

# GREEN HUMAN RESOURCE MANAGEMENT, GREEN ORGANIZATIONAL CULTURE, AND ENVIRONMENTAL PERFORMANCE: AN EMPIRICAL STUDY

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**Abstract**—Ethical companies must balance their financial, social and environmental performance. The process of applying HR management objectives to environmental management is called Green Human Resource Management (GHRM). Research on GHRM and environmental performance in Indonesia is still limited in number, especially in South Sumatra. Based on the Environmental Quality Index reported by the Ministry of Environment and Forestry of the Republic of Indonesia, in 2016 South Sumatra was 16th national ranked, but slipped to 20th national ranked in 2017. This phenomenon is the basis of why this research carried out in South Sumatra, especially in Palembang as the capital of South Sumatra. This study aims to analyze the effect of GHRM, which consists of Green Recruitment and Selection (GRS), Green Training (GTR), and Green Compensation (GCO), directly on environmental performance (EP) and indirectly through green organizational culture (GOC) at state hospitals of Palembang. The population in this study were 2,270 employees at state hospitals in Palembang. By using the Slovin formula and proportional stratified random sampling method, a total sample of 146 people was obtained. The results showed that there were positive effects of all GHRM variables consisting of GRS, GTR, and GCO on GOC and EP. The results of this study also show that there is an indirect influence between GRS and GCO on EP through GOC, while GTR does not have an indirect influence on EP through GOC as an intervening variable. Other results show that there are positive GOC influences on the EP.

**Keywords**—Green Human Resource Management, Green Organizational Culture, Environmental Performance, Hospital, South Sumatra.

## I. INTRODUCTION

Ethical companies must balance their financial, social and environmental performance (Florea, Cheung, & Herndon, 2013). Research on financial and social performance is relatively broad, but research on environmental performance is still limited in number (Walls, Berrone, & Phan, 2012). One of the priority areas for environmental management is human resources (HR). The process of implementing HR management objectives for environmental management is called Green Human Resource Management (GHRM) (Renwick, Redman, & Maguire, 2013). At present, there are only a few studies in the literature to guide managers in considering HR factors to maximize their efforts in the successful implementation of GHRM (Govindarajulu & Daily, 2004).

Research on GHRM and environmental performance in Indonesia is still limited in number, especially in South Sumatra. There is one phenomenon regarding environmental performance in South Sumatra; based on the Environmental Quality Index reported by the Ministry of Environment and Forestry of the Republic of Indonesia, in 2016 South Sumatra was ranked 16<sup>th</sup> nationally (KHLK, 2017), but slipped to 20<sup>th</sup> national ranked in 2017 (KHLK, 2018). This is the basis of why this research was carried out in South Sumatra, especially in Palembang City as the capital of South Sumatra, with a greater number of industry than other cities/districts in South Sumatra.

Some previous studies concluded that there were positive effects of GHRM on environmental performance in manufacturing companies in Mexico (Daily, Bishop, & Steiner, 2007), Pakistan (Jabbar & Abid, 2014), India (Lather & Goyal, 2015), Italy (Guerci, Longoni, & Luzzini, 2016), Palestine (Masri & Jaaron, 2016), and Jordan (Rawasdeh, 2018) as well as energy and environmental companies in India

(Bangwal, Tiwari, & Chamola, 2017). The most recent study, conducted by Roscoe, Subramanian, Jabbour, and Chong (2019), concluded that there was a significant relationship between GHRM on green organizational culture and environmental performance in manufacturing companies in China. Most of the previous research was carried out in the analysis unit in the form of manufacturing companies. Manufacturing companies are not, however, the only industry that has the potential to pollute the environment, another business sector in the health sector, such as a hospital. Based on the research gap, this research was conducted at the hospital analysis unit, because, in recent years there has been a rapid increase in the number of hospitals operating in the city of Palembang. The city of Palembang was chosen as the research location to represent South Sumatra because the number of hospitals in the city of Palembang was higher than in other cities/regencies in the Province of South Sumatra. This study aims to analyze the effect of GHRM, which consists of variables Green Recruitment and Selection (GRS), Green Training (GTR), and Green Compensation (GCO), directly on environmental performance (EP) and indirectly through the variable green organizational culture (GOC) in hospitals in Palembang City. This study will also analyze the effect of green organizational culture on environmental performance.

## II. LITERATURE REVIEW

### A. *Ecocentrism Theory and The Triple Bottom Line Theory*

The theory of ecocentrism was first proposed by Naess in 1973, wherein it offered an adequate understanding of the environment. Moral concerns were extended to include all ecological communities, especially the environment (Keraf, 2010). The theory of ecocentrism developed to the theory of Deep Ecology (DE), which demands change where ethics are not only focused on humans but all living things and their environment. All ecological communities are the focus of DE, which can be defined as a real movement to create a harmonious life between living things and nature. This real movement affects the perspectives, behavior, and lifestyle of many people (Keraf, 2010). Popularized by Elkington in 1997, the Triple Bottom Line Theory reinforces this theory by developing the terms economic prosperity, environmental quality, and social justice (Wibisono, 2007). Elkington gives the view that companies that want sustainability must pay attention to the 3Ps. In addition to pursuing profits (profit), companies must also be involved in fulfilling people's welfare (people) and contribute actively in preserving the environment (planet). By preserving the environment, industry players will get more benefits, especially in terms of health, comfort, and availability of resources that are more secure in its continuity. Every policy carried out by industry players, including

policies in Human Resource Management (HRM), must involve efforts in preserving the environment, such as GHRM (Wibisono, 2007).

### B. *Environmental Performance (EP)*

Organizational environmental performance refers to carrying out organizational operations in a way that positively affects the environment. Environmental management has two main objectives, namely to control the level of pollution in an environment and improve environmental quality to acceptable standards (Yasamis, 2011). Increased concern to protect the environment forces organizations to adopt environmental management practices (Gonzalez-Benito, 2006). According to Yasamis (2011), there are four reasons why organizations must adopt environmental management practices: 1) ethical; because of the organization's duty to maintain environmental balance, 2) the economy; saving resources and energy which means saving costs, 3) legal; to avoid problems with law and government, and 4) commercial; a large number of organizations consider environmental management.

### C. *Green Organizational Culture (GOC)*

GOC can be defined as the values, beliefs, and behavior of organizational members regarding the natural environment. The HR department plays a key role in enabling GOC because it shapes employee values, beliefs, and behavior through the process of GRS, GTR, and GCO. A study by Pellegrini, Rizzi, and Frey (2018) identified the importance of designing HR practices to improve employee commitment and behavior to support organizational change for long-term sustainable development. Employees who are trained and compensated for being involved in pro-environment activities ultimately help develop and promote green culture in the organization. A recent study conducted by Roscoe, Subramanian, Jabbour, and Chong (2019) concluded that there was a positive effect of GHRM consisting of GRS, GTR, and GCO on GOC and also GOC on EP.

**H<sub>1</sub> : GOC has a positive effect on EP.**

**H<sub>2</sub> : GRS has a positive effect on GOC.**

**H<sub>3</sub> : GTR has a positive effect on GOC.**

**H<sub>4</sub> : GCO has a positive effect on GOC.**

### D. *Green Human Resource Management (GHRM)*

GHRM is a concept for implementing HRM policies and practices for sustainable use of resources in business organizations and promoting environmental sustainability. Effective GHRM can be promoted by organizations with the practices of GRS, GTR, and GCO (Govindarajulu & Daily, 2004). In this study, these three factors represented the overall GHRM. To increase the attractiveness of prospective employees, organizations must build a reputation inspired by the thinking that the organization is responsive to the environment (Kapil, 2015). This is confirmed by

research by Guerci, Longoni, and Luzzini (2016) which revealed that intentions related to environmental sustainability could play a major role in attracting prospective applicants. GRS ensures that prospective employees understand GOC and share its environmental values through the selection of knowledge, values, and trust in the environment of prospective employees. In the job analysis phase, job descriptions and job specifications must clarify and emphasize environmental aspects, achieve "green" and explain what is expected of "green" employees in the future (Renwick, Redman, & Maguire, 2013). Previous research from Guerci, Longoni, and Luzzini (2016) and Masri and Jaaron (2016) concluded that there were positive effects of GRS on EP.

**H<sub>5</sub> : GRS has a positive effect on EP.**

GTR is one of the main methods of GHRM in developing support for environmental sustainability initiatives (Daily, Bishop, & Steiner, 2007; Jabbour, 2013). Opatha and Arulrajah (2014) state that the most significant impact on environmental awareness among employees is through the GTR, which is responsible for creating the GOC. Training and employee development programs must cover social and environmental issues at all levels. According to Cherian and Jacob (2012), it is essential to design a GTR based on training needs to achieve optimal environmental benefits from training. Renwick, Redman, and Maguire (2013) suggest elements of GTR implementation, include training staff to produce green workspace analysis, energy efficiency, waste management, recycling, and the development of green personal skills. Previous research from Lather and Goyal (2015) and Rawasdeh (2018) concluded that there were positive effects of GTR on EP.

**H<sub>6</sub> : GTR has a positive effect on EP.**

Achieving the goal of greening the organization can be increased by compensating employees for their commitment to environmental sustainability practices (Jabbour & Jabbour, 2016). GCO can be in the form of cash-based rewards (bonuses, cash, premiums), non-cash-based rewards (sabbatical, holidays, gifts), recognition-based awards (awards, appreciation, publicity, external roles, placards), and positive awards (feedback) (Renwick, Redman, & Maguire, 2013). All types of compensation respect employees who contribute the most to environmental sustainability through the recognition and appreciation of employees who are dedicated to achieving environmental goals (Kapil, 2015). Previous research from Jabbar and Abid (2014) and Bangwal, Tiwari, and Chamola (2017) concluded that there were positive effects of GCO on EP.

**H<sub>7</sub> : GCO has a positive effect on EP.**

Based on hypothesis 1 to hypothesis 7, there are direct effects of GRS, GTR, and GCO on GOC and also EP respectively, thus, the hypothesis can be

formulated that there are indirect effects of GRS, GTR, and GCO on EP through GOC as intervening variable. Previous research conducted by Roscoe, Subramanian, Jabbour, and Chong (2019) revealed that there were indirect effects of GRS, GTR, and GCO on EP through GOC as an intervening variable.

**H<sub>8</sub> : GRS has an indirect effect on EP through GOC as intervening variable.**

**H<sub>9</sub> : GTR has an indirect effect on EP through GOC as intervening variable.**

**H<sub>10</sub> : GCO has an indirect effect on EP through GOC as intervening variable.**

III. THEORETICAL FRAMEWORK

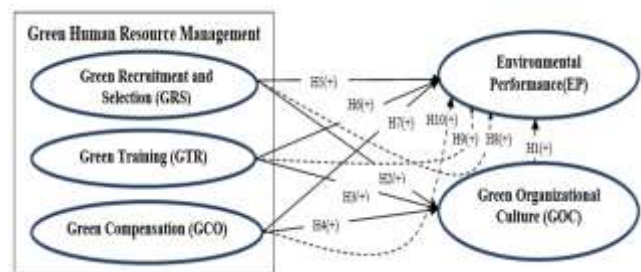


Fig. 1. Research Model

IV. METHODS

The population in this study was 2,270 employees at state hospitals in Palembang City. By using the Slovin formula and proportional stratified random sampling method, a sample of 146 employees was obtained. The sample of 146 employees became respondents in this study. The instrument used to measure the research variable was a questionnaire measured by a five-point Likert scale (1-5) with the following details:

1. Green Human Resource Management (GHRM): The instrument used to measure GHRM is a questionnaire developed by Jabbour (2013) and Renwick, Redman, and Maguire (2013) with as many as 15 questions. The question items contain variables that describe GHRM, namely Green Recruitment and Selection (GRS), Green Training (GTR), and Green Compensation (GCO).
2. Green Organizational Culture (GOC): The instrument to measure GOC is a questionnaire developed by Roscoe, Subramanian, Jabbour, and Chong (2019) with as many as 10 questions. The question items contain indicators of GOC, namely leadership emphasis, message credibility, peer involvement, and employee empowerment.
3. Environmental Performance (EP): The instrument used to measure EP is a questionnaire developed by Masri and Jaaron (2016) and Roscoe, Subramanian, Jabbour, and Chong (2019) with as many as nine questions. The question items contain indicators of EP, namely the significant reduction in

environmental incidents, waste reduction, and cost savings.

Data that have been obtained from the questionnaire will be processed using the SPSS program. An instrument test consisting of validity and reliability tests will be conducted, followed by a normality test. The analysis technique used is multiple linear regression analysis.

V. RESULTS AND DISCUSSION

TABLE 1. PROFILE OF RESPONDENTS

No	Demography's type	Profile	The Majority Percentage (%)
1	Range of ages	30-35 y.o.	30.5
2	Sex	Female	52.3
3	Academic background	Bachelor	59.1
4	Period of working	6-10 years	34.7

Source: Processed primary data (2019)

Table 1 shows that the majority age range of the respondents is 30-35 years (30.5%) with the majority gender of respondents being female (52.3%). The majority of respondents' level of education is bachelor (59.1%) with a working period of 6-10 years (34.7%). The research instrument in the questionnaire can be stated as valid and reliable if it meets the requirements for testing validity and reliability. The instrument validity test is completed by comparing the Pearson Correlation value to the r value obtained from the r table. For the number of respondents, which is 146 people, with a two-way test and a significance level of 5%, then the r table value is 0.1625. The instrument is stated to be valid if the item of each question in the questionnaire has a Pearson Correlation value > r table value. Table 2 illustrates the results of the instrument validity test used in this study.

Table 2. The Results of Instrument Validity Test

Question Item	Pearson Correlation Value	Value of r table	Description
GRS1 – GRS5	0.461 - 0.909	0.1625	Valid
GTR1 – GTR5	0.393 – 0.775	0.1625	Valid
GCO1 – GCO5	0.481 – 0.754	0.1625	Valid
GOC1 – GOC10	0.406 – 0.723	0.1625	Valid
EP1 – EP9	0.284 – 0.648	0.1625	Valid

Source: Processed primary data (2019)

Table 2 shows that all items of the question in the instrument are valid because they have a greater value of Pearson Correlation than the value of the r table. Furthermore, reliability testing is conducted to test whether the instrument used is reliable and reliable. The instrument is reliable if the Cronbach's Alpha value of each questionnaire question item is greater than 0.6. Table 3 illustrates the results of the reliability tests performed.

TABLE 3. THE RESULTS OF INSTRUMENT RELIABILITY TEST

No	Variables	Cronbach's Alpha	Description
1	GRS	0.796	Reliable
2	GTR	0.738	Reliable
3	GCO	0.742	Reliable
4	GOC	0.727	Reliable
5	EP	0.696	Reliable

Source: Processed primary data (2019)

Table 3 illustrates that all instruments in this study are reliable because they have values of Cronbach's Alpha greater than 0.6. Then, the normality of the data was tested by using the Kolmogorov–Smirnov Test. Data are said to be normally distributed if the Asymp. Sig. (2-tailed) value is greater than 0.05. Table 4 illustrates the results of the Kolmogorov-Smirnov test from the research model built.

TABLE 4. THE RESULTS OF KOLMOGOROV-SMIRNOV'S TEST

No	Research Model	Asymp. Sig. (2-tailed)	Description
1	GHRM on GOC	0.998	Normal
2	GHRM and GOC on EP	0.675	Normal

Source: Processed primary data (2019)

Table 4 shows that Asymp. Sig. (2-tailed) value in the study's model is greater than 0.05. This indicates that all the data in this study are normally distributed. Furthermore, a hypothesis test is conducted by conducting regression to identify the correlation between variables. From this regression assessment, results are presented in Figure 2 below.

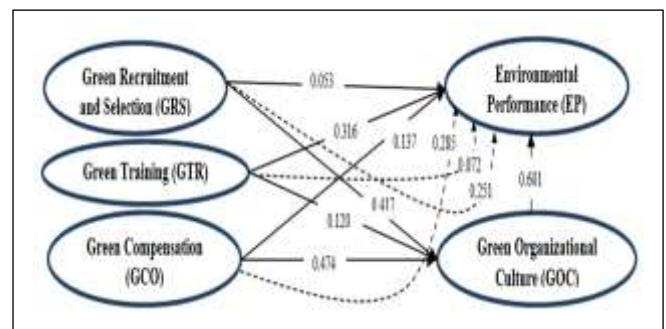


Fig. 2. Regression Test Result

Based on Figure 2, the discussion is described as follows:

1. GOC has a positive and significant effect on EP of 0.601 with a significance level of  $0.000 < 0.05$ , thus, hypothesis 1 is accepted. These results support the theory of ecocentrism and the Triple Bottom Line, as well as previous research. GOC encourages employees to improve their EP.
2. GRS has positive and significant effect on GOC with the value of 0.417, with a significance level of  $0.000 < 0.05$  as the level of significance; therefore, hypothesis 2 is accepted. These results support the theory of ecocentrism and the Triple

Bottom Line, as well as previous research. The selection of qualified employees who are aware of GOC starts with the GRS process.

3. GTR has a positive but not significant effect on GOC of 0.120 with a significance level of  $0.120 > 0.05$ ; therefore, hypothesis 3 is accepted. These results support the theory of ecocentrism and the Triple Bottom Line, as well as previous research. GTR is an important element to increase the knowledge and awareness of employees so they can familiarize themselves with GOC.
4. GCO has a positive and significant effect on GOC of 0.474 with a significance level of  $0.000 < 0.05$ ; therefore, hypothesis 4 is accepted. These results support the theory of ecocentrism and the Triple Bottom Line, as well as previous research. GCO plays an important role so that employees are motivated to familiarize and apply GOC.
5. GRS has a positive but not significant effect on EP of 0.053 with a significance level of  $0.552 > 0.05$ ; therefore, hypothesis 5 is accepted. These results support the theory of ecocentrism and the Triple Bottom Line, as well as previous research. Employees who are competent and aware of environmental performance are obtained from a good GRS process.
6. GTR has a positive and significant effect on EP of 0.316 with a significance level of  $0.000 < 0.05$ ; therefore, hypothesis 6 is accepted. These results support the theory of ecocentrism and the Triple Bottom Line, as well as previous research. Employees with optimal EP are obtained from employees who receive the GTR well.
7. GCO has a positive and significant effect on EP of 0.137 with a significance level of  $0.048 < 0.05$ ; therefore, hypothesis 7 is accepted. These results support the theory of ecocentrism and the Triple Bottom Line, as well as previous research. GCO can motivate employees to do EP well.
8. GRS has an indirect positive effect on EP through GOC of:  $0.417 \times 0.601 = 0.251$ , while the direct effect of GRS on EP is 0.053. This shows that the direct effect is smaller than the indirect effect, so the GRS indirect effect on EP through GOC is significant. Hence, hypothesis 8 is accepted. These results support the theory of ecocentrism and the Triple Bottom Line, as well as previous research. GOC mediates the relationship between GRS and EP.
9. GTR has no indirect positive effect on EP through GOC of:  $0.120 \times 0.601 = 0.072$ , while the direct effect of GTR on EP is 0.316. This shows that the direct effect is greater than the indirect effect. Therefore, the indirect effect of

GTR on EP through GOC is insignificant. Hence, hypothesis 9 is rejected. These results do not support the theory of ecocentrism and the Triple Bottom Line, as well as previous research. GOC is not a mediator of the relationship between the GTR and the EP.

10. GCO has an indirect effect on EP through GOC of:  $0.474 \times 0.601 = 0.285$ , while the GCO direct effect on EP is 0.137. This shows that the direct effect is smaller than the indirect effect. Hence, the indirect effect of GCO on EP through GOC is significant. Therefore, hypothesis 10 is accepted. These results support the theory of ecocentrism and the Triple Bottom Line, as well as previous research. GOC mediates the relationship between GCO and EP.

## VI. CONCLUSION

The results revealed that nine research hypotheses were accepted and there was one hypothesis rejected. There is a positive effect of all GHRM variables consisting of GRS, GTR, and GCO on GOC and EP. The results of this study also show that there is an indirect influence between GRS and GCO on EP through GOC as an intervening variable, while GTR does not have an indirect influence on EP through GOC as an intervening variable. Other results show that there are positive GOC influences on the EP. This study is expected to be a reference for other researchers who are interested in GHRM, GOC, and EP variables. The limitation of this study is the limitations on the unit of analysis, especially organizations in the field of environment and limited variables. Further research is expected to involve more organizations in other environmental fields, such as mining and petroleum organizations, and to add other variables such as motivation, commitment, etc.

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