The Relationship between Green Human Resource Management and Green Intellectual Capital of Certified ISO 14000 Businesses in Thailand

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Abstract

The objective of the present study is to empirically test the relationships between green human resource management (GHRM) with four practices (green recruitment and selection, green training and development, green compensation and green performance management) and green intellectual capital. The sample in this research consists of 242 human resource managers of certified ISO14000 businesses in Thailand. With a structured questionnaire, primary data was collected from mail survey and statistically treated with Pearson correlation coefficient, t-test, and the Ordinary Least Squares (OLS) regression analysis. OLS Multiple regression analysis is applied to test the effect of green HRM variables. The findings revealed that three practices of green human resource management (green recruitment and selection, green compensation and rewards and green performance management) have a positive association with green intellectual capital. The findings suggest that firms can speed up GHRM to improve green intellectual capital for competitive advantage. Therefore, the executives must put more emphasis on factors of GHRM that aligns with a strategic goal by concentrating on GHRM practices.

Keywords: green human resource management; green intellectual capital; recruitment and selection; training and development; compensation and performance management

1. Introduction

At present, the green concept in organizations has developed as a policy in many businesses. With globalization and industrial development together with the increase in human population, there are concerns about the pressure put on natural resources like land, water, minerals, and air. The growing of business is the cause of the destruction of nature to meet the human needs, so it is expected for all the companies to have a practical method towards the controlling of environmental

activities all around the world (Ashraf, Ashraf, & Anam, 2015). In addition, firms need to highlight the importance of social and environmental factors along with economic and financial factors in order to support the corporate success in the business (Cherian and Jacob, 2012). It is against this background that there is a growing need for businesses in all sectors to integrate environmental management with human resources. Human resource management (HRM) plays a critical role in embedding sustainability strategy of the organization for creating the skills, motivation, values, and trust to achieve a triple bottom line: people, planet, and profit (Uddin & Islam, 2015). The practice of contribution from human resource management to environmental management is called green human resource management (GHRM) (Renwick, Redman, & Maquire, 2008). GHRM is the use of HRM policies to support the sustainable use of resources within the organization and drive environmental management advantages. This research will present the various ways that green HRM practices are helping in improving issues. The research of Sudin (2011) explained that GHRM activities play a critical role in both increasing green intellectual capital such as human capital, structural capital and relational capital. It is argued that without facilitating the human resource and implementing sustainable policies, going green would be hard to achieve (Ahmad, 2015). Moreover, there are very few studies in Thailand that presented the relationship between green human resource practices and competitive advantage to guide managers in considering green practices as a strategy. Thus, the practices under GHRM are worth exploring for in Thailand context.

The objective of this research is to test the relationships between GHRM in four dimensions (green recruitment and selection, green training and development, green compensation and rewards and green performance management) and green intellectual capital such as human capital, structural capital and relational capital.

2. Literature and Conceptual Development

The theory of resource-based view of the firm (RBV) explains how the strategies are successful with rare, valuable and difficult-to-imitate resources, a firm is likely to gain an advantage over its competitors and thus have higher returns (Barney, 1991). Consequently, it reflects that resources and capabilities are key success factors for competitive advantage and its sustainability. In this research, RBV is applied to explain GHRM as a strategic success factor to increase the competitive advantage of a firm. GHRM is defined as all HR activities involved in development, implementation

and ongoing maintenance of a system that aim at making employees of organization green for the benefit of the individual, society, environment, and business. Several academics generally quantified that famous strategies in the field of human resource management such as recruitment, training and development, performance management, pay and reward, employment relations as critical tools for aligning staffs with an organization's environmental strategy (Arulrajah Opatha and Nawaratne, 2015). GHRM in this research consists of four aspects: green recruitment and selection, green training and development, green compensation and green performance management. Likewise, intellectual capital is the intent of gaining sustainable competitive advantage through the ownership of knowledge, practical experience, expertise of a specialist, technology of an organization, cooperation and relationships with customers. Green intellectual capital refers to the total stocks of all intangible assets, knowledge, and capabilities of a firm in an environment such as green human capital, green internal process and green interpersonal wealth that can create environmental values or competitive advantage (Santhoshraj, 2017). Following a number of researchers in the field of green intellectual capital, it is generally identified that intellectual capital consists of three dimensions such as human capital, structural capital and relational capital (Kong and Thomson, 2009). Several studies claim that the strength of GHRM has the potential to adapt organizational well-being and transform into employee values that create green intellectual capital (Hosain and Rahman, 2016). In addition, Masri and Jaaron (2017) indicated that the process of green recruitment increases their recruiting potential and attract talented employees as human capital. Similarly, the study of Rani and Mishra (2014) suggests that three types of green intellectual capital have positive effects on corporate environment citizenship as on essential factors of competitive advantages of a firm. Moreover, firms deal with the issue of performance management into environmental responsibilities by concentrating corporate-wide environmental performance standards, and green information systems tend to gain positive on intellectual capital (Marcus and Fremeth, 2009). Likewise, the research of Sudin (2011) explained that GHRM activities play a critical role in both increasing green intellectual capital such as human capital, structural capital and relational capital. Accordingly, a conceptual model of this research is shown in Figure 1.

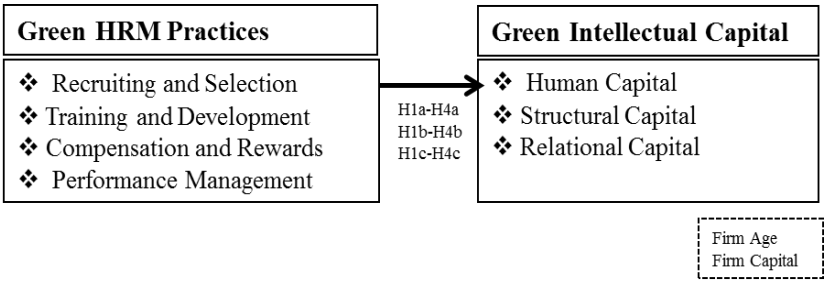

Figure 1: Conceptual Framework of GHRM and Green Intellectual capital

2.1 Green Human Resource Management

A number of researchers have specified GHRM as having various meanings and dimensions. For organizational perspective, GHRM is defined as all tasks and duties involved in developing, pursuing and creating a system at making the human resource of an organization environment aware of their private and professional lives (Aggarwal and Sharma 2015). Likewise, Mathapati, (2013) defined *"GHRM is directly responsible in creating a green workforce that understands, appreciates, and practices green initiative and maintains its green objectives all throughout the HRM process of recruiting, hiring, training, compensating, developing, and advancing the firms human capital and business"*. On the word of Opatha and Arulrajah (2014), GHRM refers to "*the policies, practices, and systems that make employees of the organization green for the benefit of the individual, society, natural environment, and the business"*. In this research, GHRM is defined as all HR practices concerned with the development, implementation, and ongoing support of a system that intends to create among employees the green values of individual and organization (Opatha and Arulrajah (2014). Many scholars broadly specified that distinguished policies in the field of recruitment, performance management and appraisal, training and development, employment relations and pay and reward are considered as powerful tools for aligning employees with an organization's environmental strategy (Arulrajah et al., 2015). Likewise, Sharma (2016) argued that GHRM practices are green recruitment, green training and development, green performance management and green employee relation. Moreover, Bangwal and Tiwari (2015) introduced GHRM processes such as green recruitment, performance management and appraisal, training and development, employee relation, pay and reward and employee exit. In summary, this research defined the GHRM in four practices: green recruitment and selection,

green training and development, green performance management and green compensation and reward. To be able to distinctly analyze the relationship between GHRM and organizational performance, this research described GHRM roles in four aspects as follows:

2.2 Green Recruiting and Selection (RES)

Green Recruiting and Selection (RES) refers to the environmental policy in its recruitment and selection practices by collaborating the employer's about greening in recruitment criteria and selection standards, stating the favorite of the business to recruit candidates who have competency and attitudes to contribute in company environmental administration (Arulrajah et al., 2015). Green recruitment acts as reducing paper in recruitment processes such as paper-free recruitment, online application form, and online interview. The study of Bhutto and Auranzeb (2016) confirms that green recruitment is the ways to achieve firm performance. Green recruiting and selection provide many ways to make recruiting and selection process more efficient such as reducing traveling expense through video conferencing, take interviews online. The study of Mandip (2012) showed that 47% of staffs desired to work in the organizations with effective green performance. In addition, Masri and Jaaron, (2017) indicated that the process of green recruitment increases their recruiting potential and attract talented employees. Likewise, the study of Obaid and Alias (2015) assert that the process of green recruitment can assist firms in producing an effective performance which contributes to the creation of structural capital. Thus, the hypothesis is proposed as follows:

Hypothesis 1a-1c: Green recruitment and selection are positively related to (a) human capital, (b) structural capital and (c) relational capital.

2.3 Green Training and Development (TRD)

Green Training and Development (TRD) refers to a practice of knowledge, skills, and attitude that makes employees openness the need for environmental practices, and develops a proactive attitude towards environmental topics for achieving environmental goals (Ahmed, 2015). Renwick Redman and Maguire (2013) suggest green training and development practices such as 1) training staff to produce green analysis of workplace, 2) application of job rotation to train green managers of the future, 3) providing of specific training on environmental

management aspects of safety, energy efficiency, waste management, and recycling, 4) development of green personal skills, and re-training of staff losing jobs in manufacturing. Therefore, it seems that certain companies have actually realized the importance of green training and development in their organizational for environmental performance. Jabbour et al., (2013) found that the construct environmental training relates positively and significantly to the environmental management maturity. Moreover, the study of Sudin (2011) proposed that green training and development is the stocks of intangible assets and capabilities of a firm that create intellectual capital. Thus, the hypothesis is proposed as follows:

Hypothesis 2a-2c: Green training and development are positively related to (a) human capital, (b), structural capital and (c) relational capital.

2.4 Green Compensation and Rewards (COR)

Green Compensation and Rewards (COR) is defined as practicing reward systems for improving performance by offering employees a benefit package that rewards employees for green performance, the use of environmental rewards and recognition and providing incentives to encourage environmentally friendly activities and behaviors. In GHRM perspective, rewards and compensation can be explained as an effective instrument for supportive environmental practices in organizations (Ahmad, 2015). Forman and Jorgensen (2001) observed that employee commitment to environmental management programs was increased when they were offered compensation to take up duties in relation to environmental responsibility. Renwick et al., (2008) suggest some green reward management practices such as bonuses, premiums, gifts, publicity, external roles and daily praise increase employee awareness of environmental achievement. Taylor (1992) examined that the companies offer green rewards to their employees for their performance were more inclined to follow the green practices. The study conducted by Berrone and Gomez-Mejia (2009) found that the firms having eco-friendly performance paid their CEOs more than non-eco-friendly. Thus, the hypothesis is proposed as follows:

Hypothesis 3a-3c: Green compensation and rewards are positively related to (a) human capital, (b), structural capital and (c) relational capital.

2.5 Green Performance Management (PEM)

Green Performance Management (PEM) refers to the process of improving capabilities of individuals and teams by encouraging employees to enhance their professional skills and environmental performance standards that help to achieve the organizational goal in a better way. In order to sustain good environmental performance, evaluation green performance of an employee is one of the critical function in successful GHRM (Arulrajah et al., 2015)**.** With the environmental management affecting global business strategy, performance management is also being influenced by the green wave in a possible positive manner. For measuring employee green performance, HR department needs to develop the program for waste management, environmental audits, the decline of waste, green information systems and green audit program for green targets goals and responsibilities in the appraisal. In addition, performance management improves the skill of an employee, behavioral competencies, teamwork, diversity, managing change, and collaboration to deal with different environmental problems which would support the company's core values and tend to enhance green intellectual capital (Chen, 2008). firms that focus on environmental performance management such as concentrating on the standard of corporate environmental performance and green information systems tend to gain positive environmental performance (Marcus and Fremeth, 2009). Thus, the hypothesis is proposed as follows:

Hypothesis 4a-4c: Green performance management is positively related to (a) human capital, (b), structural capital and (c) relational capital.

3. Data and Methodology

3.1 Population and Sample

In this research, the total of 864 ISO 14000 certified companies in Thailand chosen from the website of the Standard Intelligence Unit (n.d.) are the population for hypotheses testing. Because, ISO 14000 certified companies always manage environmental policy and improve their environmental performance according to the standard requirement. The key participants are HR directors or HR managers of each company. By using Krejcie and Morgan's sample size, the sample size is 269 companies (Krejcie and Morgan, 1970: 607-610). With simple random sampling method, the questionnaires were sent by mail and of the surveys completed and received, only 242 surveys are usable. The effective response rate is approximately 89.95% which Aaker, Kumar and Day (2007) mentioned that 20% of response rate for a mail survey is considered acceptable for analyzing and testing hypotheses. The

statistics used are t-test, Pearson correlation coefficient, and OLS regression analysis. In addition, the non-response bias was tested for two independent samples by t-test statistics. A comparison of early responses and late responses data is recommended by Armstrong and Overton (1977). T-tests comparing the first 121 survey responses received with the last 121 survey responses across the firm's four characteristics (i.e. the number of employees, number of years in business, amount of capital invested, and sale revenue per year) did not find any significant differences between the two groups. Thus, it appears that non-response bias does not pose a significant problem for this research.

3.2 Variable Measurements

In the conceptual model, all of the variables were measured on a five-point Likert scale, ranging from '1 = strong disagree' to '5 = strong agree', except control variables. The variable measurements of dependent, independent, and control variables are described as follow: *Green recruitment and Selection* was developed from Arulrajah et al., (2015). *Green training and development* was developed from Arulrajah et al., (2015). *Green compensation and reward*s was developed from Arulrajah et al., (2015), *and Green performance management* was developed from Arulrajah et al., (2015). *The green intellectual capital* was measured by three attributes: human capital, structural capital and relational capital adapted from Jirawuttinunt (2012). In addition, the control variables are also likely to affect the relationships. In this research, there are two of them comprising firm age and firm capital; because different age may present different firm characteristics and resource placement (Chen and Huang, 2009). Jabbour et al., (2013) described that different size of the firm may affect environmental practices. Larger firms often have more superior financial status for achievement (Masri and Jaaron, 2017). In addition, most of the extant literature focus that firm capital may affect the strategic decision and firm competitiveness (Thipsri and Ussahawanitchakit, 2009). Firm capital reflects firm's wealth, especially a large amount of money used for producing competitive advantage. This study defines firm age as the number of years that the firm has been established. Also, firm capital may influence the ability of a firm to create corporate strategies in order to complete greater performance (Ussahawanitchakit, 2005). It is measured by the amount of capital invested.

3.3 Validity and Reliability Test

All of the scales are improved in collaboration with experience persons to establish the face validity of the construct. Confirmatory factor analysis (CFA) is used to test the construct validity which developed from prior research. According to the rule-of-thumb of Hair et al., (2010), all factor loadings that are greater than the 0.40 cut-off are statistically significant. Furthermore, regarding scale reliability testing, the Cronbach alpha coefficients should be higher than 0.75, as recommended by Crano, Brewer, and Lac (2015). The scales for all measurements represent internally consistent results; therefore, they are considered acceptable for analysis due to indicating an accepted validity and reliability. Table 1 indicates the results for both factor loadings, being between 0.699-0.945 thus indicating that construct validity is considered acceptable. As for reliability testing, Cronbach alpha coefficients for all variables between 0.783-0.920 are considered acceptable.

Table 1 Results of Measure Validation

Items	Factor Loadings	Cronbach Alpha	Number of Items
Green Recruitment and Selection (RES)	0.710-0.881	0.783	4
Green Training and Development (TRD)	0.816-0.882	0.920	6
Green Compensation and Reward (COR)	0.699-0.857	0.866	6
Green Performance Management (PEM)	0.845-0.929	0.935	5
Human Capital (HUM)	0.774-0.945	0.888	4
Structural Capital (STR)	0.849-0.902	0.896	4
Relational Capital (REL)	0.849-0.898	0.906	4

3.4 Statistic Test

The Ordinary Least Squares (OLS) regression analysis is used to test all hypotheses following the conceptual model because both dependent and independent variables in this study were neither nominal data nor categorical data. The OLS regression analysis is an appropriate method for examining the hypothesized (Hair et al., 2010). After all, is said and done, the model of the relationships mentioned above is shown below.

$$\textbf{\textit{Equation 1: HUM}} = \beta_{01} + \beta_1 FA + \beta_2 FC + \beta_3 RES + \beta_4 TRD + \beta_5 COR + \beta_6 PEM + \varepsilon$$

$$\textbf{\textit{Equation 2: STR}} = \beta_{02} + \beta_7 FA + \beta_8 FC + \beta_9 RES + \beta_{10} TRD + \beta_{11} COR + \beta_{12} PEM + \varepsilon$$

$$\textbf{\textit{Equation3:REL}} = \beta_{03} + \beta_{13} FA + \beta_{14} FC + \beta_{15} RES + \beta_{16} TRD + \beta_{17} COR + \beta_{18} PEM + \varepsilon$$

4. Results of Descriptive Statistics

In this research, about 51.65 percent of respondents are male. The span of the age of respondents approximately the half is 41-50 years old (42.56 percent). Most of the respondents are married (65.29 percent). The majorities of the education level of respondents obtain bachelor's degrees or lower (56.20 percent). For working experiences, approximately 39.67 percent of respondents have been working with the firms for more than 15 years and 27.27 percent has 10-15 years of experience. Moreover, most of the respondents received the salary is 70,000-90,000 Baht per month (40.08 percent). The current position of respondents, 48.76 percent is HR manager, 37.66 percent is HR director, 10.74 percent is general manager, and 3.31 percent is others. Most of the business types are limited company (67.71 percent). The operation capital is more than 100,000,000 Baht (62.81percent). Most of the employees in the organization are more than 200 persons (76.86 percent). The average sales revenues per year are more than 250,000,000 Baht (80.58 percent). The period of time in operation is mostly more than 15 years (84.71 percent and 82.23 percent received environmental rewards.

Table 2 Descriptive Statistics and Correlation Matrix for all Constructs

Variables	**RES**	**TRD**	**COR**	**PEM**	**HUM**	**STR**	**REL**
MEAN	3.761	4.145	4.084	4.126	3.794	4.039	4.186
S.D	0.681	0.590	0.627	0.676	0.662	0.611	0.602
TRD	0.485**						
COR	0.552**	0.653**					
PEM	0.653**	0.696*	0.756**				
HUM	0.616**	0.545**	0.631**	0.658**			
STR	0.621**	0.6482**	0.721**	0.710**	0.835**		
REL	0.505**	0.664**	0.644**	0.608**	0.724**	0.860**	

**. p <0.01, * p < 0.05

The descriptive statistics and correlation matrix for all variables are shown in Table 2. The research verifies possible multicollinearity problems by studying the correlation between the variables included in the regression analysis. In this way, by means of Pearson's correlation coefficient, we can measure the degree of linear association between every pair of variables as shown in Table 2. With respect to possible problems relating to multicollinearity, all the correlation coefficients of

independent variables are smaller than 0.8, and all the Variance Inflation Factor (VIF) values are smaller than 10. The problem of multicollinearity of independent variables in this model is therefore not significant (Hair et al., 2010). The VIF of 3.194 is below the cut-off value of 10 recommended by Hair et al. (2010), meaning that the independent variables are not correlated with each other. Therefore, there are no substantial multicollinearity problems encountered in this study. In addition, Table 2 shows the correlation matrix for all variables used in the regression analysis**.**

5. Results of Hypotheses testing and Discussion

Table 3 exhibits the OLS regression analysis of GHRM in green recruitment and selection (Hypotheses 1a-1c). The findings show that green recruitment and selection has significant positive effects on human capital (b3 = 0.289, $p < 0.01$), structural capital (b9 = 0.196, $p < 0.01$) and relational capital (b15 = 0.110, $p < 0.05$). The result is similar to Santhoshraj (2017) indicated that the green recruitment has an impact on knowledge capital and increase employee awareness of sustainability. In addition, Brekke and Nybord (2008) revealed that talent preferred green companies more than brown companies. It can be a central view of maintaining and developing the skills, knowledge, and abilities of both individual employees and the organization as a whole. Also, Sudin (2011) revealed that there is a positive relationship between the green recruitment and selection and intellectual capital. Therefore, green recruitment and selection is an essential factor which provides firms to obtain green intellectual capital. Thus, Hypotheses 1a, 1b, and 1c are supported.

Accordingly, the results in Table 3 relate to green training and development (Hypotheses 2a-2c). The findings reveal that green training and development has significant positive effects on structural capital (b10 = 0.191, $p < 0 .01$) and relational capital (b16 = 0.388, $p < 0 .01$), consistent with prior literature. Thus, Hypotheses 2b and 2c are supported. However, the findings reveal that green training and development has no significant effects on human capital (b4 = 0.105, $p > 0 .05$). This result can argue by the study of Nolan (2002) who found that training activities appeared limited for multi-skills development depend on employees' ability to deal with each situation at work after training and motivation. In addition, measuring intellectual capital has been expended a great deal of time to complete the outcomes. Thus, estimating the impact of training and development on intellectual capital may appear in the long run. (Sheopuri and Sheopuri, 2015). Therefore, Hypothesis 2a is not supported.

Next, the results in Table 3 relate to compensation and reward (Hypotheses 3a-3c). The findings show that compensation and reward has significant positive effects on human capital (b5 = 0.277, p < 0.01), structural capital (b11 = 0.343, p < 0.01), and relational capital (b17 = 0.305, p < 0.01), consistent with prior studies. Thus, Hypotheses 3a, 3b and 3c are supported.

Table 3 Results of OLS Regression Analysis[a]

Independent Variables		**Dependent Variable**		
	1	**2**	**3**	**Hypotheses**
	HUM	**STR**	**REL**	**Testing Results**
H1:Green Recruitment and Selection (RES)	0.289*** (0.058)	0.196*** (0.047)	0.110** (0.053)	H1a, H1b, H1c are supported.
H2:Green Training and Development (TRD)	0.105 (0.072)	0.191*** (0.059)	0.388*** (0.066)	H2b and H2c are supported.
H3:Green Compensation and Rewards (COR)	0.277*** (0.078)	0.343*** (0.063)	0.305*** (0.070)	H3a, H3b, H3c are supported.
H4:Green Performance Management (PEM)	0.200** (0.080)	0.154** (0.065)	0.019 (0.072)	H4a and H4b are supported.
FA	-0.108 (0.073)	0.014 (0.060)	-0.031 (0.066)	
FC	-0.031 (0.063)	0.079 (0.052)	0.094 (0.057)	
F	44.879	68.261	45.585	
Adjusted R^2	0.522	0.626	0.526	
VIF	3.344	3.344	3.344	

[a]Beta coefficients with standard errors in parentheses, *** p < 0.01, **. p <0.05, * p < 0.10

Following, the results in Table 3 relate to green performance management (Hypotheses 4a-3c). The evidence indicates that green performance management has significant positive effects on human capital (b6 = 0.200, p < 0.05) and structural capital (b11 = 0.154, p < 0.05), consistent with prior literatures. To sum up, then, Hypotheses 4a and 4b are supported. However, the results show that green performance management has no effect on relational capital (b12 = 0.019, p > 0.05) and organizational performance (b18 = 0.097, p > 0.05). One potential explanation for this unexpected finding is performance management is considered as evaluating and controlling of the employee may not increase values if the valuation of green

performance management does not enhance the company book values, marketability, and create additional profit to the company (Ashraf et al., 2015). Thus, Hypotheses 4c is not supported.

This study proposed firm age and firm capital as control variables because prior literature showed that firm age and firm capital were factors that may affect GHRM practices (Jabbour et al., 2013 and Masri and Jaaron, 2017). However, the findings in this study show that firm age and firm capital have no effect on the relationships. It means that the year of the firm and the amount of firm capital have no influence on GHRM practices and green intellectual capital in Thailand context which may be different from the international context.

6. Conclusion, Recommendation, and Direction for Future Research

Based on findings above, this study increases our knowledge of the positive effect of GHRM on green intellectual capital. First, these findings contribute to generating new knowledge that firms can improve green intellectual capital by adopting GHRM practices. More specifically, the findings indicate that HRM with green practices leads to green intellectual capital which can create a competitive advantage for the firm. Therefore, a firm should focus on aligning HR activities with an environmental strategy to achieve superior performance. Second, this study considers green intellectual capital as the dependent effect on the relationship which few studies actually link GHRM to green intellectual capital. As expected, the results report that GHRM has a positive the relationship with green intellectual capital. These findings confirm the important role of GHRM in the workplace for organizational achievement. Third, this study increases our knowledge of resource-based view of firm theory on GHRM and green intellectual capital relationship. Our findings suggest that when managers focus on environmental issues, the firm needs to motivate employees through the implementation of GHRM practices and create a sense of responsibility among human resources toward the environmental performance. According to these three main contributions, green recruitment and selection and green compensation and rewards are two important variables in the effect of GHRM and green intellectual capital. The results suggest that firm should take attention in green recruitment and selection to improve green intellectual capital of the firm. In addition, the findings also provide that firms must be aware of the importance of HRM practices in strategic HR decisions and corporate policies. This highlights the importance of taking into environmental behaviors at work. The employee may be

trained and given a workshop to educate environmental issues. Recruitment and selection should place focus on the fit between candidates' personal values regarding the environment. Likewise, employees could be rewarded for motivating the firm to be involved in protecting the environment. Finally, the study indicates that socially responsible organization that employs green practices gain benefits by attracting and retaining human capital. Improved employee retention translates into low replacement cost which is developed structural capital. In addition, GHRM captures the relationships and reputation as well as networking.

This research is intended to expand the theoretical contributions of prior knowledge and literature of GHRM practices. Moreover, the resource-based view of the firm is integrated explaining the overall link between variables in the model. In addition, this research provides some relevant managerial implications. The results suggest that firms focus on GHRM as a strategy can increase green intellectual capital which is an intangible asset for sustainable competitive advantage. Therefore, the executives must put more emphasis on factors of GHRM that aligns with a strategic goal by concentrating on GHRM evermore. In this research, the most interesting aspect of these results of firms is the conducts in which green recruitment and selection, and green compensation and rewards are critical activities to green intellectual capital. Thus, the executives should clearly understand and enhance them within the organization for gaining GHRM as a strategy. As such, this research has assessed the importance of successful GHRM relative to green intellectual capital in Thailand context. Also this research has some limitations that should be mentioned. Firstly, this research uses the questionnaire for collecting data from a whole ISO certified business. Future research should focus on specific business type which might provide different results from this research. In addition, to better clarify the un-expectation relationship of the model, an in-depth interview with manager/director in future research would be helpful to understand in GHRM phenomenon completely. Finally, this study tests only one point of time, longitudinal research is needed to explore the impacts of GHRM on green intellectual capital in long-term.

7. Acknowledgment

Sumittra Jirawuttinunt is currently assistant professor and lecturer in Management and researcher in Management Research Unit of Mahasarakham Business School, Mahasarakham University. She would like to thank Mahasarakham Business School, Mahasarakham University for funding this research.

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