example, participation is consistent with the representativeness, correctability, accuracy and bias-suppression characteristics in that it permits subordinates to reflect their concerns and values, gives opportunity to modify decisions, can be used as a way to share information, and provides opportunity for subordinate managers to correct any inappropriate prior beliefs held by their superiors. It is therefore reasonable to propose that participation is positively associated with procedural fairness. Additionally, Lind and Tyler (1988, p. 236) argue that “the opportunity to exercise voice (participation) constitutes a visible marker of group membership . . . mute procedures are seen as . . . unjust because they appear to deny full membership rights to those denied voice” (parenthesis added). Similarly, Early and Kanfer (1985) argue that since participation gives opportunity for input, it provides the individual with perceived mastery or control over a situation; thus participation may enhance perceived fairness. Empirically, Libby (1999), Wentzel (2002), and Lau and Tan

(2006) found that participation is positively associated with perceived procedural fairness. This study therefore argues that there is a positive association between participation in setting goals and procedural fairness.

H2: Goal-setting participation is positively associated with procedural fairness.

### *2.3. Procedural fairness and goal commitment*

The third hypothesis examines the relationship between procedural fairness and goal commitment (Link PF-GC). The organisational justice literature indicates that procedural justice judgments play a major role in influencing attitudes and behaviour (Lind and Tyler, 1988; Colquitt, Conlon, Wesson, Porter, and Ng, 2001) including commitment. For example, in an experimental study, Earley and Lind (1987) found a significant association between procedural justice and task commitment. Additionally, in a team setting, Korsgaard et al. (1995) found that commitment to strategic decisions is higher when the team members perceive the process as fair. However, whilst prior empirical evidence in the organisational justice literature suggests that fairness plays a role in individuals' commitment levels, the relationship between procedural fairness and *goal* commitment has not been extensively studied (Wentzel, 2002), although far more research has been conducted on the relationship between procedural fairness and *organisational* commitment (for a review see Colquitt et al., 2001). In this regard, Lind and Tyler (1988) conclude that "To the extent that group procedures are fair, evaluation of the group and commitment and loyalty to the group will increase." (p. 232).

Earley and Kanfer (1985), however, argue that perceived fairness may enhance goal commitment. The reason why perceived fairness may enhance goal commitment is explained by Wentzel (2002) as follows,

“when individuals perceive that decisions are based on fair processes, they should be more likely to commit to a goal because they either believe the decision outcome is in line with their own self-interests (i.e., instrumental perspective) or because their compliance affirms their group membership (i.e., relational perspective)” (p. 252).

Wenzel (2002) and Maiga and Jacobs (2007) found empirical support for this contention. The following hypothesis will be therefore tested.

H3: Procedural fairness is positively associated with goal commitment.

#### *2.4. Participation and trust*

We conceptualise trust as interpersonal trust, defined by Read (1962, p. 8) as “subordinate’s trust or confidence in the superior’s motives and intentions with respect to matters relevant to the subordinate’s career and status in the organization.” This conceptualisation is consistent with previous accounting studies which examined trust in the context of superior-subordinate relationships and performance evaluation (e.g. Hopwood, 1972; Otley, 1978; Ross, 1994; Lau and Sholihin, 2005), and thus facilitates comparison with these prior studies. Moreover, since the variables studied are all within the organisation, and goal commitment as the dependent variable is person specific, the concept of trust as the interpersonal trust subordinates have in their superior (supervisor), is particularly relevant (Lau and Tan, 2006).

Read (1962) notes that trusting subordinates expect their interests to be protected and promoted by their superiors, feel confident about disclosing negative personal information, feel assured of full and frank information sharing, and are prepared to overlook apparent breaches of the trust relationships. Whitener et al. (1998) argue that a necessary foundation to increase trust in a supervisor is for the superior to engage in trustworthy behaviour with the following characteristics: (1) consistency across time and

situations, which reflects the reliability and predictability of actions; (2) integrity, which refers to the consistency between a manager's words and actions; (3) sharing and delegation of control, such as participation in decision making; (4) communication, which suggests an open exchange of ideas drawing on reliable, adequately explained information; and (5) demonstration of concern (benevolence) by showing consideration and sensitivity for subordinates' needs, acting in a way that protects the subordinates' interests, and refraining from exploiting others. Consistent with Whitener et al. (1998), Shield and Shield (1998, p. 59) argue that participation increases "a subordinate's *trust*, sense of control, and ego-involvement with the organization" (emphasis added). Empirical budgetary participation research (e.g. Lau and Buckland, 2001; Lau and Tan, 2006) suggests that participation is positively associated with trust. We therefore expect that participation in setting targets will lead to higher interpersonal trust.

H4: Goal-setting participation is positively associated with interpersonal trust.

### *2.5. Trust and goal commitment*

As previously mentioned, trust is conceptualised as interpersonal trust (i.e. trust subordinates have in their superior). With this type of trust subordinates expect their superiors to act supportively and benevolently, protecting and promoting their interests and showing consideration and sensitivity to their needs (Read, 1962; Whitener et al., 1998). The goal-setting theory literature suggests that trust in a superior is an important determinant of goal commitment (Locke et al., 1988). The possible reason is that, as argued by Zand (1997), people who trust each other can synchronise, help each other and work together constructively. Further, he contends that trusting behaviour can improve

decision quality and its implementation which, in turn, is able to increase problem solving effectiveness and *commitment*.

Empirically Oldham (1975) and Gescheidle (1989) found trust to be significantly associated with goal commitment. More recently and in a budgeting context, Maiga and Jacobs (2007) also found that trust in superiors positively affects goal commitment.

H5: Trust is positively associated with goal commitment.

## 2.6. *Procedural fairness and trust*

The extant literature shows that procedural fairness has a positive effect on trust (Alexander and Ruderman, 1987; Folger and Konovsky, 1989; Konovsky and Pugh, 1994). Alexander and Ruderman (1987) found that procedural fairness significantly affects job satisfaction, evaluation of supervisor, conflict/harmony, trust in management, and turnover intention among US government employees. Using samples of employees from a US financial services organisation, Folger and Konovsky (1989) found that procedural fairness positively affects employee trust in supervisors. Similar results were found by Konovsky and Pugh (1994) using a sample of hospital employees.

The positive association between procedural fairness and trust is also reported in management accounting studies (Lau, Wong, and Eggleton, 2008; Magner and Welker, 1994; Staley and Magner, 2006; Lau and Sholihin, 2005; Lau and Tan, 2006). Magner and Welker (1994) found that procedural fairness in budgetary resource allocation was positively associated with trust in superiors. Drawing on a survey of U.S. Federal government managers, Staley and Magner (2006) found that procedural fairness positively affects trust in superiors. Lau and Sholihin (2005) and Lau and Tan (2006) also found a positive association between procedural fairness and trust using samples of

managers drawn from Indonesian and Singaporean manufacturing companies, respectively. In an Australian study of health service managers, Lau et al. (2008) found that procedural fairness positively affects trust. Finally, a recent study by Hartmann and Slapnicar (2009) using a sample of departmental managers of Slovenian commercial banks also reported a positive association between procedural fairness and trust. Therefore, we expect that procedural fairness is positively associated with trust.

H6: Procedural fairness is positively associated with trust.

### **3. Method**

#### *3.1. Research setting and sample*

To test the hypotheses, we derived our sample from a major UK financial services organisation. This organisation had made considerable effort in developing an effective performance measurement, evaluation and reward system, and was currently assessing how it could further encourage a positive and supporting culture by clarifying the organisation's purpose and mission and improving the process of behavioural change. Better alignment between organisational and personal goals were sought through (1) *intrinsic* motivation, whereby managers internalise the organisation's values and objectives through training programmes and various forms of communication, and (2) extrinsic motivation through the performance measurement, evaluation and reward system, where explicit personal and team objectives are aligned with incentives and rewards based on target attainment. The research objectives of our study were therefore very relevant to the organisation which had for some time been gathering data from managers relating to their understanding of the organisation's mission, beliefs and values,

performance feedback, encouragement to participate, perceived interpersonal trust, and organisational commitment.

After obtaining senior management permission to conduct the independent research study, a sample of 102 suitable managers<sup>1</sup> was devised and questionnaires were distributed to them together with a covering page explaining the purpose of the study and assuring data confidentiality. To ensure that the respondents understood the performance evaluation system within the organisation, the sample selection criteria required respondents to have managerial responsibility, and to have participated in the last performance evaluation review and received performance feedback. The survey instrument was sent to respondents through the organisation's internal mailing system but responses were sent directly to the researchers. Of the 102 questionnaires distributed, 55 were returned. Examination of responses revealed that 1 response was not sufficiently complete to be usable, yielding a total of 54 usable responses, giving a high effective response rate of 53%.<sup>2</sup> Tests conducted on early and late respondents revealed that non-

<sup>1</sup> Although the sample drawn was not random, it was regarded as reasonably representative of the managers in the organisation and no obvious bias was detected (we tested whether there are differences in responses among managers based on their functions).

<sup>2</sup> We recognise that a sample of 54 is relatively small. Therefore, it is particularly important to ascertain there are no outliers in our study as they can have large effects on the statistical analysis. As suggested by Hair et al. (2006), we address this issue using the Mahalanobis  $D^2$  measure. The results indicated no potential outlier.

response bias was not a problem.<sup>3</sup> In addition to the survey, interview discussions were conducted with 20 managers involved in the survey to ensure the reliability of the survey responses and to gain a better understanding of managers' perceptions of the fairness of the performance measurement and evaluation reward system.

A demographic analysis of respondents revealed that the average number of employees respondents directly manage is 7 (range 1 to 60), they had worked in the organisation, on average, for 5.6 years (range 1-19 years), and in their current position on average for 2.7 years (range 1-8 years), being supervised by their current superior for 2.6 years on average (range 1-8 years). Most management functions were represented. The main categories were sales and marketing, operations, and accounting and finance. Other functions were change management, business improvement, fraud and anti-money laundering prevention and detection. Most respondents operated at the middle and lower management levels.

### *3.2. Instruments*

To enhance the validity and reliability of the construct and permit comparability of the results with previous studies, all variables were measured by instruments that had been previously developed and used (see discussion below). However, to accommodate the objectives of the study minor wording modifications were made to these instruments. To ensure that these modifications did not affect the reliability and validity of the measures,

<sup>3</sup> We split the responses into two groups based on their date of arrival. We then performed t-tests to examine whether there are differences of answers for all variables studied. We found no significant difference between the two groups.



all of the instruments were pilot-tested prior to the distribution, on executive MBA students from a UK university.

### *3.2.1. Goal-setting participation*

To measure this variable, we asked respondents to indicate their level of agreement using a 7-point Likert - type scale, ranging from strongly disagree to strongly agree, on the following two items: (1) “My superior allows me to participate in setting my performance goals/targets” and “I am highly involved in setting the budget goals/targets”. The first item was taken from the goal-setting questionnaire used by Locke and Latham (1984) and Locke and Latham (1990) and the second item was adapted from Milani (1975).<sup>4</sup>

### *3.2.2. Procedural fairness*

Procedural fairness refers to the fairness of all aspects of the organisation’s procedures that are used by the superior to evaluate the subordinate’s performance, to communicate performance feedback and to determine the subordinate’s rewards such as promotion and pay increases (Folger and Konovsky, 1989). This variable is measured using a four-item instrument developed by McFarlin and Sweeney (1992). In management accounting studies it has been used by, for example, Lau and Sholihin (2005), and Lau and Tan (2006). Respondents were requested to rate the fairness of the procedures used to evaluate their performance, to communicate performance feedback, and to determine their pay increases and promotion, ranging from 1(very unfair) to 7 (very fair).

### *3.2.3. Trust in their supervisor*

<sup>4</sup> Milani’s (1975) instrument consisted of 6 items. However, we only used the first item as it explicitly states “setting the budget goals/targets”. This is consistent with our objective because we want to examine participation in setting both financial (budget) and non-financial targets.

As discussed earlier, we used Read's (1962) concept of trust as the subordinate's confidence in the superior's intentions regarding matters relevant to the subordinate's career and status in the organisation. It is therefore appropriate to use his instrument, consistent with previous studies in management accounting research (e.g. Hopwood, 1972; Otley, 1978; Ross, 1994; Lau and Buckland, 2001; Lau and Sholihin, 2005; Lau and Tan, 2006). The instrument consists of four items, asking respondents to rate the extent to which (1) their superiors took advantage of opportunities to further their (respondents') interests; (2) respondents felt free to discuss their problems with their superior without fear of jeopardising their positions; (3) respondents felt confident that their superiors kept them fully and frankly informed about matters which might concern them; and (4) respondents trusted their superiors to have acted in a justifiable manner when their superiors made decisions which seemed against the respondents' interests.

#### *3.2.5. Goal commitment*

To measure this variable we used three items taken from the instrument developed by Hollenbeck, William, and Klein (1989). The items are: (1) I think the performance goals are good goals to strive for; (2) I am willing to put in a great deal of effort into achieving the performance goals; and (3) I am strongly committed to achieving performance goals. We asked respondents to indicate their level of agreement to the above items using a 7-point Likert-type scale ranging from 'strongly disagree' to 'strongly agree'.

Table 1 presents the results of the descriptive statistics of variables studied which cover mean, minimum and maximum values (both theoretical and actual), and the standard deviation. The table shows that while there is a wide range of responses the

means suggest that the managers sampled tended to be strongly committed to attaining their goals (5.91) and believed the performance evaluation procedures were fair (5.16). Level of trust (4.67) and participation in target setting (4.22) were less highly rated and had a wider dispersion which may reflect the different experiences that subordinate managers received from their superiors. The lower ratings for trust and participation are consistent with the organisation's quarterly survey (not reported in this paper) which revealed that level of trust and opportunity to communicate and have opinions listened to were relatively low.

**INSERT TABLE 1 ABOUT HERE**

#### **4. Analysis, results and discussions**

To test the hypotheses, a structural equation modeling with partial least squares (PLS) approach was employed because it is able to deal with multiple dependent and independent variables simultaneously. In addition, PLS was considered suitable because it can handle relatively small sample sizes and multicollinearity among independent variables. Another important reason for using PLS is that it does not require a normal distributional assumption (for details, see Chin, 1998; Chin and Newsted, 1999). In this study we used PLS Graph version 03.00 software.

The objective of the structural model using a PLS approach is to maximise the variance explained by variables in the model using R-Square as the goodness-of-fit measure (Chin and Newsted, 1999). The parameter estimation procedure associated with covariance-based structural equation modeling is not appropriate (Chin and Newsted, 1999; Hulland, 1999). Rather, a bootstrapping re-sampling procedure is used to estimate

t-statistics for the PLS structural path coefficient.<sup>5</sup> Following standard practice in accounting studies which use PLS (e.g. Chenhall, 2005), this study uses a large bootstrap sample of 500. This figure is chosen so that the data approximates normal distribution and leads to better estimates of test statistics as PLS does not require normal distribution (Chin, 1998; Gefen, Straub, and Boudreau, 2000).

PLS is a component-based modeling technique which simultaneously examines both measurement and structural models. The measurement model specifies the relationship between the manifest items (indicators) and the latent variables (constructs) they represent. In other words, the measurement model assesses the reliability and validity of measures (indicators) relating to specific constructs. The structural model identifies the relationships among constructs. Hence, PLS is able to assess the validity of constructs within the total model (Chenhall, 2005). Whilst the measurement and structural models can be evaluated together, they should be interpreted separately (Hulland, 1999).

#### *4.1. Measurement model analysis*

As previously mentioned, the measurement model is used to evaluate the relationship between measures and constructs by assessing the reliability and validity of measures (indicators) relating to specific constructs. The measurement analysis of this

<sup>5</sup> Bootstrapping is “an approach to validating a multivariate model by drawing a large number of subsamples and estimating models for each subsample. Estimates from all subsamples are then combined, providing not only the “best” estimated coefficients . . . , but their expected variability and thus their likelihood of differing from zero . . . This approach does not rely on statistical assumptions about the population to assess statistical significance, but instead makes its assessment based solely on the sample data” (Hair et al., 2006, p. 1-2).

study reveals that all measures are significant<sup>6</sup> and above the 0.60 loading level, indicating that the measures share more variance with their respective constructs than with the error variance (see table 2). In other words, loading with a minimum of 0.60 is important as it indicates that the measure is accounting for at least 60 percent of the variance of the underlying latent variable (Chin, 1998). In relation to the cut off point, Chin (1998) states, "...the loadings should be at least 0.60 and ideally at 0.70 or above" (page. xiii). In addition, the composite reliability coefficients for the constructs are all above the accepted level of 0.70 (Nunnaly, 1967).

Construct validity was assessed in terms of convergent validity and discriminant validity. Convergent validity is assessed using the average variance extracted (AVE). To be considered as having adequate convergent validity, a construct should have an AVE measure of 0.50 or more (Hulland, 1999). For this study, as seen in table 2, the AVEs for all the constructs are above 0.65, thus providing evidence of adequate convergent validity.

### **INSERT TABLES 2 ABOUT HERE**

Discriminant validity assesses whether a construct shares more variance with its measures than with other constructs. It is evaluated by comparing the square roots of AVEs to the correlation between constructs. When the square root of AVEs of a construct is greater than the correlation between the construct with another construct, it is deemed valid. The results are shown in table 3 which includes correlation among constructs in the off-diagonal and the square root of AVE in the diagonal. The diagonal elements are all

<sup>6</sup> The lowest t-statistic is 3.854 which belongs to item 2 of participation. The results provide initial support for the construct validity of the instrument.

greater than their respective off-diagonal elements, indicating adequate discriminant validity. Overall, the analysis demonstrates that the measurement model is reliable and valid.<sup>7</sup>

### **INSERT TABLE 3 ABOUT HERE**

Table 3 also describes positive significant correlations between goal-setting participation with goal commitment ( $r=0.278$ ;  $p<0.05$ ), procedural fairness ( $r=0.374$ ;  $p<0.01$ ), and interpersonal trust ( $r=0.338$ ;  $p<0.05$ ) suggesting that participation is an important variable in enhancing goal commitment, procedural fairness perception, and subordinates' trust in their superior. In addition, the table shows that goal commitment is positively correlated with procedural fairness ( $r=0.548$ ;  $p<0.01$ ) and with trust ( $r=0.315$ ;  $p<0.01$ ) suggesting that goal commitment can be improved by increasing perceived procedural fairness and subordinates' trust in their superior. Finally, the table shows that procedural fairness is positively correlated with trust ( $r=0.463$ ;  $p<0.01$ ) indicating that procedural fairness may enhance the interpersonal trust between subordinate and superior.

#### *4.2. Structural model analysis*

The structural model is used to test the hypothesised relationships, particularly to examine whether the effect of participation in target setting on goal commitment is direct or indirect (i.e. mediated by procedural fairness and trust). In this study, however, prior to the main structural analysis we performed a correlation analysis between the respondents' demographic variables with the dependent variables studied to test for potential spurious effects. Using this analysis we find that the three tenure measures (i.e. the length of

<sup>7</sup> Factor analysis confirms the result of PLS on construct validity.

service in the organisation, in the current position, and with the current supervisor) are not correlated with goal commitment.<sup>8</sup>

Following Hartmann and Slapnicar (2009), in performing structural model analysis we use a step-wise approach (see also Baron and Kenny, 1986; Luft and Shields, 2003). First, we tested whether participation in target setting affects goal commitment directly to test hypothesis 1. Secondly, we ran PLS by introducing trust as the mediating variable; and thirdly, we ran PLS by including trust and procedural fairness as mediating variables, as portrayed in figure 1, to test the other hypotheses.

The results (see table 4, panel A) show that goal-setting participation is positively associated with goal commitment (coefficient: 0.413;  $p < 0.01$ ,  $R^2 = 0.191$ ). Therefore hypothesis 1 which states that goal-setting participation is positively associated with goal commitment is supported. Conducting further analysis by introducing interpersonal trust as a mediating variable reveals that participation is positively associated with trust ( $r = 0.449$ ;  $p < 0.01$ ) and trust is also positively associated with goal commitment ( $r = 0.178$ ;  $p < 0.10$ ). However, the association between participation and goal commitment remains significant ( $r = 0.346$ ;  $p < 0.01$ ) (See table 4, panel B). This means that trust only *partially* mediates the relationship between participation and goal commitment. In other words, while there is an indirect effect of participation on goal commitment via trust, participation itself still has a direct effect on goal commitment.

We then introduce both trust and procedural fairness into the model as mediating variables as shown in figure 2. Results show that the relationship between goal-setting participation and procedural fairness is significant (path coefficient = 0.563;  $p < 0.01$ ) and

<sup>8</sup> Since tenure is not correlated with goal commitment, we do not include it in our structural model.

the relationship between procedural fairness and goal commitment is significant (path coefficient = 0.424;  $p < 0.05$ ). Hence, hypotheses H2 (goal-setting participation is positively associated with procedural fairness) and H3 (procedural fairness is positively associated with goal commitment) are supported. In other words, it can be stated that procedural fairness mediates the relationship between goal-setting participation and goal commitment. Secondly, while the relationship between participation and trust is significant at  $p < 0.10$  (path coefficient = 0.259), the association between trust and goal commitment is not significant. These results support hypotheses H4 (Participation in target setting is positively associated with interpersonal trust) but do not support H5 (Trust is positively associated with goal commitment). Third, the relationship between procedural fairness and trust is significant (path coefficient = 0.334;  $p < 0.05$ ). Thus, hypotheses H6 (Procedural fairness is positively associated with trust) is supported. Finally, when procedural fairness and interpersonal trust are included in the model we find that the direct effect of goal-setting participation on goal commitment becomes insignificant. A summary of the path coefficients (and their associated t-values) and the  $R^2$  of the endogenous constructs for the complete model are presented in Table 4 panel C and figure 2.

#### **INSERT TABLES 4 AND FIGURE 2 ABOUT HERE**

Overall, the results indicate that procedural fairness and trust fully mediate the relationship between goal-setting participation and goal commitment. Baron and Kenny (1986) argue that *full* mediation exists if a significant direct effect of the independent variable and dependent variable becomes insignificant after controlling for the effects of the mediating variables. The mediation is *partial* if the relationship between the



independent and dependent variable remains significant after controlling for the effects of mediating variables. In this study, the total indirect effect is 0.273 which is calculated based on the path coefficients among variables as in table 5. The table shows that the large portion of the indirect effect is attributable to procedural fairness.

**INSERT TABLE 5 ABOUT HERE**

To examine whether the mediating effect of procedural fairness on the relationship between participation and goal commitment is significant we performed Sobel's test. This gave a statistic of 2.678 ( $p < 0.01$ ) indicating that the mediating effects is significant. It means there is no direct effect of participation on goal commitment. Instead, the effect is indirect via procedural fairness.

To assess the practical significance of the study and to estimate the extent to which our statistical findings exist in the population, we performed an effect size test as suggested by Hair et al. (2006) and Huck (2000).<sup>9</sup> The effect size ( $f^2$ ) of this study, based on the  $R^2$  of 0.331, is 0.495. According to Cohen (1988) this figure is a fairly large effect; hence, suggests practical significance. Based on our results, it is important for the organisation to manage the performance measurement and evaluation system being perceived as fair.

<sup>9</sup> Hair et al. (2006) define effect size as “estimate of the degree to which the phenomenon being studied (e.g. correlation or difference in means) exists in the population” (p. 2). Huck (2000) argues that effect size indicates the practical significance of a study.

## **5. Conclusions, limitations and future research**

This study investigates whether goal-setting participation affects goal commitment and if so, whether the effect is mediated by procedural fairness and interpersonal trust. Using a sample of 54 managers within a UK major financial services organisation the study finds that goal-setting participation is positively associated with goal commitment. Further analysis arising from introducing interpersonal trust and procedural fairness as mediating variables reveals that the association is fully mediated by those two variables. This suggests that in this organisation both procedural fairness and trust play an important role on the association between goal-setting participation and goal commitment.

This study has replicated prior work, particularly Wentzel (2002) and Lau and Tan (2006), but in very different settings. Our study indicates that goal-setting participation can enhance the perceptions by subordinate managers of procedural fairness, trust, and goal commitment. This finding supports Lau and Tan's (2006) finding in a budget setting that participation is positively associated with procedural fairness and interpersonal trust. It is also consistent with the findings of Wentzel (2002) that fairness mediates the relationship between participation and goal commitment. Given the considerable differences in context between the two samples, and the call by Wentzel (2002, p.266) to extend the generalisability of her findings and, specifically, examine whether her findings were salient to times of growth and expansion, our results confirm that the model holds for a wide range of settings. In contrast to the above two studies, our study was not restricted to a budgetary context but related to participation, fairness, trust and goal commitment in the organisation's performance measurement and evaluation

process. The consistency of findings between the two processes lead us to suggest that the model applies equally well to organisations using financial and nonfinancial goals in scorecard-type approaches.

From a practical perspective, this study implies that in the design of performance evaluation systems, goal commitment is enhanced when subordinates are encouraged to participate in setting goals, performance evaluation procedures are perceived as fair and the level of interpersonal trust is high. From a theoretical perspective, our study supports goal theory arguments that participation can enhance goal commitment (Locke, 1968; Locke et al., 1988), and organisational justice theory that procedural fairness positively affects attitudes and behaviour (Lind and Tyler, 1988; Colquitt et al., 2001), including goal commitment.

This study is not without its limitations. First, since we use a cross-sectional survey approach, it encounters the limitation concerning the “causation” process. For example, whilst we propose that participation affects fairness, it could be argued that procedural fairness may drive participation, i.e. in order to maintain a high perception of procedural fairness organisations will allow their employees to participate (see for example Lau and Lim, 2002). Similarly, while the literature suggests that procedural fairness affects trust, it could also be that interpersonal trust increases perceptions of procedural fairness. To examine this issue, future studies might address the topic using experimental or case study approaches or validate the results using samples of managers from other organisations and/or sectors. Secondly, related to the first limitation, whilst our study examined the consequences of participation, we did not investigate the antecedents of participation. Hence, future studies should investigate the antecedents of

participation (Shields and Shields, 1998). Other limitations of this study are related to sample size, convenience sample and measurement issues. With regard to sample size, the sample used in this study is relatively small. Additionally, in determining samples we use a convenience sampling approach. Therefore, future studies should examine the model used in this study using larger samples from various organisations determined randomly or using samples from other organisation and/or industry to validate the results of our study.

In relation to measurement issues, two points are particularly relevant to mention. The first concerns the measurement of participation. In this study, participation is only captured using two items, which may not adequately capture all its dimensions. Future studies should measure this variable using a more comprehensive instrument to increase its validity and reliability. The second concern is the measurement of procedural fairness. In this study, fairness is operationalised as fairness of procedures used in evaluation, communication of feedback, and reward systems for pay and promotion. Some respondents, however, may view fairness in the context of budgeting procedures; while others may see it in a broader context based on all performance evaluation procedures. Future studies should make this clearer and link it more closely to goal-setting within the performance measurement and evaluation process.

Notwithstanding the above limitations, we believe that this study provides additional evidence on the importance of participative goal-setting and procedural fairness in designing performance evaluation systems that better motivate managers to be more committed to the goals.

**Table 1. Descriptive statistics of variables studied**

Variable	Theoretical score		Actual score		Mean	SD
	Min	Max	Min	Max		
Participation	1.00	7.00	2.00	7.00	4.22	1.31
Procedural fairness	1.00	7.00	3.00	6.50	5.16	0.96
Trust	1.00	7.00	2.00	6.75	4.67	1.22
Goal commitment	1.00	7.00	4.33	7.00	5.91	0.63

**Table 2. Reliability and convergent validity**

Latent variable	Mean	S.D.	Loading
Participation (composite reliability = 0.789; AVE = 0.660)			
Participation 1	5.43	1.09	0.9537
Participation 2	2.92	1.97	0.6409
Procedural Fairness (composite reliability = 0.918, AVE = 0.738)			
Procedural Fairness1	5.37	1.07	0.9067
Procedural Fairness2	4.98	1.24	0.8078
Procedural Fairness3	5.39	0.96	0.8969
Procedural Fairness4	4.91	1.23	0.8205
Interpersonal trust (composite reliability =0.951; AVE = 0.828)			
Trust1	4.22	1.40	0.9302
Trust2	5.06	1.35	0.8812
Trust3	4.78	1.31	0.9249
Trust4	4.61	1.29	0.9027
Goal commitment (composite reliability =0.867; AVE = 0.686)			
Goal Commitment1	5.72	0.90	0.7623
Goal Commitment2	5.93	0.75	0.8343
Goal Commitment3	6.07	0.64	0.8838

**Table 3. Discriminant validi**

	Participation	Fairness	Trust	Commitment
Participation	<b>0.812</b>			
Fairness	0.374***	<b>0.859</b>		
Trust	0.338**	0.463***	<b>0.909</b>	
Commitment	0.278**	0.548***	0.315**	<b>0.828</b>

Diagonal element: square root of AVE; off-diagonal: correlation between constructs

\*\*\* Significant at p<0.01

\*\* Significant at p<0.05

**Table 4. PLS Results (Path coefficient, t-statistics, and R<sup>2</sup>)**

**Panel A. Direct effect**

Variable	Path to
	Goal commitment
Participation	0.413 (4.536)***
R <sup>2</sup>	0.191

**Panel B. Testing the mediating effect of trust**

Variable	Path to	
	Trust	Goal commitment
Participation	0.449 (4.611)***	0.346 (3.121)***
Trust		0.178 (1.463)*
R <sup>2</sup>	0.202	0.206

\*\*\*p<0.01 (one-tailed)

\*\* p<0.05

\* p<0.10

**Panel C. Full model**

Variable	Path to		
	Procedural fairness	Trust	Goal commitment
Participation	0.563 (5.486)***	0.259 (1.529)*	0.140 (1.072)
Procedural fairness		0.334 (2.281)**	0.424 (3.002)**
Trust			0.076 (0.596)
R <sup>2</sup>	0.317	0.276	0.331

\*\*\*p<0.01 (one-tailed)

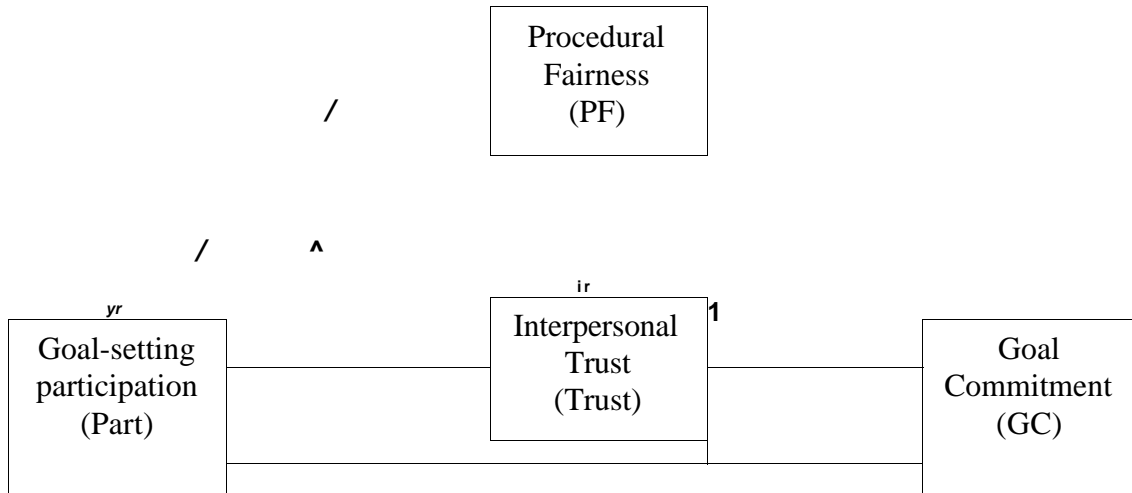
\*\* p<0.05

\* p<0.10

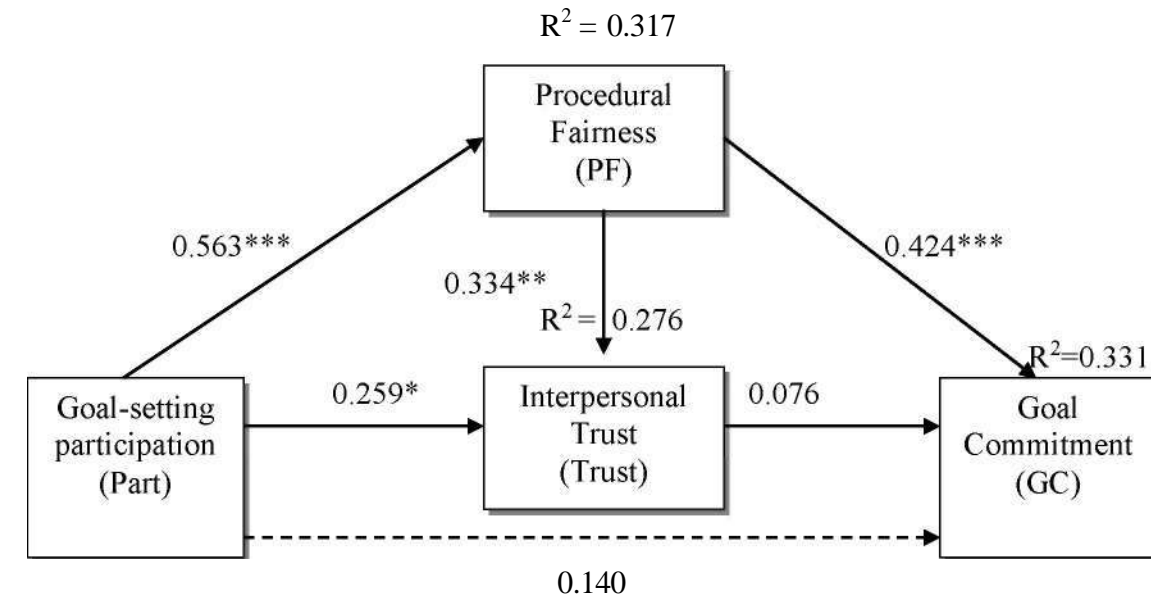
**Table 5. The indirect, direct, and total effects of participation on goal commitment**

Path (Part-PF-GC)	0.563 x 0.424		0.239
Path (Part-PF-Trust-GC)	0.563 x 0.334 x 0.076	0.014	
Path (Part-Trust-GC)	0.259 x 0.076	0.020	0.034
<b>Indirect effect</b>			<b>0.273</b>
<b>Direct effect</b>			<b>0.140</b>
<b>Total effect</b>			<b>0.413</b>

**Figure 1. Model of the study: The effect of goal-setting participation on goal commitment**



**Figure 2. PLS Results**



\*\*\*p<0.01 (one-tailed)  
 \*\* p<0.05  
 \* p<0.10

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