

Article

# Commitment to Human Resource Management of the Top Management Team for Green Creativity

Weiwei Huo <sup>1</sup>, Xianmiao Li <sup>2,\*</sup> , Manyi Zheng <sup>1,\*</sup>, Yan Liu <sup>1</sup> and Jinyi Yan <sup>1</sup>

<sup>1</sup> SHU-UTS SILC Business School, Shanghai University, Shanghai 201899, China;

huoweimei@shu.edu.cn (W.H.); liuyan1930@shu.edu.cn (Y.L.); ceciliayjy@shu.edu.cn (J.Y.)

<sup>2</sup> College of Economics and Management, Anhui University of Science & Technology, Huainan 232001, Anhui, China

\* Correspondence: xianmiao@aust.edu.cn (X.L.); zmy422@shu.edu.cn (M.Z.)

Received: 26 December 2019; Accepted: 28 January 2020; Published: 31 January 2020



**Abstract:** Drawing on the upper echelons theory and targeted at Chinese coal enterprises, this research examines the interactions of commitment to human resource management on green creativity, and discusses the mediating mechanism of green human resource management (GHRM) between them. The results show that commitment to human resource management indirectly affects the enterprise of green creativity, while GHRM intermediates the process. Environmental regulation positively regulates the relationship between commitment to human resource management (COHRM) and GHRM, as well as the intermediary role of GHRM in the relationship between COHRM and green creativity. This study provides an important reference value for the research of GHRM in China and offers practical enlightenment for the manufacturing and coal industry enterprises to carry out environmental management and achieve sustainable development.

**Keywords:** commitment to human resource management of top management team; green human resource management; green creativity; environmental regulation

## 1. Introduction

In the new era, how to balance the relationships between economic development and resources, the environment and ecology have been of paramount significance to sustainable development. With the aggravation of environmental pollution, a large number of pollutants have been discharged close to or even more than environmental capacity. Nowadays, environmental pollution serves as a major bottleneck restricting economic development in China. The problem of the ecological environment has been attached with great importance by our government. President Xi Jinping put forward that the five development concepts, “innovation, coordination, green, openness and sharing”, and has taken the concept of green development as an important guiding ideology for national economic development, pointing out the direction for ecological, environmental protection and green creativity. As we all know, coal enterprises belong to high pollution and high energy consumption enterprises, which are facing great pressure of development and transformation now. Therefore, it is worth deliberating the relationship between improving organization efficiency and undertaking environmental responsibility for green creativity, so as to achieve sustainable development, as vital issues for coal enterprises.

As the integration of innovation and green development, green creativity has become an effective way to eliminate the bottleneck of the environment and resources and promote sustainable development [1]. Referring to innovative ideas and practices in the process of production and services, green creativity focuses on an organization’s environmentally friendly behavior and influences [2,3]. The upper echelons theory points out that the effective implementation of the organizational strategy of the top management team (TMT) plays a key role that influences the final organizational output

through strategy formulation and strategy implementation [4]. Furthermore, the behavior of TMT can directly affect the innovation of the organization's human resource management. As the most important strategic decision-making management group, it bears the responsibility of identifying the organizational environment, distinguishing organizational ability and carrying out organizational strategic planning and innovation, which affect the strategic development of the organization.

The combination of specific measures of human resource management (HRM) and the organization's environmental development strategy [5,6] can help the organization to meet the requirements of sustainable development [7–10]. GHRM (Green human resource management) is a research topic about the intersection of environmental management and HRM, having progressively emerged in recent years [11]. It emphasizes that by applying specific measures such as environmental protection training, green recruitment, and performance management, employees are encouraged to participate in environmental protection, pollution prevention, and control activities in the operation process of the organization, so as to achieve the sustainable development goal [12]. Especially in the context of the current pursuit of knowledge progress, human resources give an impetus to organizational innovation and are vitally beneficial to improving organizational competitiveness [7]. GHRM has become the focus of environmental management research [13], which is a comprehensive human resource management system that reflects the green values of an organization [12]. Therefore, this study introduces the concept of commitment to human resource management (COHRM) and analyzes how the investment and support behavior of TMT on human resource management activities affect green creativity.

However, the research on GHRM is relatively weak at present. Few research studies focus on the level of organization strategy and operation, discuss how to integrate the green concept into organization management activities, and analyze the relationship between GHRM and sustainable development [11,14]. For example, through case studies of manufacturing companies in Brazil [15] and Italy [14], it is found that GHRM contributes to organizational environmental achievement. Even so, the research on how GHRM affects green creativity is rare. Meanwhile, it ignores the factors affecting the GHRM system. In China, although some scholars have denoted that TMT serves as a support in the organization's environmental protection strategy and ecological innovation [16,17], there is little discussion on the impact of TMT on GHRM. Additionally, the organization's strategy should be appropriately in accordance with the actual situation and environment. Whether GHRM can promote the organization's green creativity and achieve sustainable development goals still remains to be confirmed.

Porter's hypothesis [18] holds that when external conditions change, such as production transformation, creative response and induced innovation are the result. Hence, industrial competitiveness can encourage innovation and the application of clean technology by designing appropriate regulatory policies regarding the environment. Simultaneously, some researchers believe that the environmental regulation disparity on technological innovation among nations and regions in certain industries exists, and the innovation intensity depends on the current productivity conditions of organizations, industries, nations and regions [19,20]. Consequently, for China, as the representative of emerging, developing countries, how various environmental regulations impact organizations' green creativity is worth exploring.

We need to give insight into the following points. First, although previous research have pointed out that TMT can affect the innovation and performance of an organization, less attention is paid to COHRM directly. Second, there is less research on the antecedents of GHRM, especially lacking research on the role of TMT. The effect of COHRM of TMT and the specific GHRM measures on green creativity has not been empirically tested. Lastly, the situational factors of GHRM are rarely concerned, and whether there are differences in specific situations remains to be further studied.

Therefore, regarding the actual situation of China's coal enterprises, this study will draw on the upper echelons theory to mainly demonstrate the following aspects: (1) Make empirical tests of the impact of COHRM of TMT on organizational green creativity. As the most important decision-maker,

the commitment of TMT is of critical value to organizational strategy and sustainable development. For example, resource support is provided when TMT makes COHRM, in terms of the development and implementation of a specific GHRM system, as well as organizational green creativity. (2) Adapt Tang et al. [6] to regard GHRM as a key process of COHRM affecting green creativity. This research discusses the mediator of GHRM in the relationship between COHRM and green creativity, as viewed by upper echelons theory, and deeply understands this mechanism of COHRM on green creativity. (3) This study investigates the moderated mediating role of environmental regulation. Based on the Chinese context and the previous research of western scholars, this research further demonstrates how different environmental regulations on COHRM affect green creativity and other effects when it takes measures, which respond to the proposition of exploring cultural differences [21,22] and Chinese cultural characteristics [23]. It also provides further empirical support and accumulates local evidence for exploring the impact of COHRM of TMT on green creativity in the context of Chinese organizational management. Therefore, this research introduces environmental regulation as a situational variable to analyze the effect of COHRM on green creativity in China. In conclusion, the hypothesized model of this research is displayed as follows (Figure 1).

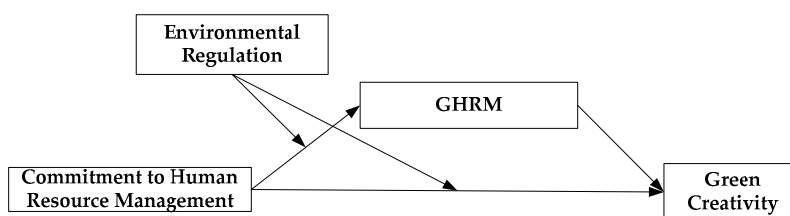


Figure 1. Hypothesized theoretical model.

## 2. Literature Review and Research Hypotheses

### 2.1. Upper Echelons Theory

Proposed by Hambrick and Mason, the upper echelons theory opened a new field of leadership theory research [24]. This theory studies the relationship between the demographic characteristics of TMT and strategic decision-making and the relationship between TMT and the performance of an organization. The core connotation of the upper echelons theory is that the top managers will make a personalized interpretation and understanding of the organization's external environment they are facing, and their behavior is the embodiment and reflection of the individual characteristics, such as values, cognition and experience, thus influencing the strategic choice [25]. Generally speaking, the top manager is the main body of strategic decision-making, which makes bounded rational decisions according to the organization's own characteristics. Therefore, to understand the operation process and mode of an organization, we would better understand the top managers in the organization.

In the process of promoting the research of the upper echelons theory, scholars gradually expand their research objects, changing from CEOs to TMT. More and more studies show that TMT has a stronger predictive effect on the strategy and performance of the organization. Gill [11] combined a series of specific activities of human resources from recruitment to resignation, analyzed the specific practical measures of GHRM, then argued that human resource strategy must be consistent with organizational strategy, and an organization can use GHRM to achieve sustainable utilization of resources.

In addition, the research of situational factors about the upper echelons theory is enhanced. Carpenter [26] divided the situational factors into three categories. They are environmental factors, organizational factors, and leadership factors. Environmental factors include environmental uncertainty, national culture, and industry factors. Organizational factors include organizational structure, organizational strategy, and internationalization. Leadership factors involve internal interaction, and so on.

## 2.2. Commitment to Human Resource Management and Green Creativity

The perception and interpretation of the environment by TMT will directly influence the extent of an organization's attention to alleviate environmental issues and then affect the choice of green creativity model. The input and support of TMT to human resource management activities is regarded as a commitment to human resource management (COHRM). When top managers are willing to participate in functional activities, recognize and take actions to promote the value of human resources, organizations are more likely to mobilize human resources to achieve green creativity.

The sensitivity of TMT to the outside world makes the organization more sensitive to the potential risks and benefits. The more obvious the commitment to human resource management of TMT is, the more willing they are to invest the corresponding resources and capabilities in the strategic development of the organization [17]. The HRM system plays a more important role in organizational strategic support [3]. At this time, the organization can face environmental protection problems more actively, making corresponding strategic adjustments such as green creativity.

Relevant research has shown that TMT tends to identify the potential benefits and market opportunities resulting from green creativity when it has strong environmental awareness [16]. Enterprises can quickly perceive the requirements of the government and other stakeholders, such as carrying out environmental protection innovation and adjusting the protection strategy to avoid the corresponding environmental risks. Enterprises can quickly integrate market information to obtain a competitive advantage. Meanwhile, the higher the TMT's environmental awareness, the more a sense of responsibility for green creativity is guaranteed [27]. Managers with a high awareness of environmental protection adopt an open and supportive attitude towards green creativity and are good at coordinating the requirements and the organization's resources. They can effectively apply the knowledge learnt internally or externally to green creativity, which actively responds to environmental problems [28]. Based on the analysis above, we, therefore, hypothesize the following:

**Hypothesis 1 (H1).** *Commitment to human resource management will be positively related to green creativity.*

## 2.3. Commitment to Human Resource Management and GHRM

TMT's support and COHRM directly affect specific human resource management activities [29]. On the one hand, the enthusiasm and investment of top managers in human resource activities, as well as the understanding and recognition of their values, are vital components of COHRM [30]. Being responsible for the formulation and dissemination of the organizational strategy, TMT is at the central position while implementing organization strategies, and when they attach great importance to human resource management activities. As a crucial driving force for the organization to achieve sustainable goals, GHRM integrates environmental management into human resource management to help enterprises achieve green value and create unique competitive advantage [31]. When TMT recognizes the importance of combining environmental management and human resource management, they can better distinguish the value of GHRM from the complex organizational environment. In addition, their positive belief in GHRM will encourage and stimulate other corresponding management support behaviors [32], improve the attention and comprehension of the whole organization of GHRM, and strategically promote GHRM implementation.

On the other hand, TMT specifically participates in sharing relevant information and making decisions [27], which provide time, human capital and other resources to support human resource management. Such participation could promote the flow of information related to human resource management and enhance business consistency [11]. In the face of pursuing sustainable development goals, TMT, as the strategic decision-maker in the organization, can more clearly understand the necessity of environmental management, recognize the value of GHRM, and actively communicate with the whole organization. Their behavior can promote employees to reach a consensus on GHRM, provide resource support for GHRM, and improve its effectiveness. To sum up, this research believes

that COHRM promotes the organizations' GHRM from the two aspects of top managers' belief support and participation support. We, therefore, hypothesize the following:

**Hypothesis 2 (H2).** *Commitment to human resource management will be positively related to GHRM.*

#### 2.4. Green Human Resource Management and Green Creativity

Zibarraset et al. [33] point out that GHRM involves the whole work cycle of employees, including reward, education, training, and authorization for employees. Guerciet et al. [34] also believe that green training, green compensation, and green recruitment are the main components of GHRM. Specific measures, including environmental protection training and green performance management, can enhance the environmental protection ability of employees, stimulate environmental protection motivation, offer work opportunities, and give full play to the critical value of human resources [12,34]. In terms of working capacity, GHRM can attract and develop employees with green creativity. Green recruitment attracts and preferentially selects those candidates. They have enough environmental awareness, sensitivity, and environmental protection knowledge and are consistent with the organization's environmental protection values [12]. These employees focus very much on protecting the environment, conserving energy, reducing emission during the work process, and actively participating in green creative activities. Meanwhile, high environmental sensitivity helps the organization adjust environmental protection strategies in time with changes in the external environment, which is conducive to the improvement of green creativity [34]. The environmental protection training provided by the organization can develop and improve the employees' environmental protection knowledge and skills, not only strengthen their environmental protection awareness [35], help them better understand the impact on the environment caused by the waste of resources in the work process, thus taking a more environmentally friendly way of work, but also improve the employees' abilities to solve environmental problems so that they can really participate in the improvement of green creativity related decisions [36].

Green performance management, green reward, and incentive authorization are essential to stimulating employees' willingness or motivation for green creativity. As an important factor of performance appraisal, green performance management should match the assessment indicators with the organization's strategic objectives for green creativity [11]. GHRM emphasizes rewarding employees' green creativity behaviors or activities. Responding to the clear information provided by GHRM, employees can better perceive and understand the strategic objectives of the organization's green creativity, and are guided to clarify their roles in the process of environmental management [37]. Furthermore, employees are motivated to participate in and take corresponding environmental protection behaviors to realize green creativity. In conclusion, GHRM can significantly improve green creativity. Therefore, we propose the third hypothesis:

**Hypothesis 3 (H3).** *GHRM will be positively related to green creativity.*

Combined with the discussion above, we deem that the relationship between green creativity and COHRM is mediated by GHRM. TMT's commitment to human resource management, the support for HRM in terms of resources and other behaviors have improved GHRM consciousness, created a good environment for the organization to implement GHRM, and improved its effectiveness [38]. First of all, specific human resource management activities, including green recruitment, green rewards, environmental protection knowledge training, and stimulating employees to participate, are of vital importance to employees' ability, motivation, and job opportunities, and improve the value of human resources in achieving organizational environmental protection goals [12]. Second, GHRM combines the environmental management goals for the organization to create unique resource advantages which are not easy to transfer among organizations [39], and wins market position by promoting product development. Lastly, GHRM meets the requirements of stakeholders for organizational green

creativity, which creates a good corporate image and reputation, thus laying good foundations for the organization to achieve innovation performance. Therefore, hypothesis 4 is proposed as follows:

**Hypothesis 4 (H4).** *GHRM mediates the effects of COHRM on green creativity.*

### 2.5. The Moderating Role of Environmental Regulation

The Theory of Planned Behavior (TPB) [40] denotes that subjective norm refers to the external subjective pressure perceived by an individual when making a decision on a specific behavior. It reflects the influence of important organizations or others on individual behavior. Environmental regulation refers to all legal policies and their implementation processes that the country takes to restrict economic activities in order to protect the environment [41]. In the light of means of regulation, there are three types of environmental regulation—command-control, market-incentive, and voluntary [42,43]. Command-control refers to laws, regulations, policies, and systems formulated by legislative or administrative departments to directly influence polluters to make environmentally friendly choices. Market-incentive is designed by the governmental using market mechanism. With the help of market signals, the government guides the enterprises' emissions, encourages the polluters to mitigate emissions, and controls and optimizes the society's overall pollution situation. Voluntary environmental regulation is the agreement, commitment, or plan proposed by the industry association. The organization itself or other subjects can decide whether to participate in protecting the environment. At present, the implementation of voluntary environmental regulation in China has just begun, which is not mature enough compared with the other two types of regulations.

Environmental regulations, which normally refer to guiding, normative, or imperative environmental policies, are formulated and carried out by the government to alleviate enterprise environmental pollution behavior [44]. Meanwhile, the implementation of enterprise environmental regulations is also supervised by industry associations in China. Wang et al. [45] point out that those enterprises violating environmental protection laws or regulations would receive penalties, such as economic fines and bad reputations. Such regulations thus serve as external subjective pressure for enterprises, especially for TMT, urging them to consider the environment when making decisions, and paying more attention to applying GHRM and green creativity. Therefore, in this study, we merely divided the environmental regulation into market-incentive and command-control. The former is so mandatory that it can bring pressure on organizations to save energy and reduce emissions. The policy support of green creativity and the implementation of environmental regulations are positive benefits to strengthening the subjective norms of organization management and GHRM. The latter regulation has the characteristics of flexibility, which can help enterprises avoid losses and ensure cost minimization in the process of green creativity. Currently, people's awareness of the current situation of the environment and resources has gradually improved, and the demand for health and a healthy environment is constantly expanding. The formulation of relevant government environmental regulations has formed strong public opinion supervision for organizations. In order to improve their own environmental reputation, enterprises will also promote green creativity by systematizing relevant rules and regulations such as GHRM. Higher environmental regulations help to strengthen the sense of pressure and mission of the stakeholders for green creativity.

In the background of China's relationship society, the strength of network relationships with stakeholders is more essential than the structural characteristics [46]. The closer the cooperation between the organization and the government, the more conducive the organization is to obtaining information resources of green creativity and obtaining a first-mover advantage. When managers truly realize that green creativity can bring expected benefits to organizations, those valuable heterogeneous resources can be further exploited and transformed by organization, which will assist in promoting the organization's economic behavior. Accordingly, we argue that environmental regulation has a prominent influence on green creativity in organizations. We propose Hypothesis 5:

**Hypothesis 5 (H5).** *The relationship between COHRM and green creativity is moderated by environmental regulation such that a positive relationship is stronger when environmental regulation is higher rather than lower.*

In addition, green creativity is an innovation that balances the improvement of economic benefits and the reduction of environmental pollution by reducing resource consumption, aiming at the harmonious development of the organization's economic and ecological environment. The organization has the vision of pursuing environmental protection and sustainable development, and this requires the organization to take action to help the employees recognize and accept such a vision. Environmental regulation plays a key role in human resources by achieving the environmental protection goal and improving green creativity [47]. Based on this, we propose Hypothesis 6:

**Hypothesis 6 (H6).** *Environmental regulation moderates the mediating role of GHRM between COHRM and green creativity, and such relationship is stronger when environmental regulation is higher rather than lower.*

### 3. Methods

#### 3.1. Sample and Procedure

In this research, we collected samples by conducting a questionnaire survey where the main subjects were coal manufacturing enterprises and heavy polluting enterprises in seven provinces including Jilin, Liaoning, Anhui, Shandong, Henan, Hebei, and Shanxi. These areas have had early economic development, a high degree of industrialization, a great impact on the environment, and were the first pilot areas for conserving energy and reducing emissions in key industries. The society and enterprises themselves attach great importance to environmental protection issues. At the same time, coal manufacturing enterprises are now facing the pressure of environmental governance and organization resource transformation, hence bearing a higher willingness to implement the green creativity strategy.

On the basis of relevant research literature and the mature scales, the "double-blind" method was adopted in the process to ensure the accuracy of the questionnaire. Before the formal survey, we conducted interviews and small-scale surveys to ensure that the survey items were in line with China's national conditions. Seven senior managers of coal enterprises were selected for in-depth interviews. The interview outline was divided into structured and semi-structured contents. There were 3 structured questions: (1) Do you think there is a connection between GHRM and the green innovation of enterprises? (2) What role do executives play in innovation strategy and green human resource management? (3) How do environmental regulations affect sustainable development strategy? The semi-structured interview content was followed up according to the respondents' answers. After the interviews, we revised the questionnaire according to the interview results and 73 small-scale surveys were conducted. After the data analysis results, the items of the questionnaire were adjusted again. Formal investigation was carried out by means of on-site distribution, mailing, and e-mail. Six hundred and thirty questionnaires were distributed in 6 months from March to August 2019, and 553 questionnaires were received, which is a 87.7% response rate. After removing the invalid questionnaires, such as incomplete filling and inconsistent filling, 421 valid questionnaires were attained, with a validity rate of 66.3%.

In Table 1, the demographic profile, including the diversity of composition, is displayed. Among our sample of 421 subordinates, 65.6% were male, 34.4% were female, 85.3% of the respondents were between 20 to 40 years old and the rest (14.7%) were over 40 years old. The respondents represent those with graduate (73.2%) degrees, a master or above (9.3%), high school or below (4.8%), and junior college (12.8%) degrees. The responses received were from R&D (24.2%), followed by production (34.7%), engineering technology (20.4%), operation (18.5%), and other (2.1%) departments. About half (49.9%) of the responses were received from private enterprises, followed by state-owned (20.7%),

self-employed (16.4%), foreign-funded (12.6%), and other (0.5%) enterprises. Their enterprise scale revealed that 46.5% of them have below 500 people, whereas 53.5% of them have above 500 people.

**Table 1.** Demographic profile ( $n = 421$ ).

Aspects	Frequency	Percentage
<b>Gender</b>		
Male	276	65.6
Female	145	34.4
<b>Age</b>		
Above 20	144	34.2
Above 30	215	51.1
Above 40	57	13.5
Above 50	5	1.2
<b>Education</b>		
High school or below	20	4.8
Junior College	54	12.8
Graduate	308	73.2
Master or above	39	9.3
<b>Department</b>		
Production	146	34.7
R&D	102	24.2
Engineering Technology	86	20.4
Operation	78	18.5
Others	9	2.1
<b>Properties of enterprise</b>		
State-owned	87	20.7
Private	210	49.9
Self-employed	69	16.4
Foreign-funded	53	12.6
Others	2	0.5
<b>Enterprise scale</b>		
Below 200	59	14.0
Above 200	137	32.5
Above 500	112	26.6
Above 1000	30	7.1
Above 1500	83	19.7

### 3.2. Measures

In this study, measurements are based on reliable mature scales developed abroad. In order to ensure their scientific nature, the chosen measurements were originally English-written, but to avoid misinterpretation and translation deviation caused by language and cultural differences, the research group used the translation-back-translation procedure to interpret the relevant scales into Chinese. All responses were reflected in a 5-point Likert scale where “1 = strongly disagree; 5 = strongly agree”.

**Commitment to human resource management.** We adopt 15 items developed by Bae [29]. The representative items are “TMT of the company regards employees and human resources measures as the source of competitive advantage”, “the TMT of the enterprise values the development of human resources more than the creation of profits”, and so on, which are evaluated by human resources management. In this study, the scale’s reliability coefficient is 0.766.

**GHRM.** Referring to the 18 items adopted by Tang et al. [39], encompassing green training, green recruitment, green staffing, green compensation, green performance management, and green involvement. The representative items are “our company pays more attention to candidates with



environmental awareness”, “our company provides practical activities (including current affairs publications) for staffs to participate in environmental management”, which are evaluated by human resources management. The scale’s reliability coefficient in this study is 0.899.

**Green creativity.** The measurement of green creativity performance refers to the scale of Chang et al. [48], which involves green product and green process innovation, including 8 items such as “when the enterprise develops and designs products, it chooses the materials with the least environmental pollution, and effectively reduces the discharge or waste of harmful substances in the production and manufacturing process”. The reliability coefficient of the scale is 0.755.

**Environmental regulation.** Referring to the research results of Lanoie [49] and Ma Fuping [50], this research designs a measurement scale with nine items, including five items measuring order controlled environmental regulations, for example, “the environmental laws and regulations facing the enterprise are relatively completed”, “the department of environmental supervision of the enterprise has strong independence and authority”. Four items measure market incentive environmental regulation, such as “the enterprise can get government subsidy for environmental pollution control” and “the enterprise should bear the corresponding tax for pollution discharge”. The reliability coefficient of the scale is 0.734.

**Control variables.** We considered employee gender, age, education, department, tenure, and ownership, and modeled them as the control variables. The control variables were age (1 = age below 20 years old, 2 = age between 21 and 30, 3 = age between 31 and 40, 4 = age between 41 and 50, and 5 = age over 51), gender, education (1 = high school and below, 2 = junior college degree, 3 = bachelor degree, 4 = master degree or above), department (1 = production, 2 = R&D, 3 = engineering technology, 4 = operations, and 5 = others), properties of companies (1 = state-owned companies, 2 = private companies, 3 = self-employed companies, 4 = foreign-funded companies, 5 = others), enterprise scale (1 = below 200 people, 2 = between 200 and 500 people, 3 = between 500 and 1000 people, 4 = between 1000 and 1500 people, 5 = over 1500 people). Prior studies, for example, Jia [3], showed that demographic variables have major influences on green-related outcomes.

## 4. Results

### 4.1. Confirmatory Factor Analysis

For evaluating the distinctiveness of the key variables, including COHRM, GHRM, environmental regulation, and green creativity, we adopted AMOS 22.0 to implement the confirmatory factor analyses. As demonstrated in Table 2, the four-factor model offered a satisfactory fit to the data ( $\chi^2/df = 2.1$ , RMSEA = 0.05, TLI = 0.91, CFI = 0.95, SRMR = 0.05). In particular, the four-factor model’s fitness was much more satisfactory than that of the other three kinds of factor models. Corresponding data suggested that the measurement possessed obvious discriminant validity (see Table 2 for details). In addition, the results indicated that all items’ factor loading coefficients in the four-factor model were greater than 0.5 (significant), and had good convergence validity. Hence, we used these four constructs for subsequent analyses.

**Table 2.** Results of CFA.

Models	$\chi^2$	df	RMSEA	CFI	TLI	SRMR
Four-factor model	2662.72	1268	0.05	0.91	0.95	0.05
Three-factor model <sup>a</sup>	2697.77	1271	0.05	0.85	0.84	0.06
Two-factor model <sup>b</sup>	2824.35	1273	0.06	0.79	0.78	0.06
One-factor model	3011.74	1274	0.07	0.76	0.75	0.07

Note:  $N = 421$ . <sup>a</sup> Environmental regulation and green creativity combined; <sup>b</sup> green creativity, environmental regulation, and GHRM combined; GHRM: green human resource management.

#### 4.2. Descriptive Statistics

The descriptive statistics are presented in Table 3. COHRM positively affected green creativity significantly ( $r = 0.58, p < 0.01$ ) and GHRM ( $r = 0.64, p < 0.01$ ). In addition, GHRM and green creativity showed a positively connection ( $r = 0.68, p < 0.01$ ). These outcomes provide preliminary evidence for our hypotheses.

**Table 3.** Means, standard deviations, and correlations for the study variables.

Variables	Means	SD	1	2	3	4	5	6	7	8	9	10
1. Gender	1.34	0.48	-									
2. Age	2.82	0.70	-0.08	-								
3. Education	2.87	0.63	0.11 *	-0.05	-							
4. Department	2.29	1.18	0.01	0.02	0.20 **	-						
5. Properties of enterprise	2.22	0.93	0.03	0.07	-0.08	0.02	-					
6. Enterprise scale	2.86	1.32	-0.09	-0.02	0.04	-0.02	-0.03	-				
7. COHRM	3.60	0.50	0.06	-0.08	0.05	-0.08	-0.14 **	0.10	-			
8. GHRM	3.83	0.62	0.05	0.00	0.10 *	-0.02	-0.10 *	0.11 *	0.64 **	-		
9. Green creativity	4.02	0.50	0.01	-0.03	0.06	-0.01	-0.02	0.13 **	0.58 **	0.68 **	-	
10. Environmental regulation	2.02	0.53	0.01	0.05	-0.05	0.01	0.05	-0.17 **	-0.55 **	-0.67 **	-0.66 **	-

Note:  $N = 421$ ; COHRM: commitment to human resource management; GHRM: green human resource management.  
\*  $p < 0.05$ ; \*\*  $p < 0.01$ .

#### 4.3. Hypotheses Testing

##### 4.3.1. Direct Effect Hypothesis

Hypothesis 1 presents that COHRM positively affects green creativity strongly. Table 4 shows that COHRM related strongly and positively to green creativity ( $\beta = 0.59, p < 0.01$ ), Hypothesis 1 is verified. COHRM also positively affects GHRM ( $\beta = 0.63, p < 0.01$ ), strongly supporting Hypothesis 2. At the same time, GHRM positively affects green creativity significantly ( $\beta = 0.68, p < 0.01$ ), consistent with Hypothesis 3. Additionally, Table 4 also demonstrates the mediating effect. Even so, the full mediating effect needs to be further verified.

**Table 4.** The results of parameter estimates.

	GHRM		Green Creativity		Green Creativity		
	M1	M2	M3	M4	M5	M6	M7
Gender	0.05	0.02	0.01	-0.02	-0.02	-0.03	0.001
Age	0.02	0.06	-0.03	0.01	-0.04	-0.02	0.01
Education	0.09	0.07	0.05	0.03	-0.01	-0.01	0.04
Department	-0.04	0.01	-0.01	0.04	0.01	0.03	0.01
Properties of enterprise	-0.09	-0.01	-0.02	0.06	0.05	0.06	0.05
Enterprise scale	0.11	0.05	0.13	0.07	0.05	0.05	0.02
COHRM		0.63 **		0.59 **		0.26 **	0.34 **
GHRM					0.68 **	0.52 **	
Environmental regulation							-0.41 **
COHRM × Environmental regulation							0.15 **
R <sup>2</sup>	0.03	0.42	0.02	0.35	0.47	0.51	0.53
ΔR <sup>2</sup>	0.03	0.38	0.02	0.33	0.47	0.04	0.53
F	2.30 *	42.05 **	1.46 *	31.53 **	52.25 **	52.99 **	50.48 **
ΔF	2.30 *	271.51 **	1.46 *	207.63 **	52.25 **	31.33 **	202.84 **

Note:  $N = 421$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ . COHRM: commitment to human resource management; GHRM: green human resource management.

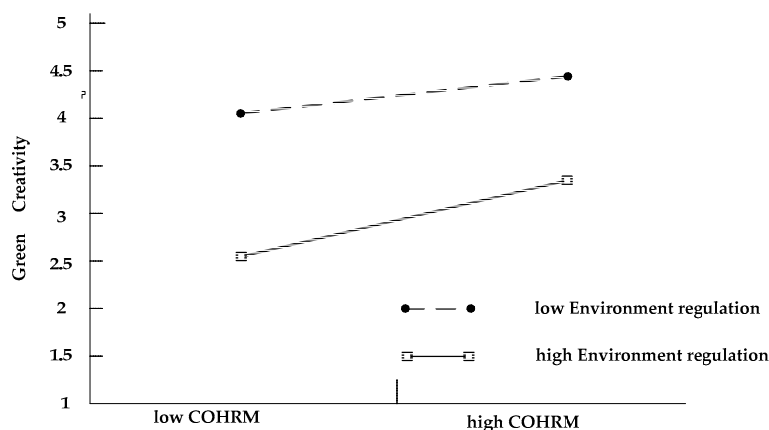
#### 4.3.2. Mediation Analyses

Hypothesis 4 predicted that GHRM could mediate the relationship between COHRM and green creativity. In the test, we used the classic method given by Baron and Kenny [51]. As shown in M4 in Table 4, COHRM positively affects green creativity ( $\beta = 0.59, p < 0.01$ ). Hypothesis 1 is verified and the first condition of intermediary effect test is met. M2 shows that COHRM positively affects GHRM ( $\beta = 0.63, p < 0.01$ ), which meets the second condition of the intermediary effect test. As shown in M6, when independent variables and intermediary variables regress the dependent variables in the meantime, GHRM positively affects green creativity significantly ( $\beta = 0.52, p < 0.01$ ), while the impact of COHRM on green creativity is verified significantly ( $\beta = 0.26, p < 0.01$ ), meeting the third condition of the intermediary effect test. Hypothesis 4 is supported.

#### 4.3.3. Moderation Analyses

We introduced the centralized human resource management commitment, environmental regulation, and their product term into the regression model of role stress. As shown by M7, the interaction of COHRM with environmental regulation plays an active role in green creativity ( $\beta = 0.15, p < 0.01$ ). With the enhancement of environmental regulation, the positive relationship is stronger between COHRM and green creativity.

To reflect the regulatory effect of organizational support more intuitively, we drew an interaction effect graph according to the steps provided by Cohen [52]. Figure 2 clearly shows that the positive relationship of high environmental regulation is significantly greater than that of low environmental regulation. Hypothesis 5 is verified.



**Figure 2.** Interaction effect of COHRM and environmental regulation on green creativity.

#### 4.3.4. Moderation Mediation Analyses

The result in Table 5 shows that GHRM has a positively effect on green creativity when environmental regulation is higher (estimate = 0.07, 95%; CI = (0.45, 0.72)), while with a low level of environmental regulation, the effect of GHRM is also significant on green creativity (estimate = 0.06, 95%; CI = (0.27, 0.50)). The path of moderated mediation is significant at the 95% CI (0.39, 0.58). Therefore, Hypothesis 6 is verified.

**Table 5.** Moderated mediation effect.

Dependent Variable	Mediator	Moderator	Level	Effect Size	Boot SE	LL 95% CI	UL 95% CI
Green creativity	GHRM	Environmental regulation	Low(−1SD)	0.39	0.06	0.27	0.50
			High(+1SD)	0.59	0.07	0.45	0.72
		Environmental regulation		0.49	0.05	0.39	0.58

Note:  $N = 421$ .

## 5. Discussion and Conclusion

### 5.1. Discussion

Combining with the upper echelons theory, this study takes Chinese coal enterprises as the research object to explore the interactions between COHRM, GHRM, and green creativity by conducting a questionnaire survey and using hierarchical regression. The results show that COHRM can directly affect green creativity as well as have a positive impact on green creativity through GHRM. In this process, environmental regulation not only regulates the relationship between COHRM and green creativity but also regulates the intermediary effect of GHRM between them. When there is higher environmental regulation, the positive effect of COHRM on green creativity is stronger. Additionally, the intermediary effect of GHRM on the relationship between them is also stronger.

### 5.2. Theoretical Contribution

There are three main theoretical contributions. Firstly, this study promotes strategical research on the driving factors of green creativity. From a strategic human resource management perspective, combined with the upper echelons theory, this study finds that the commitment of TMT to human resource management can stimulate organizations to implement GHRM. Previous studies mainly discussed the driving effect on the organization's green creativity. The relationship between TMT and the organization's innovation performance is mostly from the functional background of TMT, which ignores the significance of top management in the human resource management (HRM) system to the perception and driving force of green creativity. In this study, TMT's support is refined to the HRM field, and the concept of commitment to human resource management (COHRM) is introduced. It is pointed out that COHRM indirectly affects green creativity through GHRM. The results of this study will help us better understand green creativity strategy and provide a useful reference for organizations to choose the green creativity strategy mode more effectively.

Secondly, it enriches the theoretical research of GHRM. In this study, COHRM favorably affects GHRM and then promotes green creativity. Meanwhile, GHRM plays an intermediary role between COHRM and green creativity. Based on the nature-resource-based view, the existing research mainly discusses which human resource management measures can be taken to carry out environmental management effectively. However, the theoretical basis is relatively simple, rarely involving the intermediary mechanism of GHRM [3]. Based on TMT's cognition of green creativity strategy, this study analyzes the effect of COHRM on GHRM implementation, and discusses the realization of green creativity by influencing employees. The findings of this study can help us understand GHRM as a management system formally implemented from the relationship of stakeholders. GHRM plays an important role in influencing employee attitudes, shaping employee behaviors and realizing green creativity [53].

Finally, an empirical study on environmental regulation in the Chinese context is added. This research considers the environmental regulation's influence on green creativity and discusses the influence of GHRM on green creativity under environmental regulations in China. Previous studies have mainly focused on the path and interaction of environmental regulation levels on green creativity

performance of pollution enterprises. The regulatory content focused more on solving problems than on pollution prevention. China is a representative emerging market economy nation in the world, with a vigorous economy and fast development speed. However, the relevant system is not completed, especially for some high pollution and high energy consumption enterprises, which are facing the great pressure of development and transformation. This research not only shows the governance and intervention mechanisms by macro and micro factors on green creativity but also helps to deeply explain the boundary role of environmental regulation.

### *5.3. Practical Implications*

From the practical perspective, our study has three implications. Firstly, organizations should pay attention to the influence of TMT on human resource management. Organizations should regularly train their TMT to better understand GHRM and reasonably allocate resources in accordance with the external environment and the actual situation of the organization. TMT should actively interact with external stakeholders and maintain good relationships with them as well. Meanwhile, organizations should not only improve the awareness of environmental protection, correctly realize and promote the achievement of the organization's environmental protection objectives, but also improve the overall attention and comprehension of environmental management to better implement GHRM and promote green creativity.

Secondly, in terms of corporate systems and cultures, managers should be aware of the role of GHRM in implementing green creativity. For example, a corporate system is conducive to strengthen organizations' recognition of GHRM. Managers should integrate environmental management into every aspect of human resource management, such as formulating the overall environmental protection objectives, upgrading environmental management to the strategic level, and strengthening the supervision of environmental protection implementation. With regard to the specific measures, the concept of GHRM should be aligned with practices. Managers should focus on innovation and optimization of each link of human resource management, such as green recruitment and staffing. Enterprises should also strengthen environmental protection knowledge and skill training for employees, and motivate them to actively participate in environmental protection activities, thus jointly achieving the strategic goal of green creativity.

Finally, resource-based enterprises with high energy consumption and pollution should timely adjust and improve their implementation. At the same time, international enterprises that are planning to invest or operate in China in the future should also pay special attention to the environmental regulations formulated by the government. Apparently, China's energy consumption has rapidly increased in recent years. Specifically, the growth rate of energy consumption in 2005 is 40% higher than the GDP growth rate. China can no longer follow the old path of "first pollution, then governance". The pollution problem in China has deteriorated in recent years. If the Chinese government does not take any action, it will encounter unfavorable development trends in the future. Hence, the policymakers in China should further enhance the publicity of green environmental protection awareness, constantly cultivate and strengthen the entrepreneurs' sense of social responsibility. The government should provide preferential policies such as tax and subsidies to foster the awareness of environmental innovation of top managers and implement corresponding innovative practices as well. Only when enterprises and the government appropriately stick to each responsibility can the two parties reach a win-win situation.

### *5.4. Limitations and Future Directions*

Some research limitations are list as follows. First, due to the limitations of data acquisition, this study only selects representative samples from seven provinces, which cannot completely replace the full picture of China's coal enterprises. In the future, we need to collect more samples from different regions of China to further analyze and generalize our conclusions. Second, we use cross-sectional data to carry out the empirical model test for the research design. So the results are only limited

in persuasion. In fact, the outputs of green creativity and GHRM practice often have a lag effect. Therefore, in the long run, there would be a more obvious effect of COHRM and GHRM on green creativity. We would further demonstrate vertical research on time series analysis in the future. Third, this research mainly focuses on green creativity at the organization level, so we suggest that individual and team level research should be paid attention to [54]. The impact of GHRM at the individual level will not only help to establish a more complete theoretical framework, but will also guide GHRM practice in different situations as well.

## 6. Conclusions

This study found that COHRM is an important antecedent for green creativity, which displays a positive impact on promoting green creativity via GHRM. Environmental regulation moderates the relationship between COHRM and GC (green creativity). Top managers from the coal enterprises investigated said green human resource management will promote green creativity of coal enterprises. At present, some coal enterprises have also implemented green human resource management, such as green recruitment and environmental protection staff training. Our study provides support of the influence mechanisms of COHRM for green creativity, which makes some theoretical and practical contributions. For coal enterprises in China, green human resource management and green creativity are relatively new management practices, and some top managers have not realized the long-term benefits of green management to enterprises. Therefore, researchers need to track the implementation of management strategies for as long as possible.

This study is in response to the strategic deployment of “beautiful China” and achieving a “win-win” strategy. It provides a unique perspective for enterprises to undertake environmental responsibility and innovation for the whole of society. Especially for international enterprises planning to invest or operate in China in the future, special attention should be paid to the conclusion of this study on environmental regulations formulated by the government.

**Author Contributions:** Conceptualized, reviewed, funding acquisition, writing-review and editing and supervised this study, W.H. drafted methodology, M.Z.; Conceptualized, funding acquisition, wrote original draft, writing-review and editing, X.L.; investigation, Y.L.; resources, J.Y. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was supported by the National Natural Science Foundation of China (Grant No. 71701004), the Anhui Natural Science Foundation of China (Grant No. 1808085QG223) and Shanghai philosophy and social science planning project (Grant No. 2019BGL001).

**Acknowledgments:** The authors would like to acknowledge the financial support provided by National Natural Science Foundation of China (Grant No. 71701004), the Anhui Natural Science Foundation of China (Grant No. 1808085QG223) and Shanghai philosophy and social science planning project (Grant No. 2019BGL001).

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. Chen, Y.S. The driver of green innovation and green image green core competence. *J. Bus. Ethics* **2008**, *81*, 531–543. [[CrossRef](#)]
2. Chen, Y.S.; Chang, C.H. The determinants of green product development performance: Green dynamic capabilities, green transformational leadership, and green creativity. *J. Bus. Ethics* **2013**, *116*, 107–119. [[CrossRef](#)]
3. Jia, J.; Liu, H.; Chin, T.; Hu, D. The continuous mediating effects of GHRM on employees’ green passion via transformational leadership and green creativity. *Sustainability* **2018**, *10*, 3237. [[CrossRef](#)]
4. Hambrick, D.C.; Mason, P.A. Upper echelons: The organization as a reflection of its top managers. *Acad. Manag. Rev.* **1984**, *9*, 193–206. [[CrossRef](#)]
5. Chen, Y.; Tang, G.; Lee, C.F.; Jin, J. How does executive strategic human resource management link to organizational ambidexterity? An empirical examination of manufacturing firms in China. *Hum. Resour. Man.* **2016**, *55*, 919–943. [[CrossRef](#)]

6. Tang, G.; Wei, L.Q.; Snape, E.; Ng, Y.C. How effective human resource management promotes corporate entrepreneurship: Evidence from China. *Int. J. Hum. Resour. Manag.* **2015**, *26*, 1586–1601. [[CrossRef](#)]
7. DuBois, C.L.Z.; Dubois, D.A. Strategic HRM as social design for environmental sustainability in organization. *Hum. Resour. Man.* **2012**, *51*, 799–826. [[CrossRef](#)]
8. Renwick, D.W.; Jabbour, C.J.; Muller-Camen, M.; Redman, T.; Wilkinson, A. Contemporary developments in Green (environmental) HRM scholarship. *Int. J. Hum. Resour. Manag.* **2015**, *27*, 114–128. [[CrossRef](#)]
9. Shen, J.; Dumont, J.; Deng, X. Employees perceptions of green HRM and non-green employee work outcomes, the social identity and stakeholder perspectives. *Group Organ. Manag.* **2016**, *43*, 594–622. [[CrossRef](#)]
10. Pinzone, M.; Guerci, M.; Lettieri, E.; Redman, T. Progressing in the change journey towards sustainability in healthcare, the role of “Green” HRM. *J. Clean. Prod.* **2016**, *122*, 201–211. [[CrossRef](#)]
11. Gill, M. Green HRM, People management commitment to environmental sustainability. *Res. J. Recent Sci.* **2012**, *1*, 244–252.
12. Renwick, D.W.S.; Redman, T.; Maguire, S. Green human resource management: A review and research agenda. *Int. J. Manag. Rev.* **2013**, *15*, 1–14. [[CrossRef](#)]
13. Paillé, P.; Chen, Y.; Boiral, O.; Jin, J. The impact of human resource management on environmental performance: An employee-level study. *J. Bus. Ethics* **2014**, *121*, 451–466. [[CrossRef](#)]
14. Guerci, M.; Longoni, A.; Luzzini, D. Translating stakeholder pressures into environmental performance—the mediating role of green HRM practices. *Int. J. Hum. Resour. Manag.* **2016**, *27*, 1–28. [[CrossRef](#)]
15. Jabbour, C.J.C.; Santos, F.C.A.; Nagano, M.S. Environmental management system and human resource practices, is there a link between them in four Brazilian companies? *J. Clean. Prod.* **2008**, *16*, 1922–1925. [[CrossRef](#)]
16. Peng, X.R.; Wei, J. Stakeholder environmental protection orientation and enterprise ecological innovation—The moderating effect of senior management’s environmental protection consciousness. *Sci. Res.* **2015**, *33*, 1109–1120.
17. Cao, H.J.; Chen, Z.W. The driving effect of internal and external environment on organization green innovation strategy—The regulating effect of senior management’s environmental consciousness. *Nankai. Manag. Rev.* **2017**, *20*, 95–103.
18. Michael, E.P.; Claas, v.d.L. Toward a new conception of the environment-competitiveness relationship. *J. Econ. Persp.* **1995**, *9*, 97–118.
19. Norberg-Bohm, V. Stimulating “green” technological innovation: An analysis of alternative policy mechanisms. *Policy Sci.* **1999**, *32*, 13–38. [[CrossRef](#)]
20. Villegas-Palacio, C.; Coria, J. On the interaction between imperfect compliance and technology adoption: Taxes versus tradable emissions permits. *J. Regul. Econ.* **2010**, *38*, 274–291. [[CrossRef](#)]
21. Whetten, D.A. An examination of the interface between context and theory applied to the study of Chinese organizations. *Manag. Organ. Rev.* **2009**, *5*, 29–55. [[CrossRef](#)]
22. Xiao, Z.; Bjorkman, I. High commitment work systems in Chinese organizations: A preliminary measure. *Manag. Organ. Rev.* **2006**, *3*, 403–422. [[CrossRef](#)]
23. Zhou, Y.; Zhang, Y.Y.; Liu, J. A hybridism model of differentiated human resource management effectiveness in Chinese context. *Hum. Resour. Manag. Rev.* **2012**, *22*, 208–219. [[CrossRef](#)]
24. Hambrick, D.C.; Humphrey, S.E.; Gupta, A. Structural interdependence within top management teams: A key moderator of upper echelons predictions. *Strat. Manag. J.* **2015**, *36*, 449–461. [[CrossRef](#)]
25. Yamak, S.; Nielsen, S.; Escriba-Esteve, A. The role of external environment in upper echelons theory: A review of existing literature and future research directions. *Group Organ. Manag.* **2013**, *39*, 69–109. [[CrossRef](#)]
26. Carpenter, M.A.; Geletkanycz, M.A.; Sanders, W. Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition. *J. Manag.* **2004**, *30*, 749–778. [[CrossRef](#)]
27. Egri, C.P.; Herman, S. Leadership in the North American environmental sector: Values, leadership styles, and contexts of environmental leaders and their organizations. *Acad. Manag. J.* **2000**, *43*, 571–604.
28. Tseng, M.L.; Wang, R.; Chiu, A.S.F.; Geng, Y.; Lin, Y.H. Improving performance of green innovation practices under uncertainty. *J. Clean. Prod.* **2013**, *40*, 71–82. [[CrossRef](#)]
29. Bae, J.; Lawler, J.J. Organizational and HRM strategies in Korea: Impact on firm performance in an emerging economy. *Acad. Manag. J.* **2000**, *43*, 502–517.
30. Lee, J.; Elbashir, M.Z.; Mahama, H.; Sutton, S.G. Enablers of top management team support for integrated management control systems innovations. *Int. J. Acc. Inf. Syst.* **2014**, *15*, 1–25. [[CrossRef](#)]

31. Chen, M.Y.; Tang, G.Y. Research on the relationship between strategic human resource management and corporate entrepreneurship for senior executives. *J. Shandong Univ.* **2016**, *5*, 85–93.
32. Liang, Q.; Lin, D.M.; Ma, J.N. Institutional pressures, executive team support and ERP applications—Empirical studies from China. *J. Shantou Univ.* **2013**, *29*, 53–61, 95.
33. Zibarras, L.D.; Coan, P. HRM practices used to promote pro-environmental behavior: A UK survey. *Int. J. Hum. Resour. Manag.* **2015**, *26*, 2121–2142. [[CrossRef](#)]
34. Guerci, M.; Carollo, L. A paradox view on green human resource management: Insights from the Italian context. *Int. J. Hum. Resour. Manag.* **2016**, *27*, 212–238. [[CrossRef](#)]
35. Bansal, P.; Roth, K. Why companies go green: A model of ecological responsiveness. *Acad. Manag. J.* **2000**, *43*, 717–736.
36. Jabbour, C.J.C.; Santos, F.C.A. The central role of human resource management in the search for sustainable organizations. *Int. J. Hum. Resour. Manag.* **2008**, *19*, 2133–2154. [[CrossRef](#)]
37. Becton, J.B.; Giles, W.F.; Schraeder, M. Evaluating and rewarding OCBs: Potential consequences of formally incorporating organizational citizenship behavior in performance appraisal and reward systems. *Empl. Relat.* **2008**, *30*, 94–514. [[CrossRef](#)]
38. Wagner, M. Green human resource benefits: Do they matter as determinants of environmental management system implementation? *J. Bus. Ethics* **2013**, *114*, 443–456. [[CrossRef](#)]
39. Tang, G.; Chen, Y.; Jiang, Y. Green resource management practices: Scale development and validity. *Asia Pac. J. Hum. Resour.* **2018**, *56*, 31–55. [[CrossRef](#)]
40. Ajzen, I. The Theory of planned behavior. *Organ. Behav. Hum. Decis. Process.* **1991**, *50*, 179–211. [[CrossRef](#)]
41. Tan, J.; Chen, X.C. Analysis on the impact of government environmental regulation on low-carbon economy from the perspective of industrial structure. *Economist* **2011**, *10*, 93–99.
42. Shao, L.M.; Gao, Y.Q.; Wang, S. Environmental regulation and green behavior choice of resource-based enterprises: “forced transformation” or “regulatory capture”. *J. Hehai. Univ.* **2018**, *20*, 62–68, 92–93.
43. Ding, X.J.; Fang, Y.T. Research on the relationship between environmental regulation and green innovation in China: An empirical analysis based on meta-analysis. *Price: Theory Pract.* **2018**, *6*, 34–37.
44. Xing, X.P.; Liu, T.S.; Wang, J.H.; Shen, L.; Zhu, Y. Environmental regulation, environmental commitment, sustainability exploration/exploitation innovation, and firm sustainable development. *Sustainability* **2019**, *11*, 6001. [[CrossRef](#)]
45. Wang, Y.; Li, Y.X.; Ma, Z.; Song, J.B. The deterrence effect of a penalty for environmental violation. *Sustainability* **2019**, *11*, 4226. [[CrossRef](#)]
46. Huang, J.W.; Li, Y.H. Green innovation and performance: The view of organizational capability and social reciprocity. *J. Bus. Ethics* **2017**, *145*, 309–324. [[CrossRef](#)]
47. Milliman, J.; Clair, J. Best environmental HRM practices in the US. *Green. Peop. Hum. Resour. Environ. Manag.* **1996**, *25*, 49–73.
48. Chang, C.; Chen, Y. Green organizational identity and green innovation. *Manag. Decis.* **2013**, *51*, 1056–1070. [[CrossRef](#)]
49. Lanoie, P.; Laurent-Lucchetti, J.; Johnstone, N. Environmental policy innovation and performance: New insights on the Porter hypothesis. *J. Econ. Manag. Strat.* **2011**, *20*, 803–842. [[CrossRef](#)]
50. Ma, F.P.; Cha, N. Research on the influence of environmental regulation on the performance of technological innovation—the regulating effect of institutional environment. *R&D Manag.* **2012**, *24*, 60–66.
51. Baron, R.M.; Kenny, D.A. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *J. Personal. Soc. Psychol.* **1986**, *51*, 1173. [[CrossRef](#)]
52. Cohen, J.; Cohen, P. *Applied Multiple Regression/Correlation Analyses for the Behavioral Sciences*, 2nd ed.; Psychology Press: New York, NY, USA, 1983.
53. Jiang, K.; Lepak, D.P.; Hu, J. How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Acad. Manag. J.* **2012**, *55*, 1264–1294. [[CrossRef](#)]
54. Chun, R. Ethical values and environmentalism in China: Comparing employees from state-owned and private firms. *J. Bus. Ethics* **2009**, *84*, 341–348. [[CrossRef](#)]

