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The Effects of Employees' Empowerment on Job Satisfaction: Empirical Analysis of the Demand-Control Model



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Introduction (1)



- ❑ Employees are very important in a workplace – their satisfaction with the job is important.
- ❑ There is the need to improve and maximize employees' efforts and commitment – the introduction of employees' empowerment practices (Askenazy and Caroli, 2010; Askenazy, 2001; Kling, 1995; Bauer, 2004; Kato and Morishima, 2002).
- ❑ Employees' empowerment practices – focus on individual forms
 - ❑ Employee-centred practices that promote employees' involvement and participation.
 - ❑ Decision making opportunities, information sharing practices, and incentive schemes.
- ❑ Bender et al. (2010) observed positive and negative effects of individual incentive schemes on productivity.
- ❑ In the work psychology literature, the benefits and costs of these practices are theoretically analysed using Demand-Control model.

Table 3.1: Summary of Previous Findings on Employees' Participation, Involvement and Job satisfaction

Author	Aim of Study	Data	Empirical Approach	Findings (job satisfaction as dependent variable)
Cox et al. (2006)	Relationship between Employee Involvement and Participation (EIP) and job satisfaction	WERS98	Linear and ordered logit estimations	Joint presence of the EIP practices was more significant in predicting job satisfaction than single EIP practice.
Cox et al. (2009)	Effectiveness of employees' participation practices and job satisfaction	WERS2004	Linear regressions	<ul style="list-style-type: none"> • Employees' perceptions of participatory practices were more influential in predicting job satisfaction than management approaches to employees' participation. • Manager's effectiveness in employees' participation processes was an important predictor of job satisfaction.
Wood and de Menezes (2011)	Relationship between high involvement management and employees' wellbeing (anxiety-contentment and job satisfaction)	WERS2004	Weighted multi-level regression models	<ul style="list-style-type: none"> • They found a positive relationship consultative management on job satisfaction. • They also found a positive relationship between job control and job satisfaction.
Berg (1999)	The impact of a participatory atmosphere on job satisfaction	Data on US steel industry	Ordered logit estimation	They found that employees, who (i) are involved in problem solving groups that entail the utilisation of skills and knowledge, (ii) have cordial relationships with their employers and (iii) believe that the firm is committed to ensuring a work-life balance, tend to have a higher probability of job satisfaction
Mohr and Zoghi (2008)	High involvement work design' and job satisfaction in Canadian workplaces	1999-2002 Canadian Workplace and Employee Survey	Ordered probit estimations	They found that suggestion schemes, information sharing, task teams and quality circles were positively and significantly related to overall job satisfaction
Zatzick and Iverson (2011)	Job satisfaction and absenteeism in high-involvement work systems	1999-2002 Canadian Workplace and Employee Survey	Hierarchical linear modelling	They found a positive relation between job satisfaction and employees' involvement
Westhuizen et al. (2012)	Impact of culture on participative decision-making and job satisfaction	European Values Study (EVS)	Ordered logistic estimation	They found that employees are more likely to experience higher levels of job satisfaction when their freedom to participate in decisions increases.

Introduction (2)



- ❑ This model suggests that an employee's well being depends on the balance between the demands associated with the job and the employee's degree of control in the job (Karasek, 1979).

- ❑ Studies have suggested that empowerment practices affect job satisfaction through job control factors inherent in these practices; however, the direction of effect may be affected by the level of job demands associated with the presence of the practices (Wood, 2008; De Witte et al., 2007; Noblet et al., 2006; Noblet and Rodwell, 2009; Mikkelsen et al., 1999; Morrison et al., 2003; Akerboom and Maes, 2006).

Demand-Control model (1)



- ❑ Emphasis is on job demands and the degree of decision authority and skills discretion.
- ❑ Job demands – quantity and pace of work associated with the job, e.g. work overload, work intensity
- ❑ Job control – how employees make decisions about work and working conditions and their ability to utilise their skills.
- ❑ Focus: Decision authority
- ❑ Demand-Control model – 2 major propositions
 - ❑ Combination of high levels of job demands and low levels of control results in job stress
 - ❑ The presence of high levels of job control and high levels promotes personal growth, learning, motivation and skills acquisition

Theoretical Framework (2)



- ❑ With emphasis on the effects of the joint presence of job demands and job control, the demand-control model outlines four types of jobs:
 - ❑ Stressful jobs – HD & LC
 - ❑ Less stressful jobs – LD & HC
 - ❑ Active jobs – HD & HC
 - ❑ Passive – LD & LC

Hypotheses (1)



- ❑ **Hypothesis 1:** Employees are less likely to be satisfied with different facets of the job in the presence of high levels of job demands
- ❑ **Hypothesis 2:** Employees are more likely to be satisfied with various aspects of the job when they have control over different aspects of their work.
- ❑ **Hypothesis 3:** The joint presence of a high level of job demands and less control opportunities is negatively related to various forms of job satisfaction.
- ❑ **Hypothesis 4:** A high level of job control moderates the negative consequences of a high level of job demands.

Hypotheses (2)



- ❑ **Hypothesis 5(a):** job control and EO policies are complementary, such that, the joint effect on different forms of job satisfaction is greater than the sum of individual effects when implemented separately in the workplace.
- ❑ **Hypothesis 5(b):** EO policies moderates the negative effects of job demands on job satisfaction.

Data



2011 Workplace Employment Relation Survey on British workplaces.

- ❑ Employee and workplace data on a representative sample of workplaces.
- ❑ Interviews conducted with the most senior personnel managers and questionnaires distributed to employees.
- ❑ Meaningful information from 2,680 workplaces out of 7,134 workplaces (response rate of 38%).
- ❑ Employee questionnaires were distributed to 81 % of the workplaces. 21,981 questionnaires were returned and this accounts for 50% response rate.
- ❑ Provides detailed information on employee-management relationship, job satisfaction, motivation issues, consultation mechanisms, incentive schemes, EO policies, workplace characteristics and employee characteristics

Variables (1)



- ❑ Dependent variables: employees' satisfaction with: sense of achievement, initiative, influence, training, opportunity to develop skills, pay, job security, the work itself and overall decision-making.

- ❑ Explanatory variables:

Job demands: Measures include the degree of employees agreement or disagreement with the following statements:

‘My job requires I work very hard’ (work intensity),

‘I never seem to have enough time to get my work done’ (work overload)

‘I often find it difficult to fulfil commitments outside of work because of the amount of time I spend on my job’ (timing demand)

Variables (2)



Job Control: Measures include employees' influence over various aspects of work: the tasks they do in their jobs, the pace of work, the way they do their jobs, the order tasks are carried out and the time they finish or start their working day.

Control Variables:

- ❑ Engagement practices such as: individual and collective participatory practices, different types of management, individual and collective payment schemes.
- ❑ Fairness at the workplace: EO policies and right to appeal a decision made under the grievance procedure.
- ❑ Employees' characteristics: intrinsic motivation, socio-demographic factors, union membership, supervisor, job tenure.
- ❑ workplace characteristics: workplace size, industries, private and public sectors, grievance procedure and occupational categories.

Preliminary Analyses (1)



- ❑ To test hypotheses 3-5, we conduct PCA on the measures of job demands and job control.
- ❑ After undertaking the PCA, missing cases are detected in the components. Imputation method is used in dealing with the missing values.
- ❑ 47 observations (out of 403 observations) with missing cases could not be imputed. These observations are dropped.
- ❑ Our feasible sample consists of 20,549 observations.

Preliminary Analyses (2)



Measures of job demands and job control are used to construct four binary variables that measure the 4 types of jobs:

- ❑ HD & HC: takes the value of 1 when job demands is greater than -0.07 and job control is greater than 0.26; zero otherwise.
- ❑ HD & LC: takes the value of 1 when job demands is greater than -0.07 and job control is less than or equal to 0.26; and takes the value of 0 otherwise.
- ❑ LD & HC: takes the value of 1 when job demands is less than or equal to -0.07 and job control is greater than 0.26; and takes the value of 0 otherwise.
- ❑ LD & LC: takes the value of 1 when job demands is less than or equal to -0.07 and job control is less than or equal to 0.26; and zero otherwise.

Descriptive statistics (1)



	Mean	Standard Deviation	Minimum	Maximum
Types of Jobs				
High Demand& High control	0.24	0.43	0	1
High Demand& Low control	0.24	0.43	0	1
Low Demand& High control	0.27	0.44	0	1
Low Demand& Low control	0.26	0.44	0	1

Descriptive statistics (2)



Workplaces with 5 or more employees

Females

Males

%

%

Contract

Permanent

0.923

0.934

Temporary

0.035

0.031

fixed period

0.041

0.033

Occupation

Higher & Lower managerial and professional occupations

0.349

0.294

Intermediate occupations

0.323

0.234

Lower occupational category

0.324

0.469

Descriptive statistics (3)



No, have never been	0.477	0.428
No, but have been	0.156	0.185
Yes	0.362	0.384

Tenure

less than 1 year	0.115	0.109
less than 2 year	0.100	0.092
less than 5 year	0.249	0.231
less than 10 years	0.242	0.243
10 years or more	0.292	0.321

Marital Status

Single	0.199	0.218
married or living with partner	0.675	0.719
divorced/ separated	0.095	0.053
Widowed	0.020	0.007

Supervisor	0.304	0.365
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Empirical Strategy (1)



- ❑ Analysis is conducted individually for various forms of satisfaction
 - ❑ Satisfaction with: achievement, initiative, influence, training, skills, pay, job security, work itself and overall involvement in decision making
- ❑ The nested nature of the data raises the question about multilevel models.
- ❑ The use of ordered logit models are considered and the parallel regression assumption is tested.
- ❑ Response variables are recoded into binary variables and logit models are estimated.
- ❑ Missing value indicators are used.
- ❑ Endogeneity- the control for union membership raises the question about endogeneity. We test for endogeneity by estimating a recursive simultaneous bivariate probit model.

Results(1)



Union Membership and Job satisfaction

- ❑ Union membership – negatively related to satisfaction with skills and involvement in decisions and positively related to satisfaction with pay and work itself.
- ❑ The relationship between union membership and job satisfaction may be as a result of reverse causality.
- ❑ Test for exogeneity –
 - ❑ Union membership is not endogenous for seven dimensions of job satisfaction.
 - ❑ Support for the explanation of the reverse causality between union membership and pay satisfaction.

Results (2)

[illegible]

Results (3)

	Satisfaction with:								
	Achievement	Initiative	Influence	Training	Skills	Pay	Job security	Work itself	Involvement in decisions
Main Predictors									
Job Control									
Over tasks	0.243*** (0.037)	0.391*** (0.038)	0.582*** (0.039)	0.043 (0.041)	0.142*** (0.041)	0.072** (0.033)	0.096* (0.055)	0.163*** (0.036)	0.113** (0.046)
Over pace	-0.021 (0.035)	-0.038 (0.036)	0.009 (0.036)	0.031 (0.037)	0.032 (0.037)	0.078*** (0.030)	0.109** (0.052)	-0.020 (0.034)	0.024 (0.043)
On how to do task	0.080* (0.044)	0.298*** (0.046)	0.197*** (0.047)	0.080* (0.048)	0.175*** (0.048)	0.015 (0.039)	0.110* (0.067)	0.120*** (0.043)	0.023 (0.056)
Over order of task	-0.023 (0.042)	0.184*** (0.042)	0.112*** (0.042)	0.067 (0.045)	0.036 (0.045)	-0.001 (0.036)	0.055 (0.061)	-0.075* (0.040)	0.099** (0.050)
Over working time	0.003 (0.023)	0.022 (0.025)	0.113*** (0.025)	0.085*** (0.026)	0.101*** (0.025)	0.101*** (0.020)	0.029 (0.035)	-0.050** (0.023)	-0.042 (0.028)
Job demands									
Work overload	-0.094** (0.044)	-0.020 (0.045)	-0.120*** (0.041)	-0.225*** (0.045)	-0.186*** (0.045)	-0.081** (0.036)	-0.089 (0.069)	-0.106** (0.043)	-0.041 (0.057)
Work intensity	0.501*** (0.054)	0.268*** (0.056)	0.115** (0.051)	-0.055 (0.056)	-0.059 (0.057)	-0.239*** (0.049)	-0.274*** (0.091)	0.369*** (0.053)	0.013 (0.071)
Timing demand	-0.074** (0.038)	-0.063 (0.039)	-0.139*** (0.034)	-0.106*** (0.037)	-0.174*** (0.038)	-0.097*** (0.031)	-0.122** (0.059)	-0.112*** (0.036)	-0.049 (0.048)
Types of Jobs (ref: LD_HC)									
High Demand and High Control	-0.061 (0.082)	0.101 (0.091)	-0.030 (0.075)	0.054 (0.082)	0.014 (0.090)	-0.105 (0.066)	0.009 (0.107)	-0.091 (0.080)	-0.098 (0.099)
High Demand and Low Control	-0.243*** (0.091)	-0.099 (0.101)	-0.203** (0.089)	0.168* (0.098)	0.138 (0.105)	-0.165** (0.080)	0.179 (0.127)	-0.209** (0.094)	-0.234** (0.112)
Low Demand and Low Control	-0.268*** (0.073)	-0.109 (0.078)	-0.174** (0.073)	0.084 (0.081)	0.086 (0.085)	0.053 (0.064)	0.015 (0.102)	-0.113 (0.074)	-0.088 (0.092)
Demand x EO Policy	-0.117* (0.066)	-0.104 (0.067)	0.019 (0.060)	0.081 (0.064)	0.195*** (0.067)	0.091* (0.055)	0.085 (0.109)	-0.120* (0.063)	-0.038 (0.085)
Control x EO Policy	0.109** (0.046)	0.099** (0.048)	0.176*** (0.054)	-0.010 (0.051)	-0.029 (0.048)	-0.047 (0.042)	-0.080 (0.077)	0.111** (0.043)	0.041 (0.060)

Conclusions



- ❑ In line with the D-C model, job demands and job control are negatively and positively related to various forms of job satisfaction.
 - ❑ Interestingly, work intensity is positively related to satisfaction with achievement, initiative, influence and work itself.
 - ❑ Results support the argument that job demands may not necessarily have negative effects on different forms of job satisfaction.
- ❑ The effects of being in different types of jobs were also confirmed except in the case of active jobs.
 - ❑ Shows that employees value having control but not necessarily in combination with high levels of job demands
- ❑ The importance of the presence of EO policies is also confirmed.
- ❑ Analysis of specific measures of practices and various forms of job satisfaction are necessary.