

The Relationship Between Employee Empowerment and Subjective Wellbeing: Evidence from Services-Based SMEs in Pakistan

Nimra Ali Khokher* and Abdul Raziq**

Abstract

Employee empowerment plays a key role in the management of talented personnel: it enables an organization to use workers' skills and abilities in a way that enhances the performance of both employer and employee. Based on a survey of 349 small and medium enterprises in Quetta, this study examines the impact of employee empowerment on employees' subjective wellbeing, which is measured in terms of affective and cognitive components. Its results indicate that employee empowerment has a significant and positive impact on employees' subjective wellbeing, implying that senior managers should prioritize this aspect of human resource management.

Keywords: employee empowerment, subjective wellbeing, small or medium enterprise.

JEL classification: M12.

1. Introduction

With increased globalization and market competition, the concept of employee empowerment has gained considerable importance in human resource management. Committed, motivated employees are more likely to compete successfully and adapt more easily to organizational or market changes. Employee empowerment enables organizations to utilize talented personnel in a way that improves the performance of both employer and employee. In this context, it means giving employees more autonomy, but also greater responsibility and holding them accountable for the job-related decisions they make. It also means that senior managers may need to oversee the work of such employees because the latter can potentially influence the organization's output and performance.

* MS student, Faculty of Management Sciences, Balochistan University of Information Technology, Engineering and Management Sciences, Quetta.

** Associate professor, Faculty of Management Sciences, Balochistan University of Information Technology, Engineering and Management Sciences, Quetta.

Employee empowerment involves increasing a worker's authority, knowledge and motivation. In turn, this creates greater trust between the employee and the organization as well as among employees. Put more precisely, the extent of employee empowerment shapes employees' subjective wellbeing (SWB), which McGillivray and Clarke (2006) define as a "multidimensional evaluation of life, including cognitive judgments of life satisfaction and affective evaluations of emotions and moods" (p. 4). SWB therefore combines positive and negative affectivity – that is, pleasant and unpleasant emotions, respectively – as well as life satisfaction (Shmotkin, 1998). In this case, it enables one to measure the extent to which employees are happy or satisfied with their lives (see Page, 2005).

Not many studies have looked at the impact of employee empowerment on SWB. Studies such as Chikumbi (2011), Collings and Mellahi (2009), and Pinto and Dhulla (2012) have focused on its impact on employee satisfaction or the competitive advantage associated with employee empowerment and restricted their analysis to affective components (emotions and moods), rather than cognitive components. We aim to address this gap in the literature by gauging the impact of employee empowerment on both the cognitive and affective aspects of employees' SWB. The study draws on a sample of small and medium enterprises (SMEs) in Balochistan's services sector, for which there is little or no literature available since most other studies in this field tend to focus on larger firms in relatively developed regions.

In many countries, SMEs are an important part of the economy and contribute meaningfully to economic growth. However, the definition of an SME varies across countries, depending on the number of employees or the volume of revenue or assets. For example, Egypt defines an SME as employing between 5 and 50 workers, while Vietnam uses a range of 10 to 300 employees. The World Bank defines SMEs as firms with a maximum of 300 employees and US\$15 million apiece in annual revenues and assets. The Inter-American Development Bank describes SMEs as employing up to 100 workers and earning less than US\$3 million in revenues (Dahlberg Group, 2011, p. 6).

In Pakistan, the Small and Medium Enterprise Development Authority defines SMEs by the number of employees (up to 250), paid-up capital (up to PRs25 million) and annual sales (up to PRs250 million). The SME Bank uses the volume of assets as its sole criterion, while the Pakistan Bureau of Statistics considers only the number of employees. The State Bank of Pakistan defines an SME based on the nature of the business, the

number of employees, the amount of capital and the value of annual net sales (Raziq & Shaikh, 2015).

Our findings are expected to add to the literature on employee empowerment among SMEs in Balochistan and its impact on their employees' SWB. Effective employee empowerment gives firms a competitive advantage by enhancing workers' motivation, capacity for innovation and productivity.

2. Literature Review and Hypotheses

The concept of employee empowerment plays a crucial role in an organization's human resource management. Karakoc and Yilmaz (2009) note that empowered employees are better able to use their skills and abilities, which not only improves the performance of the organization, but also improves their own performance and working life. An important aspect of employee empowerment is the level of supervision this entails: Dizgah et al. (2011) argue that organizations that empower their employees must also supervise them and monitor their actions.

Empowering employees involves giving them a position of greater authority and the ability to influence the outcomes and events of the organization (Honold, 1997). Juhl et al. (1997) observe that it also entails building employees' work-related knowledge and motivation (p. 103). Empowering employees increases their level of satisfaction as a behavioral component of SWB, thereby increasing their commitment toward and engagement with the organization. This ultimately benefits the organization. Moreover, greater commitment and motivation among employees enables them to compete more successfully and adapt more easily to changes (Torani, Yazdi & Gohari, 2008).

Employee empowerment is useful in that it improves the productivity of employees and allows the firm to make optimal use of their abilities by shaping their behaviors and emotions (Naderi, Jamshidiyan & Salimi, 2008). As Seyedjavadin, Heydari and Shahbaz-Moradi (2009) show, the need to develop a more effective and productive workforce with high-caliber managerial capabilities requires organizations to empower their employees. Chikumbi (2011) adds that employee empowerment helps develop greater trust among employees and increases their sense of belonging to the organization. It gives employees a sense of motivation, satisfaction, commitment, authority,

responsibility and accountability, thereby compelling the firm to achieve its goals in a better way (Ongori, 2009).

Based on the literature, we test the following hypotheses:

- H1: Employee empowerment has a significant positive impact on the affective components of employees' SWB.
- H2: Employee empowerment has a significant positive impact on the cognitive components of employees' SWB.

3. Methodology

This section describes the study's sampling method and SWB measures.

3.1. Sampling Method

The city of Quetta in Balochistan is not only a commercial hub, but also occupies a strategic position in the province. As the capital, Quetta has a far larger chain of businesses, industries, markets and resources than other cities in Balochistan, making it the best choice of sampling locations in the province. Moreover, limited or difficult access as well as time constraints meant it was not possible to sample SMEs in other cities in Balochistan.

We have used a nonprobability sampling method. It is worth noting that there is no dataset pertaining specifically to SMEs by province (Raziq & Shaikh, 2015), much less one for Quetta alone. We have targeted SMEs in the services sector rather than in manufacturing because Quetta has far fewer manufacturing SMEs than the other provinces so that collecting data would not have been feasible.

The data collection procedure involved contacting the heads or managers of services sector firms in Quetta to establish if they qualified as an SME. In each case, we then asked to meet the head or manager and presented a letter explaining the purpose of the study and asking for permission to collect data. A total of 486 self-administered questionnaires¹

¹ Each questionnaire introduced the researchers and the study's objectives. It also clarified that participation in the survey was voluntary and all responses strictly confidential. Only the supervisor and researcher had access to the completed questionnaires and all results were discussed with the supervisor alone.

were distributed to SME employees, of which 380 were returned. Of these, 349 were deemed useable and the remaining were discarded.

3.2. Measures of SWB

The questionnaire for this study was adapted from Chikumbi (2011) and Jansen (2009). SWB can be measured by affective components such as positive or negative emotions, and by cognitive components such as life satisfaction. Both components were measured separately, using two different scales. Affective components (positive or negative emotions) were measured on a positive and negative affect scale. The scale comprised 20 items (emotions or feelings) and participants were asked to assess the extent to which each emotion or feeling applied to them. Of the 20 items, 10 measured positive affects and 10 measured negative affects against a five-point Likert scale ("strongly disagree, disagree, uncertain, agree, strongly agree"). The cognitive component, life satisfaction, was measured by a satisfaction-with-life scale comprising five items assessed against a five-point Likert scale ("strongly disagree, disagree, uncertain, agree, strongly agree").

To gauge the validity and reliability of the questionnaire, we asked a group of SME specialists and SME owners/managers in the services sector to assess its content against the prevailing culture, norms and environment of SMEs in Quetta. Based on their feedback, the questionnaire was revised, some irrelevant questions removed and certain questions rephrased for simplicity (see Appendix 1). The reliability analysis yielded a Cronbach's alpha coefficient greater than 0.7.

4. Results

Table 1 provides descriptive statistics for the sample, indicating the distribution of respondents by age and gender. Almost two thirds of all respondents are male. Overall, most respondents are aged 15–35.

Table 1: Descriptive statistics

	Frequency	Percentage	Valid percentage	Cumulative percentage
Gender				
Male	225	64.5	64.5	64.5
Female	124	35.5	35.5	100.0
Total	349	100.0	100.0	
Age (years)				
15–25	154	44.1	44.1	44.1
26–35	123	35.2	35.2	79.4
36–45	54	15.5	15.5	94.8
46–55	11	3.2	3.2	98.0
56 +	7	2.0	2.0	
Total	349	100.0	100.0	100.0

Note: n = 349.

Source: Authors' estimates.

4.1. Exploratory Factor Analysis

The factor analysis applied to all the scales used in the study reveals that the Kaiser-Meyer-Olkin value of each component is greater than 0.70, indicating its sampling adequacy. Applying Bartlett's test of sphericity to each component yields significant values at the 0.05 level. Table 2 presents a rotated component matrix of the factor loadings for each variable, showing which questions relate to which factor. In each case, the item has a high loading of more than 0.5 in its component (variable).

Table 2: Rotated component matrix

Item	EE	CC	AC (PA)	AC (NA)
I contribute to determining my performance objectives.	0.747			
My manager provides clear guidance on how s/he wants a certain assignment done.	0.675			
My manager allows me to make job-related decisions.	0.756			
My manager allows me to innovate and take risks that relate to new developments.	0.769			
My job requires me to take initiative and responsibility.	0.720			
In most ways, my life is close to ideal.		0.760		
My life is in excellent condition.		0.832		
I am satisfied with my life.		0.844		
So far, I have gotten the important things I want in life.		0.682		
I usually feel interest in life.			0.983	
I usually feel excitement in life.			0.978	
I usually feel strong in life.			0.960	
I usually feel enthusiastic in life.			0.964	
I usually feel proud in life.			0.944	
I usually feel alert in life.			0.965	
I usually feel inspired in life.			0.578	
I usually feel determined in life.			0.983	
I usually feel attentive in life.			0.972	
I usually feel active in life.			0.609	
I usually feel distressed in life.				0.995
I usually feel upset in life.				0.965
I usually feel guilty in life.				0.958
I usually feel scared in life.				0.961
I usually feel hostile in life.				0.971
I usually feel irritable in life.				0.979
I usually feel ashamed in life.				0.942
I usually feel nervous in life.				0.963
I usually feel jittery in life.				0.955
I usually feel afraid in life.				0.988

Note: EE = employee empowerment, CC = cognitive component, AC = affective component, PA = positive affectivity, NA = negative affectivity.

Extracted method: principal component analysis.

Rotation method: varimax with Kaiser normalization. KMO test result > 0.5. Bartlett's test result = $p < 0.05$ (factor loadings of less than 0.5 are omitted).

Source: Authors' estimates.

4.2. Correlation Analysis

Before performing a regression analysis to test the hypotheses, we examine the correlation between the variables, following Hair et al. (2010), to determine if it is possible to investigate the impact of employee empowerment on employee SWB. Table 3 indicates correlation between all the variables used in the study at a 5 percent level of significance. This implies that a regression analysis is feasible. Since the results also indicate that the negative affects variable of the affective components of employee SWB shows no significant correlation with the other variables, we discard this variable.

Table 3: Reliability analysis and correlations

	EE	AC (PA)	AC (NA)	CC
EE	(0.785)			
AC (PA)	0.511**	(0.973)		
AC (NA)	-0.015	-0.033	(0.992)	
CC	0.358**	0.342**	-0.008	(0.764)

Note: EE = employee empowerment, CC = cognitive component, AC = affective component, PA = positive affectivity, NA = negative affectivity.

** = significant at 0.05 level (two-tailed). Cronbach's alpha coefficients for multi-item scales given in parentheses.

Source: Authors' estimates.

4.3. Regression Analysis

Having satisfied the basic assumptions of a regression analysis (see Appendix 2), we move onto determining the impact of the employee empowerment variable (EE) on the SWB variable. Both hypotheses are tested at a 5 percent level of significance.

The first hypothesis (H1) states that EE has a significant positive impact on the affective components of SWB. The R-squared term (0.261) and adjusted R-squared (0.259) in Table 4 indicate that EE explains about 26 percent of the variance in the positive affectivity of the affective components of SWB. The multiple correlation coefficient of R (0.511) is significant, with a p-value of less than 0.05 ($F(349) = 122.700; p < 0.05$). EE therefore has a significant positive variance in the positive affectivity of the affective components of SWB.

Table 4: Regression of EE on affective components of SWB

R	R squared	Adjusted R squared	SE of estimate	F	Sig.
0.511a	0.261	0.259	0.95592	122.700	0.000
Unstandardized coefficients		Standardized coefficients		t	Sig.
	B	SE	Beta		
(Constant)	1.491	0.178		8.395	0.000
EE	0.868	0.078	0.511	11.077	0.000

Note: a = predictor (constant), EE = employee empowerment, b = dependent variable (positive affectivity of affective components of SWB), SE = standard error.

Source: Authors' estimates.

The beta term (0.511) in Table 4 is significant ($t(349) = 11.077; p < 0.05$), indicating that other variables apart from EE also contribute to determining the positive affectivity of the affective components of SWB. This implies that we can reject the null hypothesis of no significant positive impact on the affective components of SWB with respect to EE.

The second hypothesis (H2) states that EE has a significant positive impact on the cognitive components of employee SWB. Table 5 gives the results of the regression used to test this hypothesis. The R-squared (0.128) and adjusted R-squared (0.126) values indicate that EE explains about 13 percent of the variance in the cognitive components of SWB. The multiple correlation coefficient of R (0.358) is significant ($F(349) = 50.949; p < 0.05$), with a p-value of less than 0.05. These results demonstrate that EE has a significant positive variance in the cognitive components of SWB.

Table 5: Regression of EE on cognitive components

R	R squared	Adjusted R squared	SE of estimate	F	Sig.
0.358a	0.128	0.126	0.63248	50.949	0.000
Unstandardized coefficients		Standardized coefficients		t	Sig.
	B	SE	Beta		
(Constant)	1.613	0.117		13.732	0.000
EE	0.370	0.052	0.358	7.138	0.000

Note: a = predictor (constant), EE = employee empowerment, b = dependent variable (cognitive components of SWB), SE = standard error.

Source: Authors' estimates.

The beta term (0.358) is significant ($t(349) = 7.138; p < 0.05$) and we can reject the null hypothesis of no significant positive impact on the cognitive components of SWB with respect to EE.

5. Discussion

The purpose of this study is to investigate the impact of employee empowerment on employee SWB. Our results suggest that employee empowerment is correlated with the affective and cognitive components of employee SWB at a 0.05 level of significance. The literature divides SWB into cognitive components and affective components. The latter comprise positive and negative affects, such that an employee is subject to either positive affects or negative affects.

Our results support the literature to the extent that there is a significant, positive correlation between employee empowerment and the affective and cognitive components of employee SWB. However, the results also indicate an insignificant correlation with the negative affects of the affective components of employee SWB. We therefore discard the negative affects and test both hypotheses with respect to the positive affects of the affective components of SWB. The results show that employee empowerment has a significant, positive impact in predicting the affective components as well as cognitive components of employee SWB.

Our results imply that empowering employees helps develop greater trust among them and a sense of belonging to the organization. This is in line with Chikumbi's (2011) findings. Empowerment also leads to greater motivation, satisfaction, commitment, authority, responsibility and accountability, enabling the firm to achieve its goals more effectively (see Ongori, 2009). In this sense, employee empowerment has a significant positive impact on the SWB of a firm's employees.

6. Conclusion

This study examines the impact of employee empowerment on employee SWB for a sample of SMEs in the services sector in Quetta. It shows that employee empowerment plays a vital role in shaping the SWB of employees. Specifically, the study's results indicate that employee empowerment has a significant positive impact on the affective and cognitive components of employee SWB.

These results have important implications for organizations, which stand to benefit from empowering their employees and according them greater authority and accountability. The increase in trust, sense of belonging, motivation and satisfaction that accompanies employee empowerment contributes to employees' SWB to a significant degree. The firm's managers are, therefore, responsible for ensuring that employee empowerment practices are implemented and monitored effectively, given the likely impact on the firm's success. This entails determining how best to empower and motivate talented employees, while ensuring that they feel their work is integral to the firm.

Future research could extend the study's hypotheses to SMEs in other sectors such as manufacturing as well as SMEs in other cities in Pakistan, depending on access, time and convenience. Given the dearth of research on employee empowerment and SWB in SMEs, the present study hopes to address this gap and to encourage further research in this area. Its findings are important to SME human resource managers, as they emphasize the value of investing in, and empowering, talented employees.

References

- Chikumbi, C. N. L. (2011). *An investigation of talent management and staff retention at the Bank of Zambia*. Unpublished Master's thesis, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.
- Collings, D. G., & Mellahi, K. (2009). Strategic talent management: A review and research agenda. *Human Resource Management Review*, 19(4), 304–313.
- Dahlberg Group. (2011). *Report on support to SMEs in developing countries through financial intermediaries*. Geneva: Author.
- Dizgah, M. R., Chegini, M. G., Farahbod, F., & Kordabadi, S. S. (2011). Empowerment and organizational effectiveness in the executive organizations. *Journal of Basic and Applied Scientific Research*, 1(9), 973–980.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
- Honold, L. (1997). A review of the literature on employee empowerment. *Empowerment in Organizations*, 5(4), 202–212.
- Jansen, R. C. (2009). *An investigation into the subjective wellbeing of the female stripper*. Unpublished Master's thesis, University of South Africa, Pretoria.
- Juhl, H. J., Kristensen, K., Dahlgaard, J. J., & Kanji, G. K. (1997). Empowerment and organizational structure. *Total Quality Management*, 8(1), 103–111.
- Karakoc, N., & Yilmaz, A. K. (2009). Employee empowerment and differentiation in companies: A literature review and research agenda. *Enterprise Risk Management*, 1(2), 1–12.
- Keith, T. Z. (2006). *Multiple regression and beyond*. Boston, MA: Allyn & Bacon.
- McGillivray, M., & Clarke, M. (2006). Human wellbeing: Concepts and measures. In M. McGillivray & M. Clarke (eds.), *Understanding human wellbeing* (pp. 3–16). Tokyo: United Nations University Press.

- Naderi, N., Jamshidiyan, A. R., & Salimi, Q. A. (2008). Employees' empowerment from on-jobs training, case study: Isfahan oil purge. *Olome Ensani Va Ejtemaei*, 7(27), 113–132.
- Ongori, H. (2009). Managing behind the scenes: A viewpoint on employee empowerment. *African Journal of Business Management*, 3(1), 9–15.
- Osbourne, J. W., & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research and Evaluation*, 8(2), 1–5.
- Page, K. (2005). *Subjective wellbeing in the workplace*. Unpublished Bachelor's thesis, Deakin University, Faculty of Health and Behavioral Sciences, Melbourne, Australia.
- Pinto, L. W., & Dhulla, T. V. (2012). To study the talent management system in banking sector with regards to motivation and satisfaction. *Bombay Psychologist*, 27(1–2), 51–54.
- Raziq, A., & Shaikh, A. A. (2015). Exploring recruitment and selection practices in Pakistani SMEs. *International Journal of Basic and Applied Sciences*, 4(1), 102–108.
- Seyedjavadin, S. R., Heydari, H., & Shahbaz-Moradi, S. (2009). The effective factors on human resource empowerment in services, case study: Banks. *Modiriyat Dolati*, 1(2), 75–88.
- Shmotkin, D. (1998). Declarative and differential aspects of subjective wellbeing and its implications for mental health in later life. In J. Lomranz (ed.), *Handbook of aging and mental health: An integrative approach* (pp. 15–43). New York: Plenum Press.
- Torani, S., Yazdi, F. V., & Gohari, M. R. (2008). The relationship between empowerment climate and employees' perception empowerment in training hospitals in Kerman. *Modiriyate Salamt*, 11(31), 17–26.

Appendix 1

Survey questionnaire

Section A: Biographical information

Gender					
Designation					
Division or department					
Age (years)	15–25	26–35	36–45	46–55	56 +

Section B: Talent management practices

Talent management involves acquiring talent, managing employees' performance and salary packages, empowering employees and retaining talent.

Instructions: Please indicate the extent to which each statement applies to you, using the scale below.

Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	2	3	4	5

B1	Acquiring talent					
1	The firm conducts a skills audit to assess gaps in workers' skills.	1	2	3	4	5
2	The recruitment process enables an extensive selection of talent.	1	2	3	4	5
3	The recruitment process succeeds in selecting the best talent.	1	2	3	4	5
4	The firm's induction programs are well structured and help new employees settle in.	1	2	3	4	5
5	The firm has a large enough pool of managerial talent available to fill any vacancies.	1	2	3	4	5
6	The firm has programs in place for building its pool of managerial talent, from which it appoints new managers.	1	2	3	4	5
7	Before advertising a vacancy, the firm tries to tap its internal talent pool.	1	2	3	4	5
B2	Performance management					
8	Targets and deadlines are clearly communicated to staff members.	1	2	3	4	5

9	The firm's performance review focuses on evaluating my competencies and abilities.	1	2	3	4	5
10	I receive positive feedback in my performance appraisal.	1	2	3	4	5
11	My performance appraisal is discussed with my supervisor.	1	2	3	4	5
12	Any weaknesses detected in the appraisal are addressed through training as a staff development initiative.	1	2	3	4	5
13	The firm conducts performance reviews regularly.	1	2	3	4	5
14	My personal objectives are aligned with the firm's business goals.	1	2	3	4	5
B3	Salary packages					
15	My salary package is adequate, given my (skill) level.	1	2	3	4	5
16	My salary and other variable payments compare well with the rest of the market.	1	2	3	4	5
17	My remuneration package is attractive.	1	2	3	4	5
18	My remuneration package matches the effort I put into my work.	1	2	3	4	5
19	The rewards offered by the firm motivate one to perform better.	1	2	3	4	5
20	There are incentives in place to perform well.	1	2	3	4	5
21	I think the firm's reward system is equitable.	1	2	3	4	5
22	Being rewarded for good performance is valuable.	1	2	3	4	5
B4	Employee empowerment					
23	I contribute to determining my performance objectives.	1	2	3	4	5
24	My manager provides clear guidance on how s/he wants a certain assignment carried out.	1	2	3	4	5
25	My manager allows me to make decisions pertaining to my job.	1	2	3	4	5
26	My manager allows me to be innovative and take risks that relate to new developments.	1	2	3	4	5
27	The tasks I am assigned require me to take initiative and responsibility.	1	2	3	4	5
B5	Retaining talent					
28	The scope of my work is very interesting.	1	2	3	4	5
29	The firm has a cordial atmosphere.	1	2	3	4	5
30	My manager values my contribution to the firm.	1	2	3	4	5
31	I understand, and am committed to, the firm's vision and goals.	1	2	3	4	5
32	My job gives me satisfaction.	1	2	3	4	5
33	My job is secure.	1	2	3	4	5
34	The firm allows equal opportunities for promotion.	1	2	3	4	5
35	My planned career path can be achieved at this firm.	1	2	3	4	5

Section C: Subjective wellbeing

SWB is measured using an affective component (a positive or negative affect) and a cognitive component (life satisfaction).

Instructions: Please indicate the extent to which each statement applies to you, using the scale below.

Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1	2	3	4	5

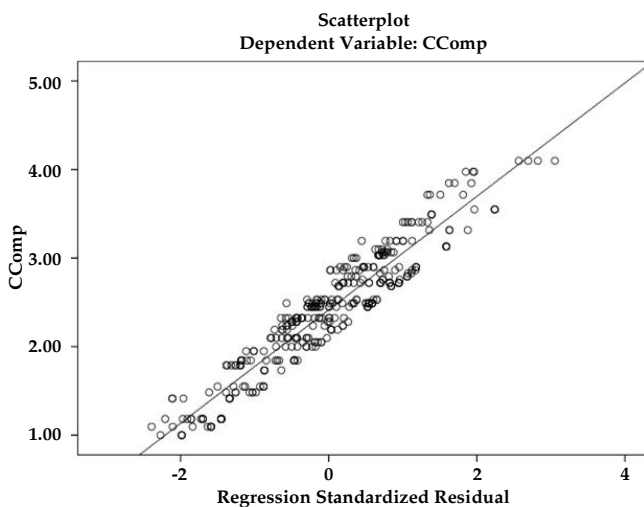
C1	Cognitive component: satisfaction with life					
36	In most ways, my life is close to ideal.	1	2	3	4	5
37	My life is excellent.	1	2	3	4	5
38	I am satisfied with life.	1	2	3	4	5
39	So far, I have obtained the important things in life.	1	2	3	4	5
40	If I could live my life over, I would change almost nothing.	1	2	3	4	5
C2	Affective component: positive or negative affectivity					
41	I usually feel interested in life.	1	2	3	4	5
42	I usually feel excited about life.	1	2	3	4	5
43	I usually feel strong about life.	1	2	3	4	5
44	I usually feel enthusiastic about life.	1	2	3	4	5
45	I usually feel proud of my life.	1	2	3	4	5
46	I usually feel alert.	1	2	3	4	5
47	I usually feel inspired.	1	2	3	4	5
48	I usually feel determined.	1	2	3	4	5
49	I usually feel attentive.	1	2	3	4	5
50	I usually feel active.	1	2	3	4	5
51	I usually feel distressed.	1	2	3	4	5
52	I usually feel upset.	1	2	3	4	5
53	I usually feel guilty.	1	2	3	4	5
54	I usually feel scared.	1	2	3	4	5
55	I usually feel hostile.	1	2	3	4	5
56	I usually feel irritable.	1	2	3	4	5
57	I usually feel ashamed.	1	2	3	4	5
58	I usually feel nervous.	1	2	3	4	5
59	I usually feel jittery.	1	2	3	4	5
60	I usually feel afraid.	1	2	3	4	5

Assumptions of multiple regression analysis

Linearity

The assumption of linearity is important in regression analysis because the results obtained are based on this (Keith, 2006). If there is no linear relationship between the dependent and independent variables, then the regression results will either underestimate or overestimate the relationship (Osbourne & Waters, 2002). Figure A1 indicates a linear relationship between the dependent and independent variables in this study, implying that the data used satisfies the assumption of linearity.

Figure A1: Linearity between dependent and independent variables



Source: Authors' estimates.

Normality

For a regression analysis, the data should be normally distributed. This is checked using different methods, including skewness and kurtosis statistics, histograms and p-plots. Table A1 indicates the normal distribution of the data used in this study, based on the skewness and kurtosis statistics.

Table A1: Normal distribution of data

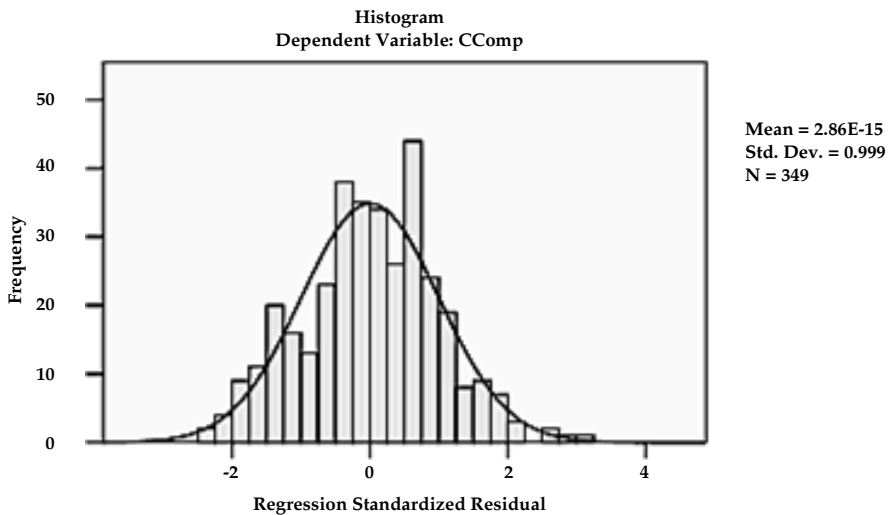
	Mean	SD	Skewness		Kurtosis	
			Statistic	SE	Statistic	SE
EE	2.1696	0.65396	0.262	0.131	-0.299	0.260
CC	2.4159	0.67635	-0.030	0.131	-0.183	0.260
AC (PA)	3.3736	1.11056	-0.159	0.131	0.159	0.260
AC (NA)	23.6126	10.51699	0.258	0.131	-0.982	0.260

Note: n = 349.

EE = employee empowerment, CC = cognitive component, AC = affective component, PA = positive affectivity, NA = negative affectivity, SD = standard deviation, SE = standard error.

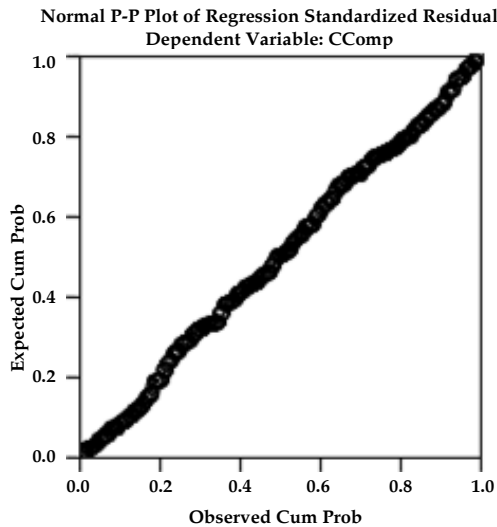
Source: Authors' estimates.

The shape of the histogram in Figure A2 and the p-plot in Figure A3 both represent a normal distribution, that is, the errors are normally distributed and the residual values are plotted as a normal curve. Therefore, the assumption of normality is not violated.

Figure A2: Normal distribution of data (histogram)

Source: Authors' estimates.

Figure A3: Normal distribution of data (probability plot)

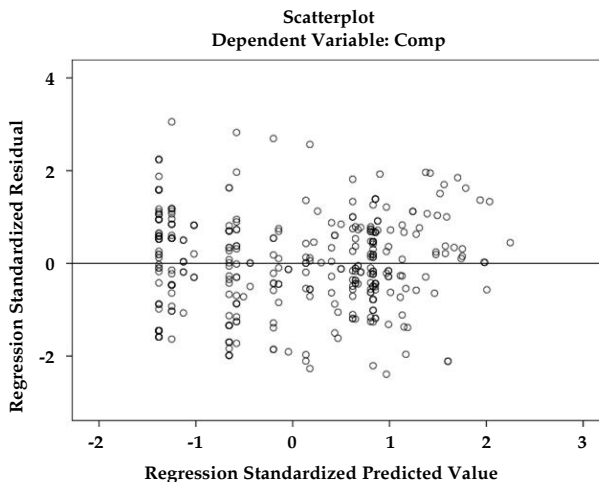


Source: Authors' estimates.

Homoskedasticity

In regression analysis, the assumption of homoskedasticity should be satisfied: there should be equal variance of errors across all levels of the independent variables. Figure A4 indicates that the errors are spread out consistently across the variables, implying that the data is homoskedastic.

Figure A4: Homoskedasticity of independent variables



Source: Authors' estimates.