

INFLUENCING EMPLOYEE INNOVATION THROUGH STRUCTURAL EMPOWERMENT INITIATIVES: THE NEED TO 'FEEL' EMPOWERED

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ABSTRACT

This study examines the relationship between various structural empowerment initiatives, psychological empowerment, and employee innovation. Structural empowerment initiatives – defined here as progressive human resource management practices that include participative decision making, information sharing, recognition and reward, training and development, and non-excessive workload – were hypothesised to impact the innovation process indirectly through psychological empowerment. A questionnaire survey among 756 employees from an Australian manufacturing firm provides some support for the proposed indirect linkage. Overall, findings suggest it is not sufficient to simply provide empowering conditions in the workplace (e.g., structural empowerment initiatives like progressive HRM practices). Instead, employees must psychologically interpret and react to these conditions via felt empowerment. Theoretical and practical implications of these findings are discussed.

INTRODUCTION

Whilst it has long been recognised that organisational survival depends in no small part on the ability to innovate (Schumpeter, 1934), an ever increasing competitive business environment has undoubtedly increased the speed and rate with which organisations are required to develop novel services and products in order for them to maintain and enhance their position (Searle & Ball, 2003). One way for organisations to become more innovative lies in their ability to foster, develop and utilise the talents, particularly the innovative potential, of their employees (Amabile, 1988; Oldman & Cummings, 1996; Searle & Ball, 2003). The issue for organisations then, is how to motivate employees capable of formulating ideas to innovate, and how to create the conditions by which organisational members can implement their innovative ideas.

In this study, the potential for organisations to motivate innovative behaviour through the application of a number of organisational practices and policies is investigated. In particular, attention is paid to recent research in the human resource management (HRM) field on what has been termed 'progressive' HRM. Theoretically it is assumed that progressive HRM practices, that include such management practices as participative decision making, investment in training, information sharing, job design, and merit based rewards, serve to increase employee innovative behaviour by creating a more involved and committed workforce, one in which work behaviour is primarily self-initiated and self-monitored rather than controlled by the sanctions and controls of traditional Tayloristic management methods (Wood & Albanese, 1995; Wood & de Menezes, 1998).

In effect, progressive approaches to HRM are assumed to influence employee behaviour in a positive way because they are empowering. Employees are provided with greater opportunities to participate in decisions that affect them and are provided with the resources to do so effectively. Empowered employees are in turn expected to think for themselves about the requirements of the job, and to move beyond blindly doing what they are told. Empowerment essentially involves learning how to take the initiative and respond creatively to the challenges of the job. As yet, however, there is very little research linking empowerment with innovation, nor the management practices that may assist in enhancing the felt empowerment of employees. Thus, the purpose of the current study was to determine whether progressive HRM, as a structural empowerment initiative, is associated with employee innovation. In particular, it is expected that psychological empowerment will play a mediating role in translating structural empowerment initiatives into employee innovative behaviour.

Structural and Psychological Empowerment

Although not new, the concept of “empowerment” has gained increased popularity in the management field over the last decade (Wall, Wood, & Leach, 2004). Used to describe the enhancement of employee self-efficacy and control (Conger & Kanungo, 1988), researchers have distinguished between two broad perspectives on empowerment: the structural and the psychological approach. Originally, the structural view focused on those management practices designed to “empower” employees, such as the delegation of decision making and the provision of increased access to information and resources for individuals at lower levels of the organisation (Bowen & Lawler, 1992). Empowerment as progressive management practice thus reflects the antithesis of traditional Tayloristic thinking (Wall et al., 2004), with the delegation of decision making prerogatives to employees, along with the discretion to act on one’s own. The psychological approach to empowerment, however, suggests that it is not sufficient to expect employees to behave in an empowered way simply by making the necessary changes at the structural level (Wall, et al., 2004). Instead, employees must experience a sense of empowerment if the expected benefits of empowerment initiatives are to be realised.

Building on the work of Conger and Kanungo (1988), Thomas and Velthouse (1990) suggested individuals experience empowerment through four cognitions: meaning, competence, self-determination, and impact. Meaningfulness concerns the value a task holds in relation to a person’s value system. Competence refers to confidence in one’s job performance abilities. Self-determination refers to feelings of control over one’s work. Impact is a sense of being able to influence important outcomes within the organisation. Together, these four cognitions form the basis for feeling empowered. The lack of any single dimension will decrease but not eliminate the overall degree of empowerment experienced (Spreitzer, 1995). The validity of the four-dimension conceptualisation of psychological empowerment has been supported in the literature (Kraimer & Seibert, 1999; Spreitzer, 1995; Spreitzer, De Janasz, & Quinn, 1999; Spreitzer, Kizilos, & Nason, 1997).

Linking Empowerment with Innovation

Empowered individuals have been shown to take a more proactive approach toward shaping and influencing their work environment (Spreitzer et al., 1997). As such, empowerment is expected to be positively related to innovative responses to the work environment. In this study, innovation is defined as a process involving the generation, adoption, implementation and incorporation

of new ideas, practices or artefacts within the organisation (Van de Ven, Angle, & Poole, 1989). Following Unsworth (2001), focus is placed upon two distinct aspects of the innovation process: the suggestion phase and the implementation phase.

Existing research suggests that empowerment may be conducive to employee innovation. Redmond, Mumford and Teach (1993), for example, found that employees with high intrinsic task motivation (consistent with the meaning dimension of empowerment) were more innovative. Similarly, self-efficacy (consistent with the competence dimension of empowerment) is also likely to lead to more innovation due to positive expectations of success (Amabile, 1988). Research has also found that having freedom to decide what to do and how to do one's work, a sense of control over one's work and ideas, and freedom from organisational or work constraints all enhance individuals' capacity for innovative behaviour (Amabile, 1988). More generally, in case studies of entrepreneurial organisations, Kanter (1983) found that empowerment and innovation were inextricably linked.

Summary and Hypotheses

To act innovatively, employees must engage in new ways of thinking and acting, experiment with new concepts, and search for creative solutions to problems (Conger & Kanungo, 1988). The most creative and innovative individuals are assumed to be intrinsically motivated as they tend to be more curious and learning orientated, more cognitively flexible, willing to take risks, and more persistent in the face of obstacles and challenges (Zhou, 2003).

Psychological empowerment is a form of intrinsic motivation that can enhance employee innovation and itself can be enhanced through the provision of appropriately designed structural empowerment initiatives, such as that evidenced by progressive approaches to HRM. As such, the following hypotheses were proposed:

Hypothesis 1: Progressive human resource management practices are positively related to the empowerment dimensions.

Hypothesis 2: The empowerment dimensions are positively related to employee innovation.

Hypothesis 3: The empowerment dimensions (meaning, impact, self-determination, and competence) mediate relations between progressive HRM and employee innovation.

METHOD

Participants and Procedure

Data were collected from a sample of employees from a large Australian manufacturing company. The company operates four divisions – mining, mineral processing, rail and industrial – across 12 manufacturing plants (11 in Australia and 1 in New Zealand) and is recognised as one of Australia's biggest and oldest heavy engineering companies employing approximately 2000 employees. Confidential paper and pencil surveys were administered on company time to 11 of the company's plants (one organisational unit was not surveyed due to a large change program undertaken during the survey period). Subsequently, questionnaires were administered to approximately 1350 employees. Completed questionnaires were returned from a total of 756 employees for an estimated response rate of 56%. In terms of organisational tenure, 29.5% of

respondents had been members of the organisation for less than 1 year, 13.6% for 1-2 years, 16.2% for 3-5 years, 18.5% for 6-10 years, 9% for 11-15 years, 5.5% for 16-20 years, and 7.7% for more than 20 years. In terms of participant age, 25% of respondents were aged 29 years or below, 56% were aged between 30 and 49, whilst 19.1% of respondents were aged 50 and above. 91.7 per cent of respondents were non-managerial employees.

Measures

Wherever possible, previously validated measures were used to assess focal variables. Except where indicated, respondents used 5-point Likert scales ranging from *strongly disagree* to *strongly agree* to respond to all items. Items were coded such that a high score reflects a high level or more favourable assessment of the focal construct.

Structural Empowerment Initiatives

Structural empowerment was operationalised as employee level perceptions of five separate 'progressive' human resource management practices. These practices have been termed progressive as they reflect a move away from traditional command-and-control methods of managing employees to the provision of a more empowering work environment.

Participative Decision Making. Participative decision making was measured using 6 items from Vandenberg, Richardson and Eastman's (1999) 7-item 'power' scale. The scale assesses the extent to which employees are able to make decisions concerning their day-to-day work activities. Chronbach's alpha was .83.

Information Sharing. Information sharing was measured using 6 items from the communication scale of Furnham's (1991) Organisational Climate Demonstration Questionnaire (OCQ). These six items were chosen based upon their relevance to both upward (e.g., "I have adequate opportunities to express my views in my department") and downward communication (e.g., "I am kept adequately informed about significant issues in the organisation as a whole") within the organisation. Chronbach's alpha was .81.

Training and Development. Training and development was measured using 7 items from Vandenberg, et al's (1999) 8-item 'knowledge' scale. The scale assesses the extent to which employees feel they receive adequate training and development opportunities within the organisation. Chronbach's alpha was .90.

Recognition and Reward. Three items were used to assess perceptions of the extent to which employees believe their effort and work accomplishments will be suitably recognised and rewarded by their organisation. These items were adapted from Spector's (1985; 1997) job satisfaction measure on the facets of rewards and benefits and combined in this study to form a measure of "recognition and reward". Chronbach's alpha was .67

Non-Excessive Workload. Work load, an indicator of job design, was assessed using Beehr, Walsh and Tabler's (1981) three-item role overload scale. An example item is "It often seems I have too much work to do for one person". Scores were reverse scored such that mean workload scores reflect employee freedom from excessive workload. Chronbach's alpha was .71.

Psychological Empowerment

The 12-item empowerment scale developed and validated by Spreitzer (1995; 1996) was used to assess cognitions and feelings of empowerment. This scale contains 3 items for each of the 4 dimensions of empowerment. Sample items include “The work I do is meaningful” (meaning), “I am confident about my ability to do my job” (competence), “I have significant autonomy in determining how I do my job” (self-determination), and “My impact on what happens in my department is large” (impact). Chronbach alpha reliabilities for the four empowerment scales were adequate in this sample (meaning, $\alpha = .81$; competence $\alpha = .87$; self-determination $\alpha = .70$; impact $\alpha = .74$).

Innovation Variables

Innovation was measured using both the number of ideas suggested and the number implemented, using scales originally developed by Borrill, et al. (1998) and subsequently used by Axtell, et al. (2000) and Clegg, Unsworth, Epitropaki and Parker (2002) The measure of suggestions made was a 6-item scale that asks respondents to indicate the extent to which they had proposed changes to various aspects of work over the past six months, including suggesting (1) new targets or objectives; (2) new working methods or techniques; (3) new methods to achieve work targets; (4) new information or recording systems; (5) new products or product improvements; and (6) other aspects of work. Respondents indicate their responses on a five-point Likert types scale from 1 (“Rarely”) to 5 (“Very often”). The measure of *implementation of suggestions and ideas* covered the same aspects of work as detailed above (6 items), but asks respondents to indicate the extent to which the suggestions had been implemented. A principal components analysis with varimax rotation revealed a distinctive two-factor solution with all items loading on their respective factors at .81 or higher. Both measures also showed good internal consistency (Cronbach’s alpha = .90 and .93, respectively).

RESULTS

Descriptive statistics and correlations are provided in Table 1. Prior to tests of analyses, a confirmatory factor analysis was performed to assess the distinctiveness of the measures. Each measure was specified as unidimensional with appropriate items loading on their respective factors. AMOS 5 was used to evaluate the fit of the measurement model. Global fit indices ($\chi^2 = 2621.87$, $df = 1072$; CFI = .92; NNFI = .90; RMSEA = .044) indicates that the expected nine factor structure fits the data well. All factor loadings for the measurement model were significant and individual loadings were all .40 or above. In contrast, a single factor measurement model provided poor fit to the data ($\chi^2 = 11177.29$, $df = 1127$; CFI = .45; NNFI = .41; RMSEA = .109).

I used Baron and Kenny’s (1986) three-step procedure for assessing the mediating role of the psychological empowerment dimensions. First, the independent variables should be related to the dependent variables; second, the independent variables should be significantly related to the mediator variables (progressive HRM should be associated with psychological empowerment); and third, the mediating variables should be related to the dependent variables with the independent variables included in the equation. If the first three conditions hold, at least partial mediation is present. If the independent variables have nonsignificant beta weights in the third step, then complete mediation is present (Liden, Wayne, & Sparrowe, 2000). Following from the procedure

detailed above, the innovation variables were first regressed on the progressive HRM variables (see Table 2). Satisfying the first requirement for mediation, the beta weights for participative decision making, information sharing, and non-excessive workload were all significant and positively associated with both suggestions made and suggestions implemented.

Table 1. Means, Standard Deviations, and Correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Impact	2.98	0.87	--									
2. Meaning	3.58	0.47	.63	--								
3. Self-determination	3.64	0.71	.54	.63	--							
4. Competence	4.01	0.57	.15	.56	.31	--						
5. PDM	3.22	0.57	.56	.42	.52	.13	--					
6. Information sharing	3.14	0.58	.54	.40	.50	.10	.80	--				
7. Training & development	3.09	0.67	.51	.36	.44	.07	.77	.82	--			
8. Non-excessive workload	2.96	0.71	.00	.03	.15	.12	.15	.22	.22	--		
9. Reward & recognition	2.95	0.68	.35	.23	.31	.01	.44	.56	.62	-.34	--	
10. Suggestions made	2.79	1.03	.40	.38	.24	.13	.14	.12	.11	.14	.03	--
11. Suggestions implemented	2.72	0.96	.46	.36	.30	.07	.41	.45	.42	-.02	.25	.48

Note: PDM = Participative Decision Making. Correlations above .07 significant at $p < .05$; Correlations above .10 significant at $p < .01$. Correlations above .13 significant at $p < .001$.

Table 2. Dependent variables regressed on independent variables

Variable	<i>F</i>	<i>df</i>	Adjusted R^2	β
Dep. Var: Suggestions Made	7.99***	5,736	.05	
Participative decision making				.20*
Information sharing				.17*
Training & development				-.20
Non-excessive Workload				.17***
Recognition and Reward				.03
Dep. Var: Suggestions Implemented	39.71***	5,273	.21	
Participative decision making				.20**
Information sharing				.41***
Training & development				-.14
Non-excessive Workload				.09*
Recognition and Reward				.05

Note. Dep. Var. = dependent variable. * $p < .05$, ** $p < .01$, *** $p < .001$

Next, the mediator variables (psychological empowerment dimensions) were regressed on the independent variables (Table 3). Satisfying the second requirement for mediation and providing some support for Hypothesis 1, the beta weights for the five HRM practices were almost all significant and positively associated with the four empowerment dimensions. Apart from the competence dimension, the progressive HRM practices displayed a substantive association with empowerment, explaining between 24 and 39 per cent of the variance in impact, self-determination, and meaning. Finally, to test the third step of mediation, the dependent variable was regressed on the mediating variables, with the independent variable included in the equations (Table 4). With all five HRM variables in the equation, the beta weights for impact and meaning were significant for both suggestions made and suggestions implemented. Competence and self-determination were not significant for the innovation variables, thereby not passing the requirement for mediation. These results also provide partial support for the hypothesis that psychological empowerment would be associated with employee innovation (hypothesis 2).

Table 3. Mediators regressed on independent variables

Mediator and variable	<i>F</i>	<i>df</i>	Adjusted R^2	β
Mediator: Impact	98.23 ^{***}	5,744	.39	
Participative decision making				.65 ^{***}
Information sharing				.50 ^{***}
Training & development				.64 ^{***}
Non-excessive Workload				.15 ^{***}
Recognition and Reward				.23 ^{***}
Mediator: Competence	6.51 ^{***}	5,744	.04	
Participative decision making				.30 ^{***}
Information sharing				.18 [*]
Training & development				.35 ^{**}
Non-excessive Workload				-.12 ^{**}
Recognition and Reward				-.04
Mediator: Self-Determination	83.52 ^{***}	5,744	.36	
Participative decision making				.73 ^{***}
Information sharing				.62 ^{***}
Training & development				.88 ^{***}
Non-excessive Workload				-.03
Recognition and Reward				.19 ^{***}
Mediator: Meaning	47.41 ^{***}	5,744	.24	
Participative decision making				.56 ^{***}
Information sharing				.50 ^{***}
Training & development				.66 ^{***}
Non-excessive Workload				.13 ^{***}
Recognition and Reward				.16 ^{***}

Note. ^{*} $p < .05$, ^{**} $p < .01$, ^{***} $p < .001$

Table 4. Dependent variables regressed on mediators (with independent variables included)

Mediator and variable	<i>F</i>	<i>df</i>	Adjusted <i>R</i> ²	<i>β</i>
Dep. Var: Suggestions Made	22.34***	9,732	.21	
Participative decision making (<i>fully mediated</i>)				-.15
Information sharing (<i>fully mediated</i>)				-.12
Training & development				.17
Non-excessive Workload				.08*
Recognition and Reward				-.09
Impact				.35***
Competence				-.02
Self-Determination				.01
Meaning				.23***
Dep. Var: Suggestions Implemented	31.75***	9,718	.28	
Participative decision making (<i>fully mediated</i>)				.01
Information sharing (<i>partial mediation</i>)				.26**
Training & development				.05
Non-excessive Workload				.04
Recognition and Reward				-.03
Impact				.35***
Competence				-.06
Self-Determination				-.06
Meaning				.16**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

To determine the presence of full or partial mediation, I next examined all cases in which the first three conditions of mediation had been met. As shown in Table 4., the beta weights for participative decision making and information sharing were non-significant with empowerment in the equation, thereby indicating that the relationship between participative decision making and suggestions made is fully mediated by impact and meaning, as is the relationship between information sharing and suggestions made. Similarly, the relationship between participative decision making and suggestions implemented is fully mediated by impact and meaning, whilst the lower but still significant beta weight for information sharing in the suggestions implemented equation suggests partial mediation for the information sharing-suggestions made relationship.

In addition to the mediation effects shown for the meaning and impact dimensions of empowerment, the non-excessive workload variable showed significant direct effects for suggestions made, even when included in the regression equation with other HRM practices and psychological empowerment. Thus, aspects of work design that limited role overload made significant contributions to explaining variation in the number of suggestions made by employees.

DISCUSSION

In order to survive, organisations must innovate. Yet despite the emphasis in fostering innovation, 'little is known about the conditions that promote the creative performance of individual employees in organisations' (Oldman & Cummins, 1996, p. 607). In this study, an attempt was made to link structural empowerment initiatives, in this case progressive HRM practices, with employee innovation. Results indicate that both participative decision making and information sharing have a positive association with the two elements of the innovation process: suggestions made and suggestions implemented. Moreover, results indicate that these two HR practices operate to influence innovation through their effects on the impact and meaning dimensions of empowerment. Felt empowerment fully mediates the relationship between participative decision making and innovation, and partially mediates the relationship between information sharing and innovation. Thus, structural empowerment initiatives that provide employees with more decision making latitude and that provide greater access to information create within employees a greater sense of personal meaning and sense of influence within the organisation. This experience is, in turn, associated with greater idea generation and propensity to help implement innovations in the organisation. What these results also tell us is that it is not sufficient to simply provide empowering conditions in the workplace (e.g., structural empowerment initiatives like progressive HRM) and expect employees to be more innovative. Instead, employees must psychologically interpret and react to these conditions (Laschinger, et al., 2004).

Contrary to expectation, the provision of a none too demanding workload was found to be directly related to innovation. Previous research on the effects of workload and work pressure on employee innovation suggests seemingly paradoxical influences (Amabile, Conti, Coon, Lazenby & Herron, 1996). On the one hand, excessive workload pressure has been found to undermine creativity and innovation (e.g., Amabile, et al. 1996). Amabile (1988) has suggested that workload negatively impacts creativity and innovation particularly when workload is seen as an externally imposed means of control. In contrast, Andrews and Ferris (1972) found that at least some workload pressure was generally associated with high creativity in R&D scientists, suggesting that pressure can have a positive influence if it is seen as arising from the challenging nature of the task itself (Amabile, et al. 1996). In this study it was expected that non-excessive workload would be positively associated with perceptions of self-determination, or personal control, such that designing work not to be over demanding would prove empowering. The results suggest this may not be the case and future research examining the effects of workload pressure on employee innovation should prove fruitful in explicating this link.

There are several practical implications for organisations who wish to promote employee innovation. First, empowering individuals may help foster innovative behaviour. Second, the use of participative decision making and extensive information sharing may be one means by which an organisation can influence felt empowerment amongst employees. This suggests the current attention afforded to 'progressive HRM' and 'empowerment' may be more than just a passing 'fad' and may instead provide organisations with an avenue for harnessing the innovative potential of their employees. Future research should be directed towards identifying other management techniques that impact psychological empowerment, or those management practices that impact innovative behaviour more directly, as was found with the freedom from excessive workload variable (a job design feature) in the current study.

LIMITATIONS

Among the limitations of the present research is the fact that all variables were assessed using self-report measures and thus may be susceptible to common method variance. It is noteworthy, however, that there was considerable variability across HRM practices in terms of their correlations with psychological empowerment and innovation, suggesting that respondents were making meaningful discriminations as they responded to the survey. Likewise, the results of the confirmatory factor analysis suggests respondents were able to distinguish the 11 constructs examined. Another weakness of the present study is the cross sectional nature of the design which necessarily precludes any causal assessment. Thus, whilst the results support the assumption that HRM work to impact innovative behaviour, we cannot rule out the alternative interpretation that causality operates in the reverse direction. That is, employees who make more suggestions or assist in their implementation may simply evaluate their organisation's HRM practices in a more positive light or likewise report feeling more empowered in the workplace.

Despite these limitations, this study provides some initial evidence to suggest that psychological empowerment, the motivational process of feeling enabled, is an important mechanism in the link between structural empowerment and employees' innovative behaviour.

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