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TITLE: The Importance of Organisational Commitment in Managing Change in the Bus Industry in Australia

ABSTRACT: In Australia there is a continuing trend in the transport sector towards corporatisation, privatisation, competitive regulation (ie tendering) and deregulation. With the implementation of the 1990 Passenger Transport Act in New South Wales, the urban bus industry has moved from a rigid system of licensing towards one of performance-based contracts. The new focus arising out of the legislation has centred on the quality of service delivery with pressing managerial implications. To date, little attention has been paid to the effects of organisational change on the role of middle management in the transport sector. While the current perception may be that the position of middle management is largely irrelevant following industry downsizing, it is contended that the role of the middle manager is reaffirmed at the centre of organisational change. This paper identifies the relationship between perceived satisfaction with the outcomes of change and organisational commitment and structure. Study findings demonstrate that organisational structure is important in the development of organisational commitment which in turn is vital in the effective implementation of organisational change.

Key words: organisational commitment, organisational structure, human resource management, middle management, organisational change, transport, Australia

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Introduction

The urban bus industry is a significant player in Australia's passenger transport market (Industry Commission 1993, Baird 1991). In recent years, Australia has joined the growing number of nations subscribing to the ideals of competitive markets as the catalyst for more efficient and effective delivery of transport services. The transition, however, from an essentially spatial monopoly environment in urban public transport has thrown up many challenges, including determination of the path to a fully competitive market.

In the lead up to the 1990 Passenger Transport Act of New South Wales (NSW), the urban bus industry considered the case for a fully deregulated market and chose the more conservative route of 'competitive' regulation. The nature of the reform is interpreted in terms of performance-based contracts, with industry compliance defined by minimum levels of service, quality of vehicles and acceptance of maximum fares. Although often misconstrued as competitive tendering and contestability, the urban bus market remains one of incumbent protection subject to compliance. The 1990 Act is currently being reviewed in the light of experiences over the last 5 years, as contracts come up for renewal.

An important feature of the changes associated with the 1990 Act is the role of management, especially middle management, and the ways in which they have adapted to the new external environment. Studies of the bus sector typically treat labour as a relatively homogeneous input, emphasising its role overall in contributing to total costs. There is a general dearth of serious focus on the human resource perspective and on how an understanding of management as a particular labour input has been changing over time and influencing the success of the bus industry in both positive and negative ways. In Australia, there has been little attention paid to middle managers who are instrumental in managing organisational change in the urban bus sector.

This paper takes a closer look at how managers (including proprietors) have responded to the new climate of service provision in terms of the interaction between organisational commitment, organisational structure, and satisfaction with organisational change.

Waves of Change in Australia

In New South Wales, the Transport Administration Act 1988 signalled the first wave of change, which led to a fundamental restructuring of the bus industry. The government achieved this by replacing the outmoded Transport Licensing Act 1931, which effectively protected the existing tram and rail services by regulating private bus routes making it difficult for potential operators to enter the market. Changes in bus services required government approval which placed immense pressure on the commercial viability of operators. This approach led to a lack of competition between private and public bus services.

The second wave of change was signalled by the Passenger Transport Act 1990 designed to enhance the standard of buses, ferries, taxis and hire car services. The outcome of this change is that the bus sector has moved from a rigid system of bus licensing, whereby operators had an exclusive monopoly, to a set of performance-based contracts. Non-compliance would lead to competitive tendering. In the interlude, the focus of change has been upon the technicalities of implementing the Passenger Transport Act 1990, the level and extent of services and the advent of the mini-bus.

A question still remains over the extent of future deregulation of urban route services. Supporters of public bus services contend that private operators are only concerned with profit and will cut back on non-profitable services in a totally deregulated system. The government is particularly concerned about the high level of concession reimbursement for operating school bus services, which some argue provides an element of hidden subsidy to support unprofitable route services in a thin market.

Despite the changes, there is little direct competition amongst bus operators in New South Wales. Both private and public operators are required to have fares, timetables, and routes approved by the NSW Department of Transport. New legislation was designed to ensure a minimum level of service by providing adequate services during peak hours, and appropriate services at night and weekends that reflect community service obligations (CSO's). Where bus operators can demonstrate this, a five year commercial contract is granted by the government. By achieving the minimum service standard, the same operator can provide core and non-core services, and maintain exclusive rights to a particular route or geographical area. Operators, who do not meet the legislative requirements, risk the termination of their contract and/or exposure to competitive tendering for the franchised areas.

Managerial Implications of Change

While the major focus of the change in NSW has centred on service enhancement including new authorisation standards for bus drivers and quality provisions, the nature of the change has many implications for the control and regulation of managerial work.

With all these changes there has been an intensifying of the complexity of managerial work. Instead of diminishing the role of the middle manager as predicted with post-downsizing, the significance of leadership from middle managers has increased with greater responsibility conferred on them for a wider array of activities both external and internal to the organisation. The integrative role that middle managers play co-ordinating activities and expectations among the various organisational stakeholders including operational, administrative and entrepreneurial is significant (Van Cauwenbergh and Cool 1982). Middle managers are well placed in crossing intra-organisational boundaries to provide the information and resources necessary to accomplish business goals and minimise uncertainty associated with organisational change.

Increasingly, employers are instilling 'responsible autonomy' in middle management through the inducement of non-economic rewards such as independence and accountability (Friedman 1977). Contrary to conventional management thinking, the need for decentralising responsible autonomy is greater when organisations are facing uncertainty associated with change (Perrow 1970). While the provision of information and resources is expected of the managerial role, the effectiveness of role performance is ultimately dependent on the incumbent's organisational commitment, and organisational structure in terms of decentralised responsibility and the opportunity to influence organisational change. The aim of the study is to investigate middle management response in terms of the interaction between organisational commitment, organisational structure, and satisfaction with organisational change.

Developing a Framework within which to Assess Managerial Response to Change

Organisational commitment

Commitment is differentiated in three ways: organisational, occupational, and work. Organisational commitment refers to involvement in pursuing managerial interests and intent to stay with the employer based on a sense of duty and responsibility (Mueller et al 1992). It extends beyond a purely personal interest in employment. Occupational commitment refers to an allegiance to a coherent set of work activities such as bus driving. Work commitment refers to a person's involvement in performing work for the benefit of clients or customers. Work-committed employees are more likely to enjoy their work, demonstrate loyalty and interest in maximising service to the people they serve (Morrow and Wirth 1989).

In this study the focus is on organisational commitment understood best by the extent to which managers identify with their organisation, internalise its values, show a willingness to invest effort, and participate in decision making (Mowday et al 1982; O'Reilly and Chatman 1986). Organisational commitment is associated with satisfaction with perceived change, and organisational support expressed through decentralised responsibility, participation, and positive work context.

Satisfaction with perceived change

Since middle managers are directly responsible for implementing change, it is important to gauge their satisfaction or evaluative reactions to changes in industry policy, organisation, services and job. Formally,

> *'Satisfaction is considered to be an attitude which results from a balancing and summation of many specific likes and dislikes experienced in connection with the job. This attitude manifests itself in an evaluation of the job and of the employing organisation...as contributing suitably to the attainment of one's personal objectives.' (Bullock 1952 p.7)*

Organisational structure

Organisational structure is depicted by decentralisation and participation. Decentralisation is an organisational characteristic reflected in the amount of responsibility conferred upon middle management. It is the extent to which middle managers are assigned tasks and provided with the freedom to implement them without impediment by employer/senior management (Hage and Aiken 1967).

A persistent theme associated with promoting organisational commitment is the provision of the frequency and quality of information processes and communication openness. 'Psychological participation' is the amount of influence that middle managers perceive themselves to possess (Vroom 1960). The extent of participation in a workplace reflects the extent to which people's efforts and investment are valued. While participation is associated with decentralisation, it provides employees with the opportunity for involvement which impacts their identification with and loyalty to the organisation. In this study, participation is the capacity of middle managers to influence decision making, especially in regard to decisions that have a future impact on the workforce.

Satisfaction with work context

Organisational commitment is based on a relationship of social exchange whereby the employer/senior management acknowledge and reward middle managers through payment, promotion, security, and working conditions for their contribution to the organisation (Mottaz 1989). Work context satisfaction is the degree of happiness that middle managers express about security, rewards, conditions of work, promotion and company policy.

In summary, the three key variables relevant to an inquiry of managerial response in a changing market are (1) organisational commitment; (2) organisational structure in terms of decentralisation, participation and work context; and (3) satisfaction with perceived changes (see Table 1) categorised by government/industry policy, organisation, services and job.

Table 1: Study variables

Organisational Structure	*Satisfaction with change*
Decentralisation	government policy
Participation	own organisation
Satisfaction with work context	services
Organisational commitment	own job
identification	
involvement	
loyalty	

Study Instruments

A survey of 40 item questions derived from several inventories was sent to a sample of NSW bus managers. The survey instrument is reproduced in Appendix A. Information was sought on:

1. *Organisational commitment,* comprising (a) pride in the organisation, and internalisation of organisation's goals; (b) involvement: willingness to invest personal effort as a member of the organisation, for the sake of the organisation; (c) loyalty: affection for and attachment to the organisation, a wish to remain a member of the organisation. Responses are on a 5-point scale, totalled across the items, so that the possible range of scores is from 9 to 45 with a high score indicating high commitment (see Section 1 of survey instrument, Appendix A). Three items (1.2, 1.3 and 1.8) are reverse scored. Reported alpha coefficient: .87 (Cook and Wall 1980).

2. *Satisfaction with change* measuring satisfaction with changes associated with industry, organisation, services and job (items 1.10 to 1.15 of the survey instrument). A 5 point response scale is also implemented.

3. *Decentralisation* (Hage and Aiken 1967) measuring delegated authority and using a 1-4 response scale (items 2.1 to 2.9). Reported alpha coefficient = .86 (Dewar et al 1980).Items 2.6-2.9 are reverse scored.

4. *Participation* (Vroom 1960) measuring joint decision making by two or more people who will be directly affected by the outcome. The scale uses a 5 point response set, scored 1 to 5 so that the possible range of scores is from 6 to 30 and totalled across items so that a high score indicates high

participation (items 3.1 to 3.7). Reported alpha coefficient = .85 (Morris and Koch 1979). Items 3.4 and 3.5 are reverse scored.

5. *Satisfaction with work context* designed to measure satisfaction with extrinsic work factors using a 1 to 5 response set (items 4.1 to 4.4). The four factors are the handling of the 1990 Act by the *government*, by the *organisation*, effect of the Act on *services* offered, and effect of Act on the respondent's *job*.

6. Demographic information (Section 5 of the survey instrument, Appendix A).

The Sample

Questionnaires were posted to 538 managers who had either attended, were completing, or wait-listed to participate in a Certificate of Transport Management (CTM) at the Institute of Transport Studies, University of Sydney. Under the 1990 Passenger Transport Act, Industry and Government require at least one manager in each bus and coach company to complete the CTM to enable that business to be accredited with a designated manager, bus and/or coach. The response rate was 40 per cent (215 responses). Six questionnaires were incomplete and discarded. The questionnaire was pre-tested on a small sample of middle managers. The sample comprised 88 per cent male and 12 per cent female respondents. The majority were middle managers with 61 per cent working in the public and private urban bus sector, with 20 per cent employed in the family company. Thirteen per cent owned and managed their own company. Summary statistics are shown in Table 2.

Table 2: Summary of demographic statistics (538 cases)

Age (years)	%	Wage ($A)	%	Education	%
25 & under	4.8	25,000 & under	10.0	TAFE certificate	20.7
26 - 35	16.3	26 - 35,000	26.3	Degree	8.7
36 - 45	36.4	36 - 45,000	26.8	CTM	47.9
46 - 55	31.1	46 - 55,000	19.6	Driver training	11.2
56 & over	11.5	56 - 65,000	7.2	Other	11.6
		66,000 & over	10.0		
Total	100		100		100

Data Analysis and Results

Most respondents reported a high degree of control and opportunity to participate in decision making processes. Similarly there was a high degree of organisational commitment and satisfaction with the changes that had occurred in the respondents' organisations. Spearman's Rho correlation was performed on eight variables (Table 3). The greatest influence on commitment was satisfaction with work context (r= .38), decentralisation (r= -.54), and participation (r=-.56).

Table 3: Multiple Correlation Matrix (n = 538)

	Mean	*S.D.*	*Comm.*	*WCsati*	*Decen.*	*Part.*	*Govt*	*Org*	*Serv*	*Job*
Commitment	35.92	5.29	1.0							
WC Satisfaction	22.99	5.35	.38	1.0						
Decentralisation	19.07	5.72	-.54	-.37	1.0					
Participation	17.68	5.83	-.56	-.49	.71	1.0				
Government	3.05	1.03	-.08	-.09	.054	.12	1.0			
Organisation	3.94	1.10	.26	.41	-.24	-.33	.25	1.0		
Service	3.74	2.30	.31	.30	-.25	-.36	.25	.46	1.0	
Job	3.57	1.20	.20	.32	-.15	-.27	.35	.48	.49	1.0

Organisational commitment

Table 4: Dimensions of organisational commitment (%)
Question 1 in Appendix A
Ranks: 1= strong disagreement, 3= do not care, 5 = strong agreement

Dimensions of Organisational Commitment	1	2	3	4	5
1. Pride in working for the company	1.9	1.4	7.2	23.9	65.6
2. Do not consider leaving the company	18.2	23.4	6.2	21.1	31.1
3. Willing to expend additional effort	27.8	6.7	4.8	11.5	49.3
4. Would not change company even if in financial difficulty	10.5	10.5	15.8	26.8	36.4
5. Manager feels part of the company	3.3	2.4	5.3	25.4	63.6
6. Effort is for the company not just myself	0.0	1.4	1.0	16.7	80.9
7. More money would not entice manager to change employers	7.2	15.3	10.0	26.8	40.7
8. Manager would recommend a close friend to work for the company	18.2	16.7	18.7	17.7	28.7
9. Felt pleased to contribute to the company	0.0	0.0	2.4	12.9	84.7

The mean commitment score was 35.9 suggesting high commitment amongst the sample (See Table 4). Commitment comprises three sub-scales. Items 1, 5, & 8 cover 'identification'. While items 1 & 5 were scored highly, item 8 was not, that is, while respondents felt pride and part of the company they worked for, they had some reservations about recommending a close friend to work for the company. The apparent inconsistency of this response may have more to do with the multiple interpretations that can be made of item 8. For example, some respondents may not want to work with a close friend regardless of how they feel about the company. Others may not feel the company is a suitable place of work for their close friend. Items 3, 6 & 9 cover involvement and were scored highly. Items 2, 4 & 7 cover loyalty and these were scored slightly lower than identification and involvement. The loyalty items concerned wages and employment security so the lower scores are understandable especially in the light of organisational tenure. Responses to items 2 and 7 suggest that managers are not about to leave their employer, and believe that they work for a good company. Organisational commitment was significantly correlated (p<.001) with decentralisation, work context satisfaction, and participation.

Decentralisation

Table 5: Middle managers' perception of decentralised approach (%)
Question 2 in Appendix A
Ranks: 1= definitely false, 4= definitely true

Managerial Response	1	2	3	4
Middle managers acting without approval	21.5	31.6	28.2	18.7
Autonomy in decision making	29.7	37.8	23.9	8.6
Small matters dealt with by middle managers	46.9	25.4	20.6	7.2
Supervisor's permission to do anything	57.4	27.8	10.5	4.3
Requesting approval	52.2	23.4	15.8	8.6
Equity and respect	40.2	19.1	17.2	23.4
Support and guidance	35.4	23.9	14.4	26.3
Overall quality of management	28.7	32.1	20.1	19.1
Recognition for work efforts	29.7	28.2	19.1	23.0

Frequency percentages are shown in Table 5 for respondents' perceptions of decentralised authority. Concern is expressed by respondents across all dimensions of their relationship with their supervisor. Areas of main concern are the inability of middle management to act without senior management approval and the degree of autonomy in decision making. Respondents do not believe they receive sufficient support and guidance as well as recognition for work efforts from their supervisors. Decentralised authority is correlated with commitment (r = -.54) and work context satisfaction (r = -.37), participation (r = .71) and satisfaction with service change (r = -.37).

Participation

Table 6: Perceived influence by middle managers(%)
Question 3 in Appendix A
Ranks: 1= a very great deal of influence/to a great extent/always/very easy/not at all, 2= a great deal of influence/to a considerable extent/often/fairly easy/to a very little extent, 3= quite a bit of influence/to some extent/sometime/not too easy, 4=some influence/to a very little extent/seldom/somewhat difficult/to a considerable extent, 5=little or no influence/not at all/never/very difficult/to a great extent

Extent of Participation	1	2	3	4	5
No influence over changes in the Act	13.4	15.3	14.4	19.1	37.8
Influence immediate supervisor's decision	27.3	33.5	32.1	3.3	3.8
Involvement in decision making	46.9	29.7	15.8	4.8	2.9
Suggestion for improving job	18.2	32.1	12.4	25.4	12.0
Suggesting for making changes	22.5	25.8	15.8	21.5	14.4
Policies and goals explained	32.5	28.2	19.6	12.9	6.7
Kept informed	36.8	27.8	23.4	10.0	1.9

While the majority of middle managers reported no direct influence in the decision processes at the legislative level, they did participate in making changes within their own organisations (see Table 6). Participation took two forms, either policies & goals were explained and respondents were kept informed, or respondents were able to make suggestions to their supervisor, improve their jobs or overall changes. Participation is associated significantly with organisational commitment (r=-.56), with work context satisfaction (r=-.49), and decentralisation (r=.71).

Work Context Satisfaction

Table 7: Satisfaction with extrinsic work factors(%)
Question 1.10-1.15 in Appendix A
Ranks: 1 = unhappy, 3 = neutral, 5 = happy

Work Factors	1	2	3	4	5
Security	4.8	4.3	12.9	21.1	56.9
Pay	3.3	11.5	23.0	30.1	32.1
Promotion	6.2	10.5	23.9	25.4	34.0
Hours of work	11.0	14.8	19.6	20.1	34.4
Conditions of work	2.9	6.7	15.3	29.7	45.5
Company policy	9.6	10.0	17.2	26.3	36.8

Middle managers expressed a high satisfaction with extrinsic factors listed in Table 7. Respondents expressed negligible deficiency in need satisfaction in regard to job security, conditions of work and company policy. There is some ambivalence expressed about pay, opportunities for promotion and hours of work. Satisfaction with work context was correlated with decentralisation ($r = -.37$) indicating that the more decentralised processes, the more satisfied middle managers are.

Satisfaction with policy changes

Table 8: Dimensions of satisfaction with changes (%)
Question 4 in Appendix A
Ranks: 1=very dissatisfied, 2=dissatisfied, 3=neutral, 4=satisfied, 5=very satisfied

Dimensions of Change	1	2	3	4	5
Government/industry policy changes	13.4	16.3	28.2	36.4	5.7
Organisation changes	3.3	3.8	16.7	47.8	28.2
Service delivery changes	2.4	9.1	23.0	43.5	22.0
Own job changes	4.3	11.5	26.8	37.3	20.1

On the whole, respondents were satisfied with policy changes. However, respondents were most satisfied with changes made by senior management (76 per cent) and those affecting service standards (65.5 per cent) (see Table 8). Least satisfaction was expressed for the way respondents perceived government to handle change and there was some ambivalence over the outcomes in terms of their own jobs.

Evaluating the Interaction between Organisational Commitment, Organisational Structure and Satisfaction with Organisational Change

To evaluate the interaction between organisational commitment, organisational structure and satisfaction with organisational change, a non-parametric method of regression trees (Breiman et al 1993) was employed to partition the data into relatively homogeneous terminal nodes (ie classes). Two trees were constructed, one for sources of variability in organisational commitment (model 1), and one for sources of variability in satisfaction with organisational change (model 2). The mean value of commitment and satisfaction with change observed in each node are used as the predicted values. The method involves binary recursive partitioning on a set of classificatory variables. 'Parent' nodes are split into two 'child' nodes with the process repeated by treating each 'child' node as a new 'parent'. A set of rules are

invoked to split each node in a tree, to decide on when a tree is complete, and to assign each terminal node to a predicted value for commitment or satisfaction with change.

To identify candidate splitting rules, all possible splits for all exogenous variables are considered. The finite number of candidate splits are subject to a brute force search through them all. Each splitting rule is rank ordered by a goodness-of-split criterion. Brieman et al (1993) promote the idea of node impurity or heterogeneity. For continuous dependent variables as applied herein, the node-specific average of the dependent variable is the default assigned to each node and the within-node variance is used as the measure of goodness of split. Unlike methods such as the chi-square automatic interaction detector (CHAID) which impose statistical stopping rules, the Brieman et al (1993) approach grows a maximal tree with no stopping rules and prunes the tree by eliminating branches until the 'best' tree is unearthed, based on predictive accuracy and a penalty applied to large (unwieldy) trees.

Where a data set is relatively small (as in the current study), an independent sample is not available without a major cost to the use of the full sample. Cross-validation to minimise misclassification is promoted to use the full sample in implementation and learning. After running the tree generation process on the entire data set, the data is then divided into a number of equal subsets, each determined by random sampling stratified on the dependent variable. The tree growing is repeated for the number of subsets, with each cross-validation replication defining all but one randomly generated subset as the learning data and the other the implementation data. In each replication, the error counts for each sub-tree in that replication tree sequence are computed. The summation of the error rates across the subset, referred to as the resubstitution relative error measure defines the global error rate for each tree in the full-sample tree sequence (see Brieman et al 1993 Chapter 11).

A useful output of the regression tree approach is a measure of an exogenous variables importance relative to that of other variables which could act as surrogates. The improvement attributable to each explanatory variable in its role as a surrogate is calculated within the primary split by tracking all surrogate splits in the tree-growing process and measuring the contribution that an exogenous variable can make in prediction which is not preserved only by primary splits and subsequent pruned trees. The value of these improvements are summed over each node, totalled, and scaled relative to the best performing variable. The most important variable is given an importance score of 100 in both analyses.

A desirable feature of any model is parsimony. Analogous to the adjusted r-squared in a linear regression model which penalises larger models, the cost complexity of a tree has been developed by Brieman et al (1993). A natural measure of the complexity of a tree is the number of terminal nodes; the re-substitution misclassification rate is an accuracy measure that improves as trees get larger. Cost complexity can be defined as resubstitution misclassification rate plus the number of terminal nodes, the latter scaled by an estimated penalty parameter where a value of zero is the largest possible tree with the lowest cost complexity. A very high value approaching infinity for the penalty parameter produces a single node tree. By growing trees to their maximal number of terminal nodes and pruning them back, the cost complexity by the number of nodes is tracked.

To understand the profiles of commitment distribution and satisfaction with change in this study, satisfaction with change (model 1 only), decentralisation, participation, satisfaction with work context and socio-economic characteristics are candidates for tree formation. The final regression trees are shown in Figures 1 and 2. Each split is summarised by a node number, a sample size, a mean and associated standard deviation for the endogenous variable, an acronym identifier for the exogenous splitting variable and the boundary value for the binary split on the exogenous variable. For example, in Figure 1, the initial 209 observations at node 1 are split on SUGGEST (Item 3.4 " If you have a suggestion for improving your job in some way, how easy is it for you to get your ideas across to your

immediate supervisor"), with 104 in the 'difficulty' class and 105 in the 'easy class'. A simple linear generalised least squares regression confirmed the statistical significance of the main influences on variation in commitment across the sampled population. The set of exogenous classification variables are defined.

Model 1: Organisational Commitment

The main summary statistics for the commitment tree are given in Tables 10 and 11. The tree has an overall rho-squared of 0.520 (defined as 1-relative substitution error), indicating that the nearly 52% of the variance in the commitment variable is explained by seven tree regression exogenous variables out of the 68 evaluated. The 7 'classifiers' in rank order of importance are: Easy, Suggest, Quality, Respect, Support, Recognis and Promote. There are 11 terminal nodes with a tree resubstitution relative error of .480, which translates into a total mean square error of .480*27.87 = 13.38 (where 27.87 is the initial variance of the commitment scale).

The initial tree split was based on the ability of someone to get their suggestions for job enhancement across to their immediate supervisor. The sample is split almost equally into the difficult and the easy camps. The sub-sample of 105 who declare ease with communicating ideas (ie Suggest < 2.5) comprise 90 who are happy with their job prospects in contrast to 15 individuals who cover the 'unhappy prospects' range. There is a further division within the happy range with 42 of the 90 individuals being significantly happy with job prospects in contrast to 48 who might be best described as reasonably happy, with two-thirds of them believing that management respects and treats them fairly. The group, who are very confident about job prospects, are predominantly (ie 38/42 or 90 percent) of the belief that any suggestions they offer for improving the set up at the depot are easily transmitted to their immediate supervisor; that is, participation is high. It may be that this group of respondents have developed a unique one-to-one relationship with each of the people they report to, that is they are members of the 'management-in' group (Dienesch & Liden 1986).

The sub-sample who find communication of suggestions to an immediate supervisor (104 individuals) difficult comprise 67% who do believe that management respects and treats them fairly, with 68% of these respondents feeling relatively happy about future job prospects despite the opinion of 92% that management does not recognise their work efforts. Of the 35/104 individuals who do not believe that management respects and treats them fairly, 89 percent are somewhat unhappy with future job prospects but in the main (ie 29/31) accept the statement that they 'receive support and guidance from their supervisor" (Item 2.7).

The message from the commitment tree is that the sampled population displays a clear division between individuals who feel a sense of participation and those who do not, together with a mixture of commitment through decentralisation of responsibility and satisfaction with change as expressed through future job prospects. For middle managers to experience organisational commitment, they need to be able to participate and affect improvements in their own work. A belief that the employing company is well managed, and that they receive respect, support and recognition in the role of middle manager is instrumental to commitment.

Table 10. Summary Data for the Final Regression Tree - Organisational Commitment

Tree	Terminal Nodes	Resubstitution Relative Error	Complexity Parameter	Relative Complexity	Rho-Squared

1	11	.480	0.00	0.000	0.520
2	10	.485	24.28	0.004	0.515
3	9	.497	72.48	0.012	0.503
4	8	.513	90.09	0.015	0.487
5	7	.529	98.28	0.017	0.471
6	6	.549	116.93	0.020	0.451
7	4	.616	194.13	0033	0.384
8	3	.653	212.55	0.036	0.347
9	2	.748	554.42	0.095	0.252
10	1	1.00	1468.94	0.252	0.000

Table 11. Summary Data for the Final Regression Tree: Variable Importance - Organisational Commitment

| Exogenous Variables
See AppA for full wording on each variable	Acronym	Relative Importance	Ranking
Work Factors			
Promotion	Promote	67.91	7
Managerial Response			
Equity and respect	Respect	90.68	4
Support and guidance	Support	90.61	5
Overall quality of management	Quality	96.14	3
Recognition for work efforts	Recognis	84.38	6
Extent of Participation			
Suggestion for improving job	Suggest	96.53	2
Suggesting for making changes	Easy	100.0	1

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                                    ┌─────────────────┐
                                    │     Node 1      │
                                    │    N = 209      │          Yes
                                    │  Mean =35.923   │───────────────────┐
                                    │   SD = 5.297    │                   │
                                    │ SUGGEST <= 2.500│                   │
                                    └────────┬────────┘                   │
                                          No │                            ▼
                                             ▼                   ┌─────────────────┐
                  Yes            ┌─────────────────┐     No      │     Node 2      │
         ┌───────────────────── │     Node 6      │ ──────────  │    N = 105      │
         │                      │    N = 104      │             │  Mean =36.562   │
         │                      │  Mean =33.260   │             │   SD = 4.777    │
         │                      │   SD = 4.341    │             │ PROMOTE <= 2.500│
         │                      │ RESPECT <= 2.500│             └────────┬────────┘
         │                      └────────┬────────┘                  Yes │
         ▼                            No │                               ▼
┌─────────────────┐                     ▼                      ┌─────────────────┐
│     Node 7      │  Yes     ┌─────────────────┐               │    Node -1      │
│    N = 35       │──────    │     Node 9      │               │    N = 15       │
│  Mean =35.171   │          │    N = 69       │               │  Mean = 32.933  │
│   SD = 5.245    │          │  Mean =32.290   │               │   SD = 4.449    │
│ PROMOTE <= 4.500│          │   SD = 3.414    │               └─────────────────┘
└────────┬────────┘          │ PROMOTE <= 3.500│
      No │  Yes              └────────┬────────┘
         │                         No │
         ▼                            ▼
┌──────────────┐  ┌─────────────────┐  ┌─────────────────┐  ┌─────────────────┐
│   Node -8    │  │     Node 8      │  │    Node 10      │  │     Node 3      │      No
│   N = 4      │  │    N = 31       │  │    N = 47       │  │    N = 90       │──────────
│ Mean = 41.750│  │  Mean =34.323   │  │  Mean =33.106   │  │  Mean =39.500   │
│  SD = 2.046  │  │   SD = 4.921    │  │   SD = 2.562    │  │   SD = 4.143    │
└──────────────┘  │ SUPPORT <= 3.500│  │ RECOGNIS <= 2.500│ │ PROMOTE <= 4.500│
                  └────────┬────────┘  └────────┬────────┘  └────────┬────────┘
   No             Yes   No │                 No │                Yes │
    │                      ▼                    ▼                    ▼
┌──────────────┐  ┌──────────────┐     ┌──────────────┐   ┌─────────────────┐  ┌──────────┐
│   Node -7    │  │   Node -6    │     │   Node -11   │   │     Node 4      │  │  Node 5  │
│   N = 2      │  │   N = 29     │     │   N = 43     │   │    N = 48       │  │  N = 42  │
│ Mean = 26.500│  │ Mean = 34.724│     │ Mean = 33.326│   │  Mean =38.063   │  │Mean=41.143│
│  SD = 2.500  │  │  SD = 4.791  │     │  SD = 2.503  │   │   SD = 4.079    │  │ SD = 3.563│
└──────────────┘  └──────────────┘     └──────────────┘   │ RESPECT <= 1.500│  │EASY <= 2.500│
                                                          └────────┬────────┘  └─────────┘
                  ┌──────────────┐     ┌──────────────┐        No  │ Yes    Yes │    No
                  │   Node -9    │     │   Node -3    │            ▼            ▼
                  │   N = 22     │     │   N = 16     │   ┌──────────────┐  ┌──────────────┐
                  │ Mean = 30.545│     │ Mean = 36.125│   │   Node -2    │  │   Node -4    │
                  │  SD = 4.250  │     │  SD = 3.333  │   │   N = 32     │  │   N = 36     │
                  └──────────────┘     └──────────────┘   │ Mean = 39.031│  │ Mean = 41.684│
                                                          │  SD = 4.073  │  │  SD = 3.221  │
                                       ┌──────────────┐   └──────────────┘  └──────────────┘
                                       │   Node -10   │
                                       │   N = 4      │                     ┌──────────────┐
                                       │ Mean = 30.750│                     │   Node -5    │
                                       │  SD = 1.920  │                     │   N = 4      │
                                       └──────────────┘                     │ Mean = 36.000│
                                                                            │  SD = 2.345  │
                                                                            └──────────────┘
```
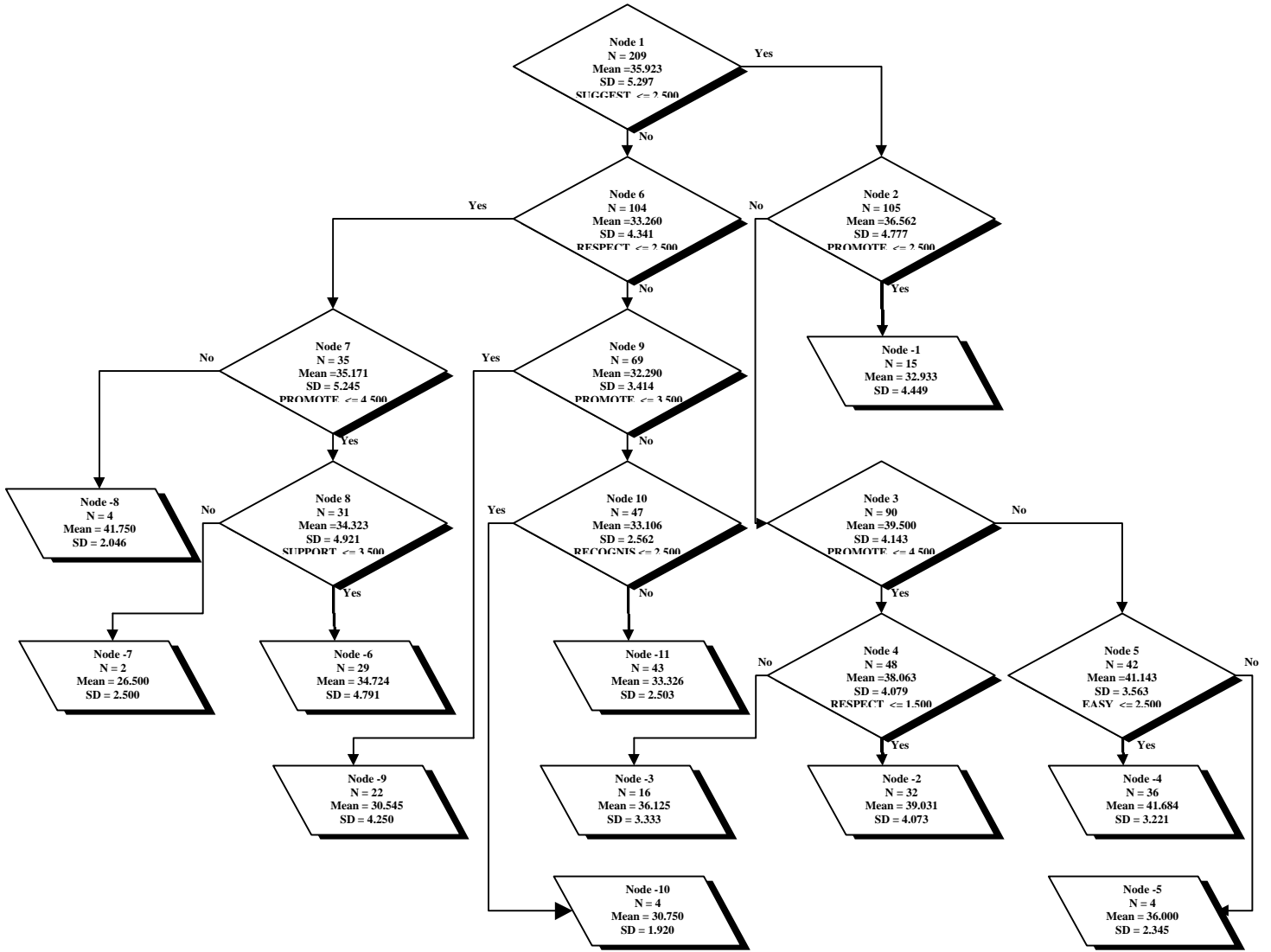
Figure 1. Sources of Variability Organisational Commitment

Model 2: Satisfaction with Change

The main summary statistics for the satisfaction-with-change (SWC) tree under the 1990 Passenger Transport Act are given in Tables 12 and 13. The tree has an overall rho-squared of 0.364 (defined as 1-relative substitution error), indicating that the nearly 36.4% of the variance in the SWC variable is explained by eight tree regression exogenous variables out of the 68 evaluated. The 8 'classifiers' in rank order of importance are: Informed, Condns, Explain, Authoris, Security, Initiate, Promote and Growage. There are 14 terminal nodes with a tree resubstitution relative error of .636, which translates into a total mean square error of .636*0.9 = 0.574 (where 0.9 is the initial variance of the SWC scale).

Two dimensions of participation - Explain ('to what extent have policies and goals been explained to you') and Informed ('to what extent are you kept informed of changes') are ranked very high as classifiers of SWC. Node one splits the sample between those who indicate little if any explanation of policies and goals of the bus business (127 out of 209 observations) and those 82 who indicate substantial explanation. Interestingly, the mean SWC is higher (4.22) for the former group than with the latter group (mean of 3.5) implying some sense of being happier with the change under the 1990 Passenger Transport Act when one is less informed about the intent of the business in terms of goals and policies.

The group privy to very little explanation are dominated (ie 123 of the 127 individuals) by a feeling of a great deal of happiness in respect of job security, seemingly associated with a much stronger commitment by organisation to keep them informed of changes under the 1990 Act regardless of the directions of change being pursued by the organisation through its policies and goals. It is assumed that many bus firms in the private sector have poorly articulated policies and goals, and operate in a reactive mode towards policies imposed on them under the 1990 Act. Indeed the group best described as happy employees, with perceptions of high amount of job security in businesses and where they have little knowledge of the firm's policies, divide into a group of 73 or 59 percent who claim that they are not kept informed of changes under the 1990 Act, and 41 percent who indicate that they are in varying degrees. This is an important message. Satisfaction-with-change is very much linked to the level of information and explanation provided by management. It appears that many bus businesses provide quality information at a time of organisational change, and equally many neglect to do this.

The 82 (or 39 percent) of the total sample who have had the policies and goals explained to them to a greater extent include a high proportion (87 percent) of individuals who reject the decentralisation statement that 'any decision I make has to have my supervisor's approval'. It is assumed that these managers are relatively senior in the management hierarchy and are closer to the policies and goals of the bus firm. This interpretation is clarified by the further segmentation on Explain within the extent scale in the range of 'some-to-great extent', where 86 percent are at the lower end of this positive range of extent. That is, the amount of information on policies and goals of the bus business still remains guarded by owners and top management. This result accords with observational evidence on practices in a very tight family-oriented private-sector industry. About two-thirds (26/41) of these middle to senior managers tend to support the view that 'a person who wants to make their own decision would be quickly discouraged here'.

Satisfaction with organisational change depends on the amount of managerial communication about what is happening. Feeling a sense of control is important to middle managers who are caught between managing downwards and managing upwards. This feeling of double jeopardy is heightened when middle managers are often responsible for implementing change in the workplace. The impact of changes

not altering work conditions and job security was an important factor in feeling satisfied with policy changes.
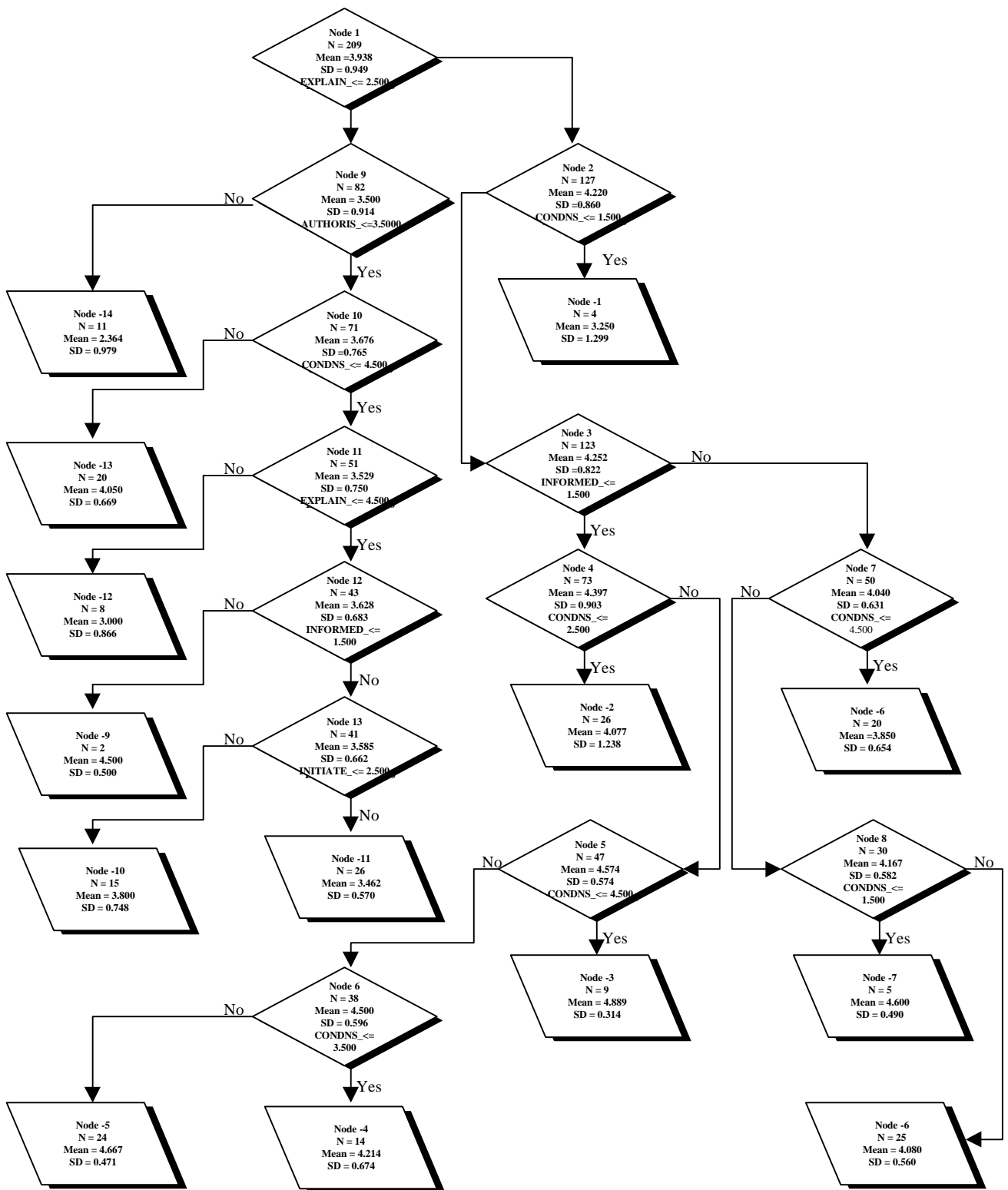
```
                          Node 1
                          N = 209
                          Mean =3.938
                          SD = 0.949
                          EXPLAIN_<= 2.500
```

```
              Node 9                           Node 2
              N = 82                            N = 127
              Mean = 3.500                      Mean = 4.220
              SD = 0.914                        SD =0.860
              AUTHORIS_<=3.5000                 CONDNS_<= 1.500
```

No

```
Node -14                                                    Yes
N = 11          Node 10
Mean = 2.364    N = 71                          Node -1
SD = 0.979      Mean = 3.676                    N = 4
           No   SD =0.765                        Mean = 3.250
                CONDNS_<= 4.500                  SD = 1.299
```

```
Node -13                Yes
N = 20          Node 11                         Node 3
Mean = 4.050    N = 51                          N = 123
SD = 0.669      Mean = 3.529                     Mean = 4.252        No
           No   SD = 0.750                        SD =0.822
                EXPLAIN_<= 4.500                  INFORMED_<=
                                                  1.500
```

```
Node -12                Yes
N = 8           Node 12                Yes      Node 4                         Node 7
Mean = 3.000    N = 43                           N = 73                         N = 50
SD = 0.866      Mean = 3.628                      Mean = 4.397        No   No    Mean = 4.040
           No   SD = 0.683                         SD = 0.903                    SD = 0.631
                INFORMED_<=                         CONDNS_<=                     CONDNS_<=
                1.500                               2.500                         4.500
```

```
Node -9                 No
N = 2           Node 13                          Yes                            Yes
Mean = 4.500    N = 41                          Node -2                         Node -6
SD = 0.500      Mean = 3.585                     N = 26                          N = 20
           No   SD = 0.662                        Mean = 4.077                   Mean =3.850
                INITIATE_<= 2.500                 SD = 1.238                     SD = 0.654
```

```
Node -10                No
N = 15          Node -11        Node 5                         Node 8
Mean = 3.800    N = 26          N = 47                         N = 30
SD = 0.748      Mean = 3.462    Mean = 4.574        No         Mean = 4.167        No
                SD = 0.570      SD = 0.574                      SD = 0.582
                                CONDNS_<= 4.500                 CONDNS_<=
                                                               1.500
```

```
                Node 6                  Yes                            Yes
        No      N = 38          Node -3                         Node -7
                Mean = 4.500    N = 9                           N = 5
                SD = 0.596      Mean = 4.889                    Mean = 4.600
                CONDNS_<=       SD = 0.314                      SD = 0.490
                3.500
```

```
Node -5             Yes
N = 24          Node -4                                        Node -6
Mean = 4.667    N = 14                                         N = 25
SD = 0.471      Mean = 4.214                                   Mean = 4.080
                SD = 0.674                                     SD = 0.560
```

Figure 2. Sources of Variability in Satisfaction with Organisational Change

Table 12. Summary Data for the Final Regression Tree - Satisfaction with way the 1990 Passenger Transport Act has been handled by your organisation

Tree	Terminal Nodes	Resubstitution Relative Error	Complexity Parameter	Relative Complexity	Rho-Squared
1	14	0.636	0.000	0.000	0.364
2	13	0.641	1.090	0.006	0.359
3	12	0.647	1.127	0.006	0.353
4	11	0.654	1.203	0.006	0.346
5	9	0.669	1.455	0.008	0.331
6	8	0.678	1.595	0.008	0.322
7	8	0.692	2.659	0.014	0.308
8	6	0.713	3.893	0.021	0.287
9	3	0.775	3.940	0.021	0.225
10	2	0.863	16.405	0.087	0.137
11	1	1.000	25.865	0.137	0.000

Table 13. Summary Data for the Final Regression Tree: Variable Importance - Satisfaction with way the 1990 Passenger Transport Act has been handled by your organisation.

Exogenous Variables *See Appendix A for full wording on each variable*	Acronym	Relative Importance	Ranking
Work Factors			
Security	Security	64.65	5
Promotion	Promote	30.04	7
Conditions of work	Condns	77.69	2
Managerial Response			
Autonomy in decision making	Initiate	61.33	6
Requesting approval	Authoris	74.44	4
Extent of Participation			
Policies and goals explained	Explain	75.78	3
Kept informed	Informed	100.0	1
Socio-Economic Characteristics			
Annual Wage	Growage	14.21	8

Conclusions

Organisation structure (ie. decentralisation and participation) and satisfaction with current changes considered together influence organisational commitment.

Specifically, middle managers will express higher organisational commitment, when they directly participate in the implementation of organisational change. This study found that the two most important factors in the relationship between participation and commitment were the managers' capacity to make suggestions to their supervisors for improving the organisation and for improving their own work or role of the middle manager. The perceived response of the immediate supervisor is also significant in influencing the commitment of middle managers. Organisational commitment is enhanced when middle managers believe that the quality of management in their organisation is high, they are treated with

fairness and respect, given support and guidance and recognised for work efforts. Perceived opportunities for promotion also enhance the commitment of middle managers.

Specifically, middle managers will be more accepting of imposed (ie. external) organisational change, when they are kept informed of changes, are happy with their work context, and new policies and managerial goals are explained to them. Greater satisfaction is expressed when middle managers feel they have the capacity to act on their own behalf without senior management approval, feel secure, autonomous and have prospects for promotion.

Middle managers declaring low satisfaction with changes may attribute change as 'just another ploy by the government or owners' to make them work harder for less (Salancik and Pfeffer 1978). Expressed dissatisfaction with change may be attributed to unmet expectations for the use of 'responsible autonomy' (Friedman 1977), job security and promotion.

There are a number of applications of this research for management. It is important that processes which elicit the participation of middle managers do not diffuse responsibility but heighten it. Under conditions of complex organisational change, the study findings suggest that it is undesirable, and even impossible, for middle managers to work under conventional forms of managerial control. Middle managers are committed to decisions when it significantly increased their 'real' control. A climate conducive to change needs to be developed to encourage organisational commitment among middle managers to facilitate their involvement and in turn, shape employees' expectations and attitudes positively about the changes taking place in their work organisations (Lincoln and Kalleberg 1990).

Gaining the commitment of middle managers is not something that can be engendered through new forms of management gimmickry. Sustaining organisational commitment is based on people experiencing high personal investment with their employing organisation, having the capacity to participate in decision making, being acknowledged by supervisors and satisfied with the work context. This study shifts the emphasis of the analysis of organisational change from a solely strategic orientation to an internal operational focus with an emphasis on the role of the middle manager in the change process. The findings of this study provide an understanding of a management process that is potentially most problematic and merits a greater focus.

Appendix A. The Survey Instrument

I.   FEELINGS ABOUT YOUR WORK AND YOUR ORGANISATION

Please circle <u>one</u> number only for each question using the key.

No, I strongly disagree	1
No, I disagree	2
I'm not sure	3
Yes, I agree	4
Yes, I strongly agree	5

	Strong Disagreement			**Strong Agreement**	
1.1. I am quite proud to be able to tell people who it is I work for	1	2	3	4	5
1.2. I sometimes feel like leaving this organisation for good	1	2	3	4	5
1.3. I'm not willing to put myself out just to help this organisation	1	2	3	4	5
1.4. Even if the business were not doing too well financially, I would be reluctant to change jobs	1	2	3	4	5
1.5. I feel myself to be part of this organisation	1	2	3	4	5
1.6. In my work, I like to feel I am making some effort, not just for myself but for this organisation as well	1	2	3	4	5
1.7. The offer of a bit more money with another employer would not seriously make me think of changing my job	1	2	3	4	5
1.8. I would not recommend a close friend to join our organisation	1	2	3	4	5
1.9. To know that my own work had made a contribution to the good of this organisation would please me.	1	2	3	4	5

HOW **HAPPY** ARE YOU ABOUT

	Very Happy				**Very Unhappy**
1.10. job security	5	4	3	2	1
1.11. pay received	5	4	3	2	1

1.12. promotion opportunities	5	4	3	2	1
1.13. actual hours worked	5	4	3	2	1
1.14. working conditions	5	4	3	2	1
1.15. overall coy policy and administration	5	4	3	2	1

2.   YOUR RELATIONSHIP WITH YOUR SUPERVISOR AND MANAGEMENT

Please circle <u>one</u> response only for each question.

	Definitely False			**Definitely True**
2.1. There can be little action taken here until senior management approves a decision	1	2	3	4
2.2. A person who wants to make his/her own decisions would be quickly discouraged here	1	2	3	4
2.3. Even small matters have to be referred to someone higher up for a final answer	1	2	3	4
2.4. I have to ask my supervisor before I do almost anything	1	2	3	4
2.5. Any decision I make has to have my supervisor's approval	1	2	3	4
2.6. I believe that management respects and treats me fairly	1	2	3	4
2.7. I receive support and guidance from my supervisor	1	2	3	4
2.8. The overall quality of management is good in this organisation	1	2	3	4
2.9. My work efforts are recognised by management	1	2	3	4

3.   PARTICIPATION

Please circle <u>one</u> response only for each question.

3.1. In general, how much say or influence did you have about the changes under the Passenger Transport Act at your level?	A very great deal of influence	A great dealof influence	Quite a bit of influence	Some influence	Little or no influence
3.2. Do you feel you can influence the decisions of your immediate supervisor regarding things about which you are concerned?	To a great extent	To a considerable extent	To some extent	To a very little extent	Not at all
3.3. Does your immediate supervisor ask your opinion when a problem comes up that involves you?	Always	Often	Some-times	Seldom	Never
3.4. If you have a suggestion for improving <u>your job</u> in some way, how easy is it for you to get your ideas across to your immediate supervisor?	Very difficult	Somewhat difficult	Not too easy	Fairly easy	Very easy
3.5. If you have a suggestion for improving the <u>set up at the depot</u> in some way, how easy is it for you to get your ideas across to your immediate supervisor?	Very difficult	Somewhat difficult	Not too easy	Fairly easy	Very easy
3.6. To what extent have policies and goals been explained to you?	To a great extent	To a considerable extent	To some extent	To a very little extent	Not at all
3.7. To what extent are you kept informed of changes?	To a great extent	To a considerable extent	To some extent	To a very little extent	To a very little extent

4. YOUR VIEWS ON CURRENT CHANGES UNDER THE PASSENGER TRANSPORT ACT 1990

Please circle <u>one</u> number only for each question using the key.

Key:	**Very Satisfied**	**5**	
	Satisfied		**4**
	Neutral	**3**	
	Dissatisfied		**2**
	Very Dissatisfied		**1**

4.1. How satisfied are you about the way the
changes under the Passenger Transport Act
1990 have been handled by the government?
5   4   3   2   1

Comment_____

_____

4.2. How satisfied are you about the way the
changes under the Passenger Transport Act
1990 have been handled by your organisation?
5   4   3   2   1

Comment_____

_____

4.3. How satisfied are you about the effect of
the changes on services offered by your organisation?
5   4   3   2   1

Comment_____

_____

4.4. How satisfied are you about the effect of
the changes on your job?
5   4   3   2   1

Comment_____

_____

5.	DEMOGRAPHICS:

Please tick the relevant box in each question

5.1. **Age group**
	25 or under 25 years [ ] 26-35 [ ]	36-45 [ ]	46-55 [ ]
	56 years and over [ ]

5.2. **Education and Training**

(Please tick more than one box if applicable)
a.	Tafe Certificate [ ]
b.	University Degree [ ]
c.	Certificate of Transport Management, University of Sydney [ ]
d.	Driver Training Course [ ]
e	Other...

5.3. **Current Occupation/Position in your Organisation**

(Please tick more than one box if applicable)
	Driver [ ]	Supervisor [ ] Manager [ ]
	Owner/operator [ ] Employed in family business [ ]
		Other...

5.4. **Gender**	a. Male [ ]	b. Female [ ]

5.5. **Wage Range (including allowances & bonuses)**
	$25,000 or under [ ]	$26,000-$35,000 [ ]
	$36,000-$45,000 [ ]	$46,000-$55,000 [ ]
	$56,000-$65,000 [ ]	Over	$66,000 [ ]

General Comments about the Changes taking place in the Bus Industry:

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