

Levers of job satisfaction: Participative decision making and individual characteristics¹

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This paper demonstrates that the determinants of job satisfaction do not change if the worker has decision making freedom and that the impact of some individual characteristics on job satisfaction follow interesting patterns as we move through occupational statuses.

Keywords: Bivariate probit; job satisfaction; participatory decision making

Introduction

Retention of quality labour has become a central point of interest for organisations, and it is to this end that research into determinants of job satisfaction has surged. Empirical research has highlighted the benefits that satisfied employees can provide organisations, and as a result worker satisfaction has become an essential consideration for management strategy. With job satisfaction being a subjective concept, empirical research continues to work towards identifying relevant contributory factors, which typically include socio-demographic (gender, age, marital status, etc) and work situational influences (job challenge, acknowledgement, job security, etc) (Kovach 1995).

One popular strategy aimed at improving job satisfaction has been allowing employees to participate in job-related decisions (Harley *et al.* 2000). The theoretical literature indicates that one would expect participative decision making in their workplace (PDM) to increase job satisfaction, via satisfying employees' higher-order needs (Maslow 1943) and self-expression (Miller & Monge 1986). Empirical studies, although dated, generally support this positive association (Alutto & Acito 1974; Black & Gregersen 1997; Morse & Reimer 1956; Wright & Kim 2004).

The purpose of this paper is to investigate the link between PDM and job satisfaction by (i) testing for the positive association between PDM and job satisfaction using recent data (2008 wave of the European Value Survey), (ii) applying bivariate probit models to identify whether the impact of individual and situational variables on job satisfaction differ depending on whether the worker has PDM, and (iii) extending the analysis to identify whether the impacts differ by occupational status.

The remainder of this paper is organized as follows: Section 2 provides a brief overview of the literature linking PDM and job satisfaction. Section 3 outlines the data used, while Section 4 describes the bivariate model employed and results obtained. Finally Section 5 concludes.

Literature review

Although extensively researched, much debate has surrounded the meaning of job satisfaction. At the centre of this debate is the question of whether job satisfaction is determined by the characteristics of the job itself, within the mind of the employee, or

through the interaction of the employee and his/her job (Locke 1969). Job satisfaction can be defined as 'the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values' (Locke 1969, p.316). Based on this definition, it can be postulated that job satisfaction is a function of the perceived relationship between what an employee seeks to gain from his/her job and what the employee perceives his/her job to be offering.

Early work on job satisfaction and its relationship with employee behaviours such as absenteeism, intention to quit and motivation (See Hoppock 1937; Kerr 1948; Super 1939) laid the foundations for what has become a multi-disciplinary pursuit. This includes extensive work in human resource management, applied psychology, sociology and labour economics. Research in the social sciences continues towards identifying explanatory variables of job satisfaction. These range from socio-demographic factors such as gender, age, educational level, and marital status, to more domain specific variables such as dispositional influences (e.g. personality traits - see Judge & Bono 2001), and work situational influences (e.g. job challenge, security – see Kovach 1995).

As in the case of job satisfaction, there has been much debate surrounding the meaning of PDM. One of the most comprehensive definitions of PDM is proposed by Heller, Pusic, Strauss and Wilpert (1998):

Participation is the totality of forms, i.e. direct (personal) or indirect (through representatives or institutions) and of intensities, i.e. ranging from minimal to comprehensive, by which individuals, groups, collectives secure their interests or contribute to the choice process through self-determined choices among possible actions during the decision process (p. 42).

Theoretically, from an organisational perspective, the primary motivation for implementing PDM programmes would be to promote gains in productivity. Cognitive models of participation (Miller & Monge 1986) suggest that collaboration with employees is a viable organisational strategy as it enhances the flow and use of important information within the organisation thus resulting in efficiency and productivity gains. Alternatively, from a human resource perspective the primary motivation for allowing employees to participate in job-related decisions is the potential for job enrichment (Greenberg 1975). PDM responsibility is said to be conducive to the healthy development of employees as it leads to attainment of their higher-order needs (Maslow 1943), self-expression (Miller & Monge 1986), independence and feelings of fate control, which ultimately promotes their job satisfaction (Vroom 1964)¹.

In terms of empirical studies linking PDM and job satisfaction, there is limited research on this front. This may be because quantitative researchers have in the past, shied away from such topics, due to job satisfaction being a subjective concept and economists in particular often lamenting that it is too noisy to be of analytical value. The few empirical works that link job satisfaction and PDM are also relatively dated, indicating a clear gap in contemporary literature to be filled². Research by Alutto and Acito (1974) studied the effect of decisional discrepancy on job satisfaction. Respondents in their survey were categorised as decisionally deprived, saturated, or in equilibrium, and it was found that respondents with decisional equilibrium had higher job satisfaction. Black and Gregersen (1997) used 370 questionnaire responses and used correlation and regression analysis. The correlations

¹ Note that some theorists such as Vroom (1964) have focussed their research on personality and how that mediates the relationship between PDM and job satisfaction.

² Contemporary research appears to be more concerned with investigating the mediating variables between PDM and job satisfaction (See Scott-Ladd, Travaglione, and Marshall (2006).

between PDM and job satisfaction were positive and the regression indicated that generating alternatives, planning and evaluating results generally increased satisfaction. These findings were consistent with those of Schuler (1980) who also found positive correlations between PDM and job satisfaction. All of these studies suffered from low external validity, for example Alutto and Acito's work was organisational specific.

A quick review of the theoretical and empirical literature linking PDM and job satisfaction clearly indicates a lack of recent research on this front. This study aims to fill this gap by first using recent European data to test whether more PDM leads to higher job satisfaction and then to go one step further and investigate whether the determinants of job satisfaction itself differ depending on the level of PDM an employee experiences.

Data

Our data represents the first release of the fourth wave (2008) of the European Value Study (EVS) and covers 39 Eastern and Western European countries.³ We restrict our sample to include only those workers employed between the age of 16 and 64, and we exclude workers in the armed forces and the self-employed. These restrictions yield an effective sample of 18,591 observations.

Job satisfaction is a self-reported, ordinal variable on a scale of 1-10, with 1 representing complete dissatisfaction and 10 representing complete satisfaction with the respondent's job. Although participation has been defined conceptually and operationally in many different ways (Cotton *et al.* 1988; Dachler & Wilpert 1978), participation is generally defined as a process in which influence is shared among individuals who are otherwise hierarchically unequal (Locke & Schweiger 1979; Wagner 1994). In the EVS, PDM is a categorical variable and is ordered on a Likert scale of 1-10, with 1 representing 'no freedom for decision making' and 10 representing 'a great deal of freedom for decision making' in the respondent's current job. This variable captures two considerations: (i) whether PDM exists within the respondent's job, and (ii) to what extent management allows PDM to be practised.

Figure 1 portrays a tree diagram linking PDM and job satisfaction, using the cleaned EVS sample. Both PDM and job satisfaction were split into dichotomous Yes/No groups depending on whether they were above or below average. For example, the mean for job satisfaction in our sample was 7.2, therefore, individuals reporting values of 8, 9, and 10 were classed as being satisfied (relative to the average). Similarly, the mean for PDM was 6.4, and those reporting values of 7 through to 10 for this variable were classed as having PDM (again, relative to the average). As shown in Figure 1, the sample was quite evenly split between above and below average PDM. It appears clear that those with PDM are more likely to be satisfied at work, versus those without (70.18% versus 34.45%). This result is also consistent with both the limited past empirical research and the theoretical perspectives on the relationship between PDM and job satisfaction.

<Figure 1>

³ Countries included in 2008 first release sample are Albania, Azerbaijan, Austria, Armenia, Belgium, Bosnia Herzegovina, Bulgaria, Belarus, Cyprus, Northern Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Ireland, Northern Ireland, Kosovo, Latvia, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, Poland, Portugal, Romania, Russia, Serbia, Slovak Republic, Slovenia, Spain, Switzerland, Ukraine.

Model and Results

The scenario detailed above involves the analysis of two, potentially sequential, dichotomous issues and the data corresponds to individual across 39 countries. An appropriate method to employ in this instance is therefore the bivariate probit with country-level clustering (as error terms are likely to be correlated across individuals within countries) and any marginal effects can be obtained where $P(JS=1 | A \text{ or } B)$, i.e. $P(JS=1 | PDM=0)$ and $P(JS=1 | PDM=1)$. Given marginal effect estimates of these two conditional probabilities it would be possible to identify whether the drivers of job satisfaction differ depending on whether $PDM = 1$ or $=0$. Application of this method obtains the following results.

<Table 1 and 2>

General results

Our results conform to expectations regarding individual characteristics and their influence on job satisfaction. For example, column (2) of Table 1 showcases the determinants of job satisfaction, which is essentially comparing routes C and E on the tree diagram, with D and F. Males are more likely to report higher levels of job satisfaction, and the size of the household displays a negative effect, although both these results are statistically insignificant. For both married and widowed individuals, there is a positive impact on job satisfaction, which agrees with Clark (1996) who points out that widows may value highly the social contact associated with the work environment. Medium and high levels of education display a negative impact on job satisfaction, relative to low educational attainment, which is consistent with Verhofstadt *et al.* (2007) who show that although higher educated workers are generally more satisfied at work, once job characteristics are controlled for a negative relationship emerges between education and reported job satisfaction.

All situational variables that describe the characteristics of the respondents' job are strongly significant in predicting job satisfaction. This includes variables that capture ego motivation (where the individual thinks they have potential to achieve something) and the freedom for self expression (where the individual thinks they have the opportunity to use initiative). Relative to professionals, all occupational status categories are less likely to have PDM in their current job.⁴ Less skilled and manual groupings appear to be more likely to be satisfied at work compared to the higher occupation levels. This is probably a result of controlling for job characteristics that these types of jobs may be performing poorly in, e.g. good pay and good hours.

Table 2 displays a comparison of routes C and D on the tree diagram, with E and F, i.e. determinants of job satisfaction with and without PDM. Most importantly, the marginal effects of individual and situational characteristics do not differ depending on whether or not the respondent has PDM. This shows that the determinants of job satisfaction are relatively stable, irrespective of whether or not the employee experiences above average PDM.

⁴ The four categories of occupational status used in this paper (Professionals, Skilled, Less skilled, and Manual) correspond to the ISCO-08 classifications of major groups (1 and 2, 3 and 4, 5 to 7, 8 and 9). See ILO (2010).

Results by occupational status

The analysis is replicated for the separate categories of occupational status: Manual, Less Skilled, Skilled, and Professionals. Graphs of the marginal effects of education and marital status measures are presented in Figures 2 and 3. Taken together they illustrate that whether a worker has PDM does not influence the strength of the marginal effect of variables on job satisfaction. They also indicate that as we move up the levels of occupational status the marginal effects of high education on job satisfaction has an increasing negative effect, and being married has an increasing positive effect while being divorced or widowed has an inverted-U shaped trend.

<Figures 2 and 3>

In general, it appears that the higher the occupational status then the larger the negative impact of education on job satisfaction. This probably corresponds with higher education being correlated with higher expectations and the desire to want more out of work life. It could also be the case that the positive association between marital status and high occupation status levels indicates that being single may be seen as more of a stigma to professionals and that being married has a greater impact on your job satisfaction if in a skilled / professional role, rather than a less skilled / manual role. Further research could focus on clarifying these issues.

Conclusions

This paper examines the relation between PDM and job satisfaction, using recently released 2008 European Values Survey data. This is an important area of research as PDM programmes in the workplace have become a popular organisational strategy. We first find clear results that indicate higher PDM results in higher job satisfaction. We then investigate the determinants of job satisfaction and whether they differ depending on the level of PDM the employee enjoys. Our findings indicate that irrespective of whether the worker has PDM, the marginal effects of individual and situational variables are similar in terms of their impact on job satisfaction. However, when we split the analysis across occupational status sub-groups, we find some interesting results. The impact of marital status and education level follow distinct trends when rising through the levels of occupational status. These trends also serve as a useful avenue for future research to focus on.

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Figure 1: Tree diagram

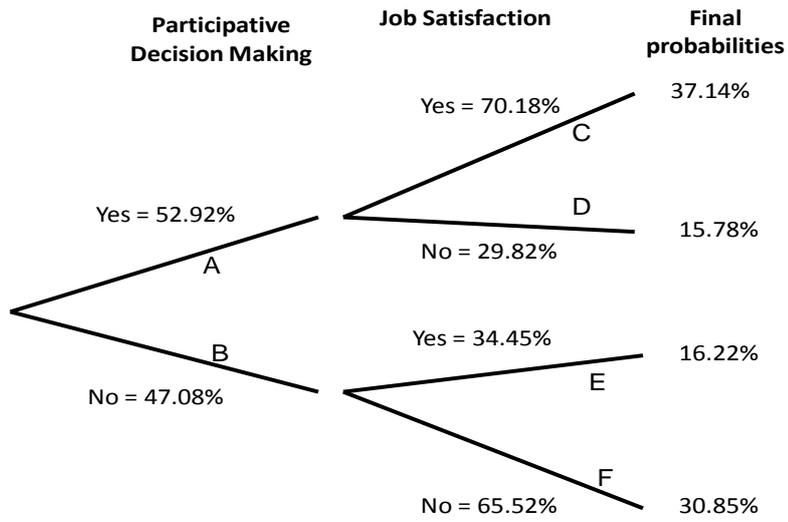


Table 1: Coefficients estimates

	(1) PDM		(2) Job satisfaction	
Constant	-0.459	(0.125)***	-0.436	(0.128)***
Male	0.143	(0.028)***	0.032	(0.021)
Age	4.35e-5	(1.72e-5)**	7.38e-5	(1.62e-5)***
Age ²	-4.01e-5	(7.45e-5)	1.68e-4	(8.44e-5)**
No. people in household	0.007	(0.008)	-0.13	(0.011)
Single	<i>Control variable</i>			
Married	0.038	(0.030)	0.098	(0.030) ***
Widowed	-0.062	(0.062)	0.006	(0.065)
Divorced or separated	0.037	(0.041)	-0.019	(0.032)
Low education	<i>Control variable</i>			
Medium education	0.058	(0.058)	-0.069	(0.045)
High education	0.203	(0.076) ***	-0.114	(0.053) **
Low income	<i>Control variable</i>			
Medium income	0.305	(0.050) ***	0.223	(0.044) ***
High income	0.564	(0.073) ***	0.406	(0.065) ***
Full time	<i>Control variable</i>			
Part time	0.044	(0.052)	-0.104	(0.058) *
Work is important	0.249	(0.083) ***	0.452	(0.096) ***
Good pay	–		-0.131	(0.031) ***
Pleasant people	–		0.076	(0.026) ***
Job security	–		0.086	(0.023) ***
Good hours	–		-0.106	(0.028) ***
Use initiative	0.183	(0.028) ***	0.090	(0.025) ***
Achieve something	0.018	(0.024)	0.089	(0.024) ***
Interesting work	–		0.078	(0.029) ***
Professional	<i>Control variable</i>			
Skilled	-0.321	(0.032) ***	-0.164	(0.027)***
Less skilled	-0.417	(0.032) ***	0.291	(0.038)***
Manual	-0.612	(0.045) ***	0.394	(0.039)***
N	18591			
Log pseudo likelihood	-23416.735			
Rho	0.467 (0.021)			

Notes: Standard errors are in parentheses and are adjusted for clusters of 39 country affiliations; ***, ** and * represent statistical confidence at the 1%, 5% and 10% levels. Rho suggests strong positive correlation between regressions ($\chi^2(1)=681.847$, $p<0.000$).

Table 2: Marginal effects

	(1) <i>JS given PDM</i>	(2) <i>JS given non-PDM</i>
Male	-0.005	-0.006
Age	2.31e-5***	2.43e-5***
Age ²	6.99e-5**	7.45e-5**
No people in household	-0.006	-0.006
Single	<i>Control variable</i>	
Married	0.033***	0.035***
Widowed	0.010	0.011
Divorced	-0.012	-0.013
Low education	<i>Control variable</i>	
Medium education	-0.034*	-0.037*
High education	-0.069***	-0.074***
Low income	<i>Control variable</i>	
Medium income	0.048***	0.049***
High income	0.086***	0.088***
Full time	<i>Control variable</i>	
Part time	-0.047**	-0.048**
Work is important	0.153***	0.138***
Good pay	-0.049***	-0.055***
Pleasant people	0.030***	0.031***
Job security	0.033***	0.035***
Good hours	-0.041***	-0.043***
Use initiative	0.012	0.012
Achieve something	0.032***	0.034***
Interesting work	0.030***	0.032***
Professional	<i>Control variable</i>	
Skilled	-0.023**	-0.024**
Less skilled	-0.060***	-0.062***
Manual	-0.074***	-0.079***

Notes: ***, ** and * represent statistical confidence at the 1%, 5% and 10% levels.

Figure 2: Marginal effects of education on job satisfaction

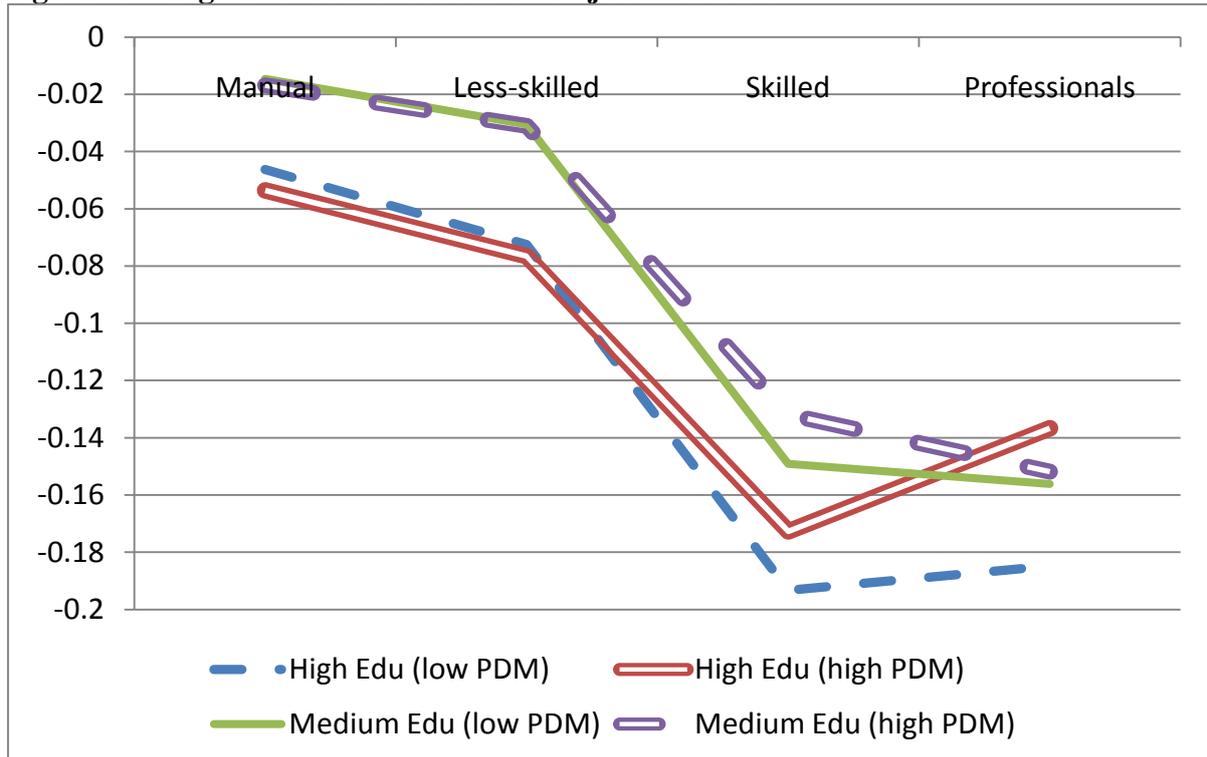
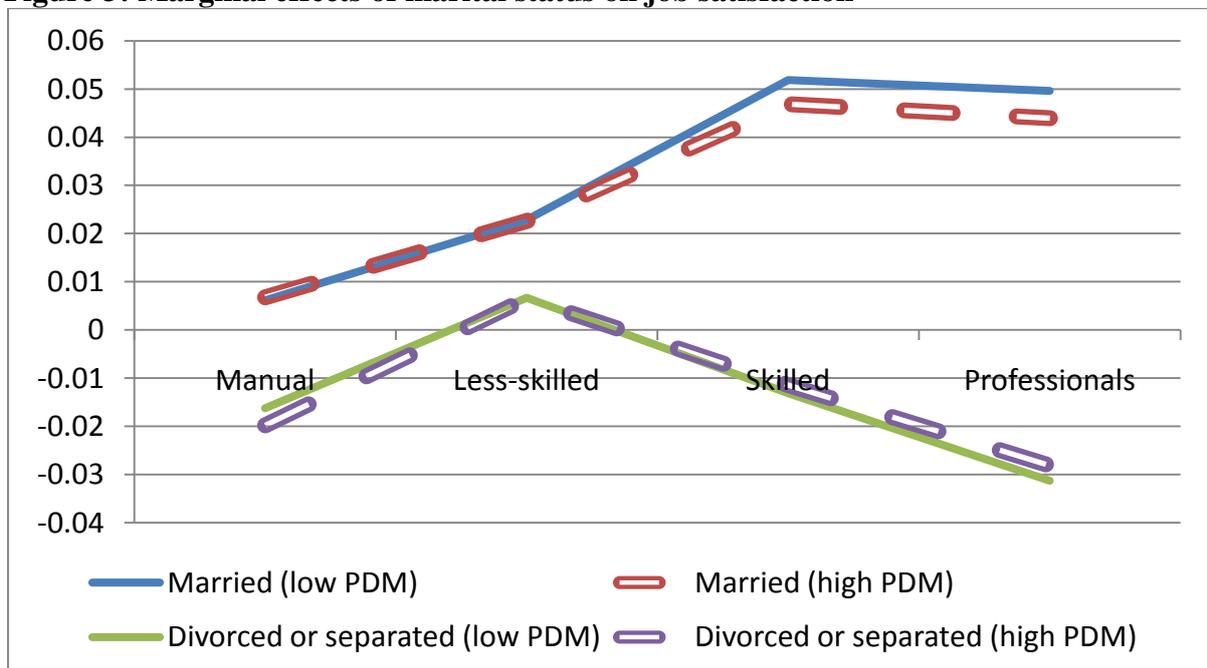


Figure 3: Marginal effects of marital status on job satisfaction



[†]This paper has been peer reviewed by two anonymous referees