

Effect of Green Human Capital on Employees' Intention to Quit: The Mediating Role of Employees' Commitment

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ABSTRACT

The main aim of the present study is to observe the relationship between green human capital and employees' intention to quit. This study also accounts for the mediating role of employees' commitment in the above-mentioned relationship. Primary data based on 523 respondents including both males and females from 153 organizations operating in India has been analyzed to test the stated hypotheses. With the application of multiple regression analysis, the study highlighted a significant and negative relationship between green human capital and employees' intention to quit. Further, the results revealed that employee commitment acts as a partial mediator in this relationship.

Keywords: Green human capital, intention to quit, employee commitment, India.

INTRODUCTION:

In today's era of knowledge economy, one of the most imperative assets of organizations for attaining competitive advantage is their intangible assets. Further, with the raising competition, organizations have started doing investments in respective assets. Stewart (1994) has introduced the concept of intellectual capital and defines it as "intellectual material that has been formalized, captured, and leveraged to produce a higher-valued asset". Pioneers of intellectual capital have claimed that it is comprised of three components i.e. human capital, structural capital, and relational capital (Bontis *et al.*, 2001; Flostrand, 2006; Kamath, 2007; Stewart, 1997; Sveiby, 1997; Edvinsson and Malone, 1997; Sullivan and Edvinsson, 1996).

With the growing awareness of environmentalism among employees, Chen (2008) has proposed the notion of green intellectual capital, which has become one of the most important agendas for organizations now days. Considering the resource-based view, Barney (1991) argued that with the availability of unique and valuable resources, a firm can gain competitive advantage over its opponents. However, green intellectual capital has become exclusive concept that can advances towards sustainable competitive advantage. According to Chen (2008) green intellectual capital is "the compilations of various intangible assets, knowledge, capabilities, and relationships, etc. about environmental protection or green innovation of both the individual and organization levels within a company". Further, he highlighted that green intellectual capital comprises of three components i.e. green human capital, green structural capital, and green relationship capital. In words of Dzikowski (2000), aggregation of knowledge, attributes, skills, qualities, innovations etc. among employees constitutes human capital. Miller and Wurzburg (1995) highlighted that this type of capital is encapsulated in employees only and can be detached with employee exit. Further, with the growing external environmental pressures, environmental knowledge should be disseminating among employees for practicing green management. This has brought forward the concept of 'green human capital' by Chen (2008) and defined it as the summation of employees' knowledge, skills, attributes, abilities, potential, experience, attitude, wisdom, creativities, and commitments, etc. towards environmentally friendly approach.

On the flip side of the coin, structural capital is encapsulated in companies and cannot be detached with employee exit. It comprises of stocks of patents, copyrights, trademarks, hardware, software, databases,

organizational technology and environment, culture, infrastructure, etc. within the premises (Edvinsson and Malone, 1997). Third, relationship capital highlights the bonding between organization and its key stakeholders i.e. business partners, wholesalers, retailers, suppliers, customers, etc. (Johnson, 1999; Chen et al., 2006). Considering the environmental perspective along with relationship capital, Chen (2008) proposes the concept of “green relationship capital” and defined it as company’s interactions with its stakeholders regarding green management.

We chose India as a spot for this research as India a less attention has been paid here on this subject. Secondly, the growing attrition rate in Indian organizations has made it necessary to identify the probable causes behind increasing employees’ turnover intentions. This makes ‘green intellectual capital’ a vital HR issue and simultaneously finding its effects on employees’ performance. Therefore, this research work targets to fill the research gap by aiding a more organized investigation by studying the impacts of green intellectual capital on employee commitment and intention to quit, as there *has been no* such study reported from *India*. Further, the study also seeks to find the mediating role of commitment in the relationship between green intellectual capital and employees’ intention to quit. A conceptual framework (Fig. 1) is proposed here to signify the hypothesized relationships among the chosen variables in this study.

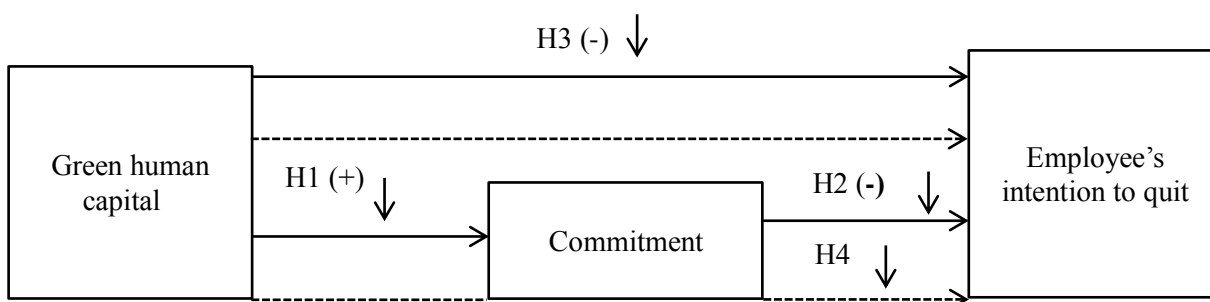


Figure 1: Projected theoretical model

Control variables: Gender, age of employees, work experience of employees, and nature of the firm.

Notes: line represents the direct relationship between independent and dependent variables. + and – signs depicts the direction of the relation between independent and dependent variables.

----- line shows the mediating effect of commitment.

LITERATURE REVIEW:

Stakeholder theory offers an explanatory framework to elucidate how green human capital influences employees’ job performance. This theory explains that adoption of green practices might show a positive attitude in employees’ performance. Brammer *et al.* (2007) highlighted that a positive and significant relationship exists between environmental corporate social responsibility (CSR) and commitment. Further, it has also been explored that environmental CSR positively relates to employees’ outcomes (Roeck and Delobbe, 2012). Based on the above mentioned studies it can be hypothesized that green human capital is significantly and positively related to commitment.

Commitment is defined as an employee’s emotional attachment and identification with their organization (Allen and Meyer, 1990). It has been highlighted that employees having high affective commitment with their organizations tends to show a strong identification towards the organizational goals and continues to stay longer with the organization (Allen and Meyer, 1993). Past studies show a significant and negative relationship between commitment and employees’ intention to quit (Ali and Baloch, 2009; Yin-Fah *et al.*, 2010). Further, Bergman (2006) highlighted those employees with high commitment level stay longer with their organization. It can also be stated that the employees who are highly committed to their organizations have lower chances of quitting the organization. Similarly, Wong, Ngo and Wong (2002) have also opined that commitment is negatively and significantly related to employees’ intention to quit. Thus, viewing the inverse relationship between commitment and the employees’ intention to quit, it can be hypothesized that commitment is negatively and significantly related to employees’ intention to quit.

Organisational behavioural (OB) theories highlight that employees who strongly identified themselves with the organization are more likely to actively participate and engage with organisational green initiatives and environmental sustainability programs. In the similar vein, Muster and Schrader (2011) opined that green HRM is a possible factor in estimating employees’ intention to act in a particular way. Further, Dumont (2015) has also observed that green HRM is inversely related to employees’ turnover intentions. Therefore, it can be

predicted that green human capital is negatively related to employees’ intention to quit.

The role of a mediator variable is to examine the relationship between a predictor variable and a criterion variable. It should define why such effect might occur (Baron and Kenny, 1986). In this study, we propose that the relationship between green intellectual capital and employees’ intention to quit is mediated by commitment. In this research, the role of commitment is inspected in green intellectual capital and employees’ intention to quit relationship.

In the light of preceding sections, the following hypotheses are advanced:

Hypothesis 1: Green human capital is significantly and positively related to commitment.

Hypothesis 2: Commitment is negatively related to employees’ intention to quit.

Hypothesis 3: Green human capital is negatively related to employees’ intention to quit.

Hypothesis 4: The relationship between green human capital and intention to quit is mediated by commitment.

RESEARCH METHODOLOGY:

Sample:

A self-administered questionnaire was distributed to 934 respondents, employed in firms that were operating in India. Employees having internet access at the workplace were sent the online survey link via e-mail and those without internet access were sent hard-copy forms of the questionnaire. It was also assured to the respondents that their responses would be held strictly confidential and only be used for the research purpose. A total of 532 questionnaires were returned and 9 were rejected due to incomplete data. Hence, 523 completed and usable questionnaires were finally retained yielding an overall response rate of 55.99%. The response rate for the online survey was 36% and for the hard copy survey was 57%.

Table 1: Demographics characteristics of the sample

Variables	Categories	Number	Percentage	Average
Gender	Male	387	74.0	
	Female	136	26.0	
	Total	523	100.0	
Age of employees	Under 25 Years	124	23.7	
	26-30	252	48.2	
	31-40	124	23.7	
	41-50	18	3.4	
	Above 50 Years	5	1.0	
	Total	523	100.0	30.03
Work experience of the employees	0-5 Years	427	81.64	
	6-10 years	74	14.15	
	11-15 years	11	2.10	
	16-20 years	4	0.76	
	21-25 years	1	0.19	
	Above 25 Years	6	1.15	
	Total	523	100	3.96
Nature of the firm	Manufacturing	164	31.4	
	Service	359	68.6	
	Total	523	100.0	

In terms of demographic characteristics of the respondents (refer table 1), the sample depicts that approximately one-third of the respondents were females (26.0%) and rest were males (74.0%). Age of the respondents were measured in groups that showed 23.7% employees under the age of 25 years, 48.2 % in the age group of 26-30

years, 23.7 % in the age group of 31-40 years, 3.4 % in the age group of 41-50 years, 1.0 % above 50 years and the mean age of the respondents was found to be 30.03 years. Work experience of the respondents was measured in groups, which show that 81.64% of them had less than 5 years of work experience, 14.15% had 6-10 years, 2.10% had 11-15 years, 0.76% had 16-20 years, 0.19% had 21-25 years, 1.15% had more than 25 years' experience in the organizations, and average tenure was 3.96 years for the respondents. According to the nature of the organizations, 31.4% of the respondents were working in the manufacturing sector and 68.6% in the service sector.

Measures:

Green human capital (independent variable):

Five items scale was designed to measure responses of green human capital on five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). All the five items were drawn from Chang and Chen (2012) green human capital scale items i.e. 'The productivity and contribution of employees concerning environmental protection in the company is better than those of its major competitors', 'The employees' competence of environmental protection in the company is better than that of its major competitors', 'The products and services of environmental protection provided by the employees of the company are better than those of its major competitors', 'The cooperative degree of team work pertaining to environmental protection in the company is more than that of its major competitors', 'Managers in the company can fully support their employees to achieve the goals of environmental protection'. The results of principal component analysis (PCA) show that these five items were well-loaded on a single component of green human capital. The calculated cronbach's alpha value of this scale was 0.812 higher than permissible value of 0.7 (Hair *et al.*, 1998).

Intention to quit (dependent variable):

The scale for intention to quit was taken from Boshoff and Allen (2000) study. A five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) was used for the measurement. The items were 'I often think about resigning', 'It would not take much to make me resign from this organization' and 'I will probably be looking for another job soon'. The Cronbach's alpha value of this scale was 0.872 greater than the acceptable value (Hair *et al.*, 1998).

Commitment (mediating variable):

Four-point Likert scale statements ranging from 1 (strongly disagree) to 5 (strongly agree) were used to measure employee' commitment, adapted from Allen and Meyer (1990). This four items scale included 'I feel a sense of loyalty and commitment to this organization', 'I am proud to tell people that I work for this organization', 'I feel emotionally attached to this organization', 'I am willing to put in extra effort for this organization'. The alpha coefficient for this scale was 0.812 meeting the condition of reliability (Hair *et al.*, 1998).

Control variables:

The analyses used a total of four control variables i.e. gender, age of employees, work experience of employees and nature of the firm. These control variables have been employed by various researchers while studying either predictor or dependent variable. Male and female were classified under gender category. Based on the nature of the firms, they were classified as manufacturing and service firms. Age of the employees was categorized into under 25 years, 26-30 years, 31-40 years, 41-50 years, and above 50 years. Work experience was classified into six categories: 0-5 years, 6-10 years, 11-15 years, 16-20 years, 21-25 years and above 25 years.

ANALYSIS AND RESULTS:

Factor Analysis:

For verifying the factor structure of the set of observed variables, the statistical technique followed here is factor analysis i.e. both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Initially, all the 12 variables regarding green human capital, commitment, and intention to quit were subjected to principal component factor analysis with varimax rotation. Factors with eigenvalue more than 1.00 and factor loadings above 0.700 were adopted as a selection criterion. The results indicated a solution of 3 factors with eigen values greater than one, clearly providing the 3 crystal clear constructs. Communalities values ranged from 0.552 to 0.808. Eigen values of all the three factors extracted were 4.803, 1.741, and 1.438, explaining 66.525 percent of

the variance. Cronbach’s alpha values for these 3 constructs ranged from 0.812 to 0.872, thereby providing a support for good internal reliability (Hair *et al.*, 1998). Further, providing evidence for convergent and discriminant validity, estimates of composite reliability (CR) and variance extracted were evaluated using first order CFA via AMOS 18. The 12-items were loaded on their expected latent constructs while allowing the constructs to correlate. The test results of confirmatory factor analysis (CFA) highlighted that all the standardized factor loadings were found to be significant ($p \leq 0.001$) and more than 0.671 (refer table 2). CR values for these constructs fluctuated between 0.812 and 0.873, a bit higher than the suggested value of 0.70 (Hair *et al.*, 2010). The calculated average variance extracted (AVE) for each construct ranged between 0.501 and 0.695, which is greater than the acceptable value of 0.50 (Hair *et al.*, 2010). Overall, these values described a satisfactory convergent validity for our latent variables (Zhao and Cavusgil, 2006). To assess the discriminant validity, we calculated maximum shared variance (MSV) and average squared shared variance (ASV) for each and every construct. The computed values of MSV and ASV were found lower than AVE for all the constructs, thus, establishing the discriminant validity of the study variables (Alumran *et al.*, 2014). Further, the results of CFA also demonstrated that calculated value of $\chi^2/df = 2.271$ lower than standard value of 5 (Harrison and Rainer, 1996), comparative fit index (CFI) = 0.975 higher than the acceptable value of 0.90 (Hu and Bentler, 1998), Tucker-Lewis index (TLI) = 0.962 greater than the permissible value of 0.90 (Hu and Bentler, 1998), and root mean square error of approximation (RMSEA) = 0.049 quite lower than the maximum value of 0.08 (Garver and Mentzer, 1999). Overall, these indices depicted model fit for study. Table 2 shows the results regarding EFA and CFA.

Table 2: Measurement variables with EFA and CFA loadings, validity, and reliability values

Factors and measurement items	Factor Loading (EFA)	Factor Loading (CFA)	Cronbach alpha	Composite reliability (CR)	Average variance extracted (AVE)	Maximum shared variance (MSV)	Average shared variance (ASV)
Green human capital			0.834	0.834	0.501	0.224	0.220
The productivity and contribution of employees concerning environmental protection in the company is better than those of its major competitors.	0.736	0.725					
The employees’ competence of environmental protection in the company is better than that of its major competitors.	0.755	0.706					
The products and services of environmental protection provided by the employees of the company are better than those of its major competitors.	0.708	0.671					
The cooperative degree of team work pertaining to	0.776	0.699					

Factors and measurement items	Factor Loading (EFA)	Factor Loading (CFA)	Cronbach alpha	Composite reliability (CR)	Average variance extracted (AVE)	Maximum shared variance (MSV)	Average shared variance (ASV)
environmental protection in the company is more than that of its major competitors.							
Managers in the company can fully support their employees to achieve the goals of environmental protection.	0.775	0.737					
Commitment			0.812	0.812	0.520	0.245	0.231
I feel a sense of loyalty and commitment to this organization.	0.779	0.744					
I am proud to tell people that I work for this organization.	0.736	0.685					
I feel emotionally attached to this organization.	0.778	0.716					
I am willing to put in extra effort for this organization.	0.790	0.738					
Intention to quit			0.872	0.873	0.695	0.245	0.234
I often think about resigning.	0.865	0.838					
It would not take much to make me resign from this organization.	0.838	0.809					
I will probably be looking for another job soon.	0.854	0.854					

Notes:

- a) These three latent variables accounted for 66.525% of the variance as a result of exploratory factor analysis.
- b) All the loadings related to CFA were significant at 0.001 level.
- c) Model fit statistics: $\chi^2/df = 2.271$; CFI = 0.975; TLI = 0.962; RMSEA = 0.049.

Table 3: Descriptive Statistics and Cronbach α Values

Variables	No. of items	Mean	SD	1	2	3	4	5	6	7	Cronbach Alpha
Gender	-	0.26	0.439	-							
Age of employees	-	2.10	0.830	-0.138**	-						
Work experience of the employees	-	3.96	4.327	-0.138**	0.687***	-					

Variables	No. of items	Mean	SD	1	2	3	4	5	6	7	Cronbach Alpha
Nature of the firm	-	0.69	0.464	0.279***	-0.025	-0.059	-	-	-	-	-
Green human capital	5	4.40	0.519	-0.142***	0.110*	0.109*	-0.061	-	-	-	0.834
Commitment	4	4.41	0.507	-0.084	0.137**	0.093*	-0.031	0.384***	-	-	0.812
Intention to quit	3	1.74	0.798	0.128**	-0.092*	-0.083	-0.018	0.390***	0.420***	-	0.872

DESCRIPTIVE STATISTICS:

Table 3 shows means, standard deviations, and bivariate correlations values. These correlations supported the hypothesized relationships between green human capital, commitment, and employees’ intention to quit. For testing the probabilities of multicollinearity among predictor variables, collinearity diagnosis was computed. Calculated value of variation inflation factor (VIF) ranged from 1.086 to 2.657, which is significantly less than 10 and therefore falls within the acceptable interval (Bowerman and O’Connell, 1990). The lowest tolerance value was 0.376, evidently a bit distant from the value of 0.40 (Allison, 1999). Thus, multi-collinearity was not found to be a reason to worry here.

REGRESSION ANALYSIS:

To test four respective hypotheses, mediated regression analysis was used while fulfilling all the three conditions of Baron and Kenny (1986). First, the predictor variable (green human capital) must have a significant relationship with mediating variable (commitment). Second, the relationship between the mediating variable and dependent variable (employee’ intention to quit) must be significant. Third, the relationship between the predictor variable and the dependent variable must be significant in the absence of mediating variable. For partial mediation, the relationship between the predictor variable and the dependent variable must be weaker when the mediator is added in regression equation; and for full mediation, the relationship between the predictor variable and the dependent variable must be insignificant in the presence of the mediating variable. Table 4 validates that all the conditions of mediation were fulfilled. Calculated F-statistics of the regression model was found to be significant (refer Table 4). Model 1 depicts the base model that included the control variables only (i.e. gender, age of employees, work experience of the employees, and nature of the firm) and was found significant according to F-statistics ($p \leq 0.05$). Further, the results indicated that the coefficient of green human capital is significantly and positively associated with commitment ($\beta = 0.372, p \leq 0.001$) in model 2, thus providing a support to hypothesis H1. In model 3, the coefficient of commitment is found to be significantly and negatively related to employee’ intention to quit ($\beta = -0.411, p \leq 0.001$), thereby supporting hypothesis H2. Model 4 indicated that there is a significant and negative effect of green human capital on employee’ intention to quit ($\beta = -0.378, p \leq 0.001$), therefore the results support hypothesis H3.

Table 4: Results of multiple regression analysis testing the mediating effects of internal employee motivation

Independent Variables	Dependent Variables				
	Intention to quit	Commitment	Intention to quit		
	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	6.593***	10.030***	12.290***	11.544***	14.176***
Gender	0.133**	-0.018	0.107*	0.088*	0.082*
Age of employees	-0.037	0.135*	0.028	-0.015	0.027
Work experience of the employees	-0.040	-0.056	-0.055	-0.022	-0.040
Nature of the firm	-0.059	-0.001	-0.063	-0.068	-0.068
Green human capital	-	0.372***	-	-0.378***	-0.260***
Commitment	-	-	-0.411***	-	-0.315***
R2	0.025	0.158	0.190	0.163	0.246
Adjusted R2	0.017	0.150	0.182	0.155	0.238
F statistic	3.257*	19.352***	24.217***	20.121***	28.132***
N	523	523	523	523	523

In model 5, when green human capital and commitment were taken altogether into the regression model as independent variables, effect of green human capital substantially reduced (from $\beta = -0.378$, $p \leq 0.001$ to $\beta = -0.260$, $p \leq 0.001$) but still found to be significant, whereas the effect of commitment still has significant and negative impact on employee' intention to quit. Thus, the results illustrated that commitment played a partial mediating role between green human capital and employee' intention to quit. Henceforth, supporting hypothesis H4 (see Table 4). The outcomes of regression analysis can be evidently seen through the model shown in Figure 2.

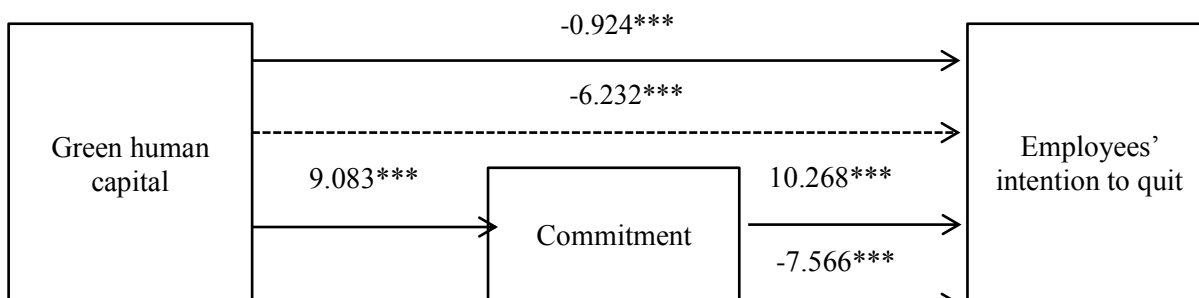


Figure 2: Results of regression analysis for derived model

Control variables: gender, age of employees, work experience of employees, and nature of the firm

Note: The standardized β coefficients are presented in Figure 2.

$^{***}p \leq .001$, $^{**}p \leq .01$, $^{*}p \leq .05$.

DISCUSSION:

With the development of environmentalism, green human capital is becoming a business necessity now days. Business reputation improves when organizations demonstrate their commitment towards green administration (Stanwick and Stanwick, 1998; Murari and Bhandari, 2011). In this regard, organizations may go beyond framing procedures/policies, instead of making it a 'window dressing' activity. This can be done by cultivating an environment-friendly work environment so that employees can reap tangible and intangible benefits. With the adoption of green programs, an organization can add variety of skills in its reservoir of human resource and harness a pool of persons with eco-friendly qualities (Ahmad, 2015). Studies have also recommended that if organizations manage green intellectual capital effectively at workplace, then employees will subsequently more engaged in their job (Collier and Esteban, 2007; Casler *et al.* 2010). The findings of this study provide support to the growing body of research that suggests that green administration's programs provide positive benefits to employees' attitude and behaviour. Thus, a well-thriving eco-friendly culture at workplace is undoubtedly effective in managing human resources.

By using multiple regression analysis on a sample of 523 respondents from 153 firms operating in India, the present study has strengthened the applicability of the green administration by indicating the positive effects of green human capital on commitment and simultaneously showing negative effects on employees' intent to quit the organizations. The results highlighted that if employees' are provided with sufficient green practices, then it will enhances their commitment level and lower down their intent to leave the organizations. This can be answered by the explanation that employees having green administration at work place feel more encouraged and confident in their capability which makes them committed (Daily *et al.*, 2009; Unnikrishnan and Hegde, 2007). Further, employees are more likely to work for that organization that prioritizes green management, which consequently results in decreased intention to quit (Shen *et al.* 2016). The study also highlighted that commitment has a noteworthy negative relationship with employees' turnover intentions implying that low level of commitment among employees leads to increase in their intention to leave the organizations. The logic behind this finding is that employees who perceived a psychological contract breach are less likely interested and interested in leaving their current job.

Added to this, the current study also found that commitment partially mediates the relationship between green human capital and intention to quit. The possible explanation for this unique green human capital–commitment–intention to quit relationship is that employees' belief that an organization intends to support them via environment management can enhance their commitment level, which thereby reduces their turnover intentions. At last, these findings imply that employers should use green programs as a tool to build healthy relations with their employees.

CONCLUSION:

The findings of this study generally supported the existing literature on the green human capital issue. The predicted relationships in this study were empirically tested and the results demonstrated that green human capital led to high commitment and reduces employees' turnover intentions. Specifically, it also highlights the mediating role of commitment in the relationship between green human capital and employees' intention to quit. Further, from employees' perspective, green human capital is an emerging and sensitive issue and ought to be addressed in an appropriate way throughout the organization. The findings are beneficial to business professionals in organizations' success through better green human capital initiatives. Finally, it is expected that this study will contribute to the ongoing trend towards research on such issues in Indian or other cultural contexts. Thus, it will offer a solid base for forthcoming research to investigate this subject more systematically.

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