The influence of green human resource management on service innovation performance: the role of change-oriented organizational citizenship behavior

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**ABSTRACT**

This paper aims to examine the influence of the variables Green Human Resource Management (GHRM), Change-Oriented Organizational Citizenship Behavior (OCB), Service Innovation Performance, and Narcissism. The approach used in this research is a quantitative approach. The sample used in this research was hotel workers, totaling 218 respondents. Research data was obtained from the results of filling out a questionnaire and analyzed using Structural Equation Modeling analysis techniques with the help of Smart PLS program. The results of this research show that (i) GHRM has a positive and significant effect on Service Innovation Performance, the higher the GHRM, the higher the Service Innovation Performance, and vice versa; (ii) GHRM has a positive and significant effect on Change-Oriented OCB, the higher the GHRM, the higher the Change-Oriented OCB, and vice versa; (iii) Change-Oriented OCB has a positive and significant effect on Service Innovation Performance, the higher the Change-Oriented OCB, the higher the Service Innovation Performance, and vice versa; (iv) Change-Oriented OCB can mediate the indirect influence of GHRM on Service Innovation Performance; (v) Narcissism does not moderate the influence of GHRM on Service Innovation Performance. In general, the conclusion drawn from this research is that the implementation of GHRM practices and the development of Change-Oriented OCB are important in improving the Service Innovation Performance of hotel workers in Yogyakarta. Hotel management in Yogyakarta can pay attention to these aspects to strengthen competitive advantages and provide excellent services to hotel guests.

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**Introduction**

Tourism has become one of the main pillars in supporting Indonesia's economy, the largest archipelago in the world with captivating natural wealth. The latest data shows that Indonesia is ranked 32nd among a total of 117 countries in the Travel and Tourism Competitiveness Index (TTCI) in 2022, confirming its role as a prominent tourist destination. High achievements in various indicators such as travel data availability, hotel price index, and visa requirements provide an overview of Indonesia's attractiveness as a tourist destination. Additionally, the contribution of the tourism industry to the economy has been recognized, contributing 5% to the total GDP in 2019.

The hospitality and tourism industries are crucial players in fostering economic expansion and progress, especially in Indonesia (Mucharreira et al., 2019). However, they are highly vulnerable to disasters and crises, as evidenced by the significant impact of the Covid-19 pandemic (Park et al., 2022). The pandemic led to a drastic decline in domestic and international tourist numbers, inducing a drop in both the hospitality and tourism industries. Various cost-cutting measures were implemented, including layoffs, salary reductions, unpaid leave, and early retirement (Liu-Lastres et al., 2023). Furthermore, hotels were repurposed as quarantine facilities by the government (Haldorai et al., 2023). Particularly in Yogyakarta, a sought-after tourist destination the pandemic dealt a severe

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The post-recovery period has brought about social phenomena that significantly influence societal behaviors amidst economic rehabilitation. New hotels are starting to emerge in Kulon Progo, located not far from YIA airport. The emergence of starred hotels in Kulon Progo is inseparable from the opening of Yogyakarta International Airport (YIA), which invites investors to invest in the hospitality industry. The opening of YIA has spurred investment in the hospitality industry, with significant capital inflows recorded in hotel and restaurant sectors. The realization of investment in the hotel and restaurant industry reached 550.64 million USD in January-March 2023, as reported by the Investment Coordinating Board of Indonesia. Notably, the trend of tourists preferring accommodation near Yogyakarta International Airport (YIA) has emerged, even though the airport is located in Kulon Progo Regency, which is far from the city of Yogyakarta. This trend is attributed to the convenience of access and the appeal of the Menoreh mountain tourist area in the region. As a result, hotels in close proximity to the airport have experienced increased demand and just traveling to Yogyakarta city merely for a leisurely walk.

Entrepreneurs in the hospitality sector are actively striving to secure the sustainability of their businesses, recognizing the need for a competitive advantage to surpass their rivals. Amidst the ongoing recovery period, the hospitality industry is presented with promising opportunities, even with the rise of hotel industry expansion and new market entrants. Innovation plays a vital role in refreshing product and service offerings, with studies showing its significance in driving organizational success and sustainability, especially in dynamic environments (Alsharif et al., 2021; Al-Abbadi & Abu Rumman, 2023; Hoang et al., 2022). Service innovation, in particular, has become indispensable, with organizations embracing creativity to maintain their competitive advantage (Yang et al., 2021; Liang et al., 2022; Sharma et al., 2021). Moreover, there's a growing emphasis on environmentally friendly practices, reflecting consumer preferences and global concerns about environmental damage and resource scarcity (Verma & Chandra, 2018; Wong et al., 2021; El-Kassar & Singh, 2019). Transitioning to green practices is increasingly seen as necessary for organizational resilience and performance enhancement in the hospitality industry (Su et al., 2020). However, empirical evidence is still needed to validate the effectiveness of these strategies in building competitive advantages (Dang & Wang, 2022).

Green innovation and the development of competitive advantages are important research focuses in the hospitality industry (Nguyen et al., 2020; Zhai & An, 2020), yet studies in this field remain limited (Sharma et al., 2020). Nevertheless, service innovation is considered a key factor in determining competitive advantages in this industry (Tang et al., 2020). In highly competitive market environments, hospitality organizations require consistently superior and efficient services to achieve success (Hameed et al., 2021). Previous studies have shown that innovation performance is influenced by changes in organizational features that produce service innovations (Elshaer et al., 2022), while environmentally based human resource management has also been shown to enhance job satisfaction and innovation performance (Pinzone et al., 2019; Cho & Chang, 2008). However, the mechanisms underlying the influence of environmentally based human resource management practices on innovation are not yet fully understood (Elshaer et al., 2023). Therefore, research on how hospitality organizations create value and gain competitive advantages through green business practices is essential (Pham et al., 2019a).

Research indicates that environmental-based human resource management practices and organizational citizenship behavior are more commonly implemented in countries with individualistic cultures such as the United States, Germany, Ireland, and Australia. However, studies in countries with collectivist cultures like Indonesia also show a positive influence of GHRM practices on environmental performance (Khammacee, 2022; Kim et al., 2019). Research in Turkey also found that the adoption of green practices plays a crucial role in enhancing organizational performance (Irani & Kilic, 2022). Studies in Egypt and Taiwan demonstrate that organizational citizenship behavior positively impacts service innovation and green innovation performance (Elshaer et al., 2022; Wu et al., 2023). In Pakistan, OCB for the environment is also positively related to sustainable performance (Malik et al., 2021). These findings highlight the importance of further research on GHRM in the hospitality industry of developing countries to fill knowledge gaps. The significance of environmental-based human resource management for organizational sustainability can be explained through workplace environmental awareness, which encourages environmentally friendly employee behavior and enhances company performance (Al-Ghazali & Afsar, 2020; Shen et al., 2018; Pham et al., 2019b).

Parties involved in organizations, including employees, customers, and investors, prefer a focus on both product and service quality and organizational citizenship behavior (OCB), particularly in competitive environments (Malik et al., 2021). OCB acts as a crucial...
link between Green Human Resource Management (GHRM) practices and overall organizational performance, especially in environmental sustainability (Anwar et al., 2020; Elshaer et al., 2021; Pham et al., 2020). Additionally, research on the influence of employees' personality traits, notably narcissism, in GHRM implementation remains limited (Tandon et al., 2023). While existing studies often focus on the Big Five framework, neglecting darker traits like narcissism, this area presents a research gap as narcissism significantly impacts organizational practices (Akgunduz et al., 2020; Zhao & Guo, 2019a, 2019b). Research by Yang et al. (2021) stated that narcissism among organizational leaders has a positive moderating effect on the relationship between green technology innovation and internal corporate social responsibility. There is still little research that extends such investigations to employees (Tandon et al., 2023), even fewer in the tourism and hospitality sector.

This study employs a survey method using questionnaires in the collection of quantitative data, which consists of numerical or numeric data, enabling statistical analysis to be conducted. The unit of analysis in this study is individuals, specifically hotel employees in Yogyakarta, with individual responses from hotel employees serving as the data source. This research adopts the SEM-PLS approach and the data will be analyzed using Smart PLS program. This study aims to understand the influence of GHRM on service innovation performance through change-oriented OCB and the role of narcissism as a moderator among hotel employees in Yogyakarta implementing GHRM. Employing a quantitative research approach that utilizes numerical data and statistics to analyze and draw conclusions about the phenomena under investigation, this study answer how narcissism moderation and change-oriented OCB mediation influence service innovation performance in hotel employees in Yogyakarta implementing GHRM. Following are the research hypotheses: (H1) GHRM has a positive and significant effect on Service Innovation Performance, (H2) GHRM has a positive and significant effect on Change-Oriented OCB, (H3) Change-Oriented OCB has a positive and significant effect on Service Innovation Performance, (H4) Change-Oriented OCB mediates the relationship between GHRM and Service Innovation Performance, and (H5) Narcissism moderates the relationship between GHRM and Service Innovation Performance.

This paper is organized as follows: following the introduction part, a second part is a literature review with theoretical and empirical studies. The third part introduces information on research and methodology that consist of data and measurement details. The next part is the result and discussion. Finally, this paper concludes with key points, implication, limitations, recommendations and future research direction.

**Literature Review**

In this study, the cognitive-affective system theory is used as a theoretical framework to examine the relationship between Green Human Resource Management (GHRM), Change-Oriented Organizational Citizenship Behavior (CO-OCB), Service Innovation Performance, and Narcissism. The cognitive-affective system theory integrates concepts of personality, situational roles, events, or contexts that trigger a series of internal reactions (not only cognitive but also affective) based on individuals' previous experiences. It involves not only social and interpersonal situations but also mood (Mischel & Shoda, 1995). Cognitive-affective aspects are interconnected and organized, guided by a stable network of cognition and individual-specific affect (Chen et al., 2021).

This theory elaborates on how the interaction between an individual's cognitive and affective systems influences organizational behavior and performance. The objective of this literature review is to comprehensively investigate these concepts, incorporating recent empirical studies and formulating the existing relationships between these concepts.

**Theoretical and Conceptual Background**

**Green Human Resource Management (GHRM)**

GHRM currently exists as a series of human resource management processes within the environment, starting from the entry to the exit of employees from an organization (Renwick, 2018). GHRM shapes a green workforce that cultivates a green culture within the organizations that implement it. Therefore, organizations must prioritize environmental concerns that align with their HRM objectives (Yong et al., 2020) since HRM plays a key role in the overall performance of the organization (Gardas et al., 2019).

**Change-Oriented OCB**

The definition of Change-Oriented OCB according to Jang (2021) is voluntary actions in the form of creativity and innovation designed to enhance individual and organizational performance. Behaviors such as personal initiative and sense of obligation as individuals related to this change encourage employees to question current practices they believe could be improved beyond mere compliant behavior and working diligently (Lang et al., 2022).

**Service Innovation Performance**

Service innovation refers to the creation and implementation of new service techniques or ideas to improve existing service issues (Yang et al., 2021). When managers and front-line employees, who are key assets in service innovation, can identify customer needs and implement service innovations, not only can they develop unique core capabilities, but the organization can also sustain its competitive advantage (Wu et al., 2023).
Narcissism

Narcissism is associated with a grandiose self-image (Krizan & Herlache, 2018) and a desire for admiration (Back et al., 2013). Individuals with narcissism often take on challenging tasks boldly, even at the risk of appearing great (Fay & Sonnenstag, 2012). Although narcissism is generally regarded as negative or even pathological behavior (Braun, 2017), in practice, it has been observed that many effective leaders actually exhibit narcissistic traits (Lang et al., 2022).

Empirical Review and Hypothesis Development

GHRM and Service Innovation Performance

The study by Al-Abbadi & Abu Rumman (2023) titled entrepreneurship, innovation, and GHRM-based sustainable performance in online businesses. The objective of the research is to examine entrepreneurship, innovation, and GHRM on sustainable performance. Data collection was conducted using a random sample consisting of 268 employees and managers. The data were then analyzed using common method bias (CMB) and multicollinearity. Findings indicate a significant and positive effect of entrepreneurship, innovation, and GHRM on sustainable performance. Another study demonstrating that GHRM significantly influences service innovation performance was found in Irani & Kilic (2022), Khammadee (2022), and Kim et al. (2019). The study titled sustainable performance and green innovation: GHRM and big data as precursors by Imran et al. (2021) utilized a comprehensive path model developed to ensure sustainable organizational performance. The research explores the impact of GHRM and big data on green innovation, which in turn leads to sustainable performance. A total of 373 participants were selected from a multisectoral population (health, tourism, finance, and education) residing in Oman and working in service sector organizations. A total of 439 responses were analyzed using SPSS 23 and PLS-SEM. The research results show that only green recruitment was found to be significantly related to sustainable performance, while green training and involvement as well as green performance management and compensation showed non-significant results. Another study demonstrating that GHRM does not significantly affect service innovation performance can be found in Guerci et al. (2016) and Yusoff et al. (2018). The inconsistency adds to the importance of conducting this research.

The Cognitive-Affective System Theory assumes that individual differences in social behavior tend to exhibit some variation depending on the situations encountered. In other words, individuals display different personalities and behaviors depending on the unit or organization they work for or belong to. There is a dynamic interactive effect between the environment and individual behavior (Perry-Smith, 2006). An organization can be considered as a unit, and the personality and behavior of individuals can be activated and processed dynamically through cognitive, affective, and motivational mediating processes that occur within the unit (Higgins, 1998). Human resources exhibit different service innovation performances in the organizations where they work based on the situational factors they experience. In this case, service innovation performance demonstrated in hotels implementing Green Human Resource Management will be better. Hence, the first hypothesis is as follows:

H1: GHRM has a positive and significant influence on service innovation performance.

GHRM and Change-Oriented OCB

The study by Malik et al. (2021) titled “corporate social responsibility, GHRM, and sustainable performance: Is OCBE a Missing Link?” aims to investigate the mediating role of OCBE in the relationship between GHRM, corporate social responsibility, and sustainable performance. The research utilized a quantitative survey design, and data were collected from 150 companies using questionnaires. The research sample consisted of HR managers and directors. Data from 150 respondents were then analyzed using Smart-PLS. The research findings indicate that GHRM has a positive effect on OCBE, and OCBE significantly mediates the relationship between CSR and GHRM, also significantly influencing sustainable performance. Another study showing that GHRM significantly affects change-oriented OCB was found in Anwar et al. (2020), Chen et al. (2021), and Elshaer et al. (2021). The study titled “The Role of GHRM in driving hotel environmental performance: Interaction and mediation analysis” by Pham et al. (2020) yielded non-significant results. Aiming to fill the research gap by expanding the Ability-Motivation-Opportunity theory to explore the direct, indirect, and interactive roles of GHRM practices, researchers employed a quantitative approach with a survey strategy. A total of 220 questionnaires were distributed to hotel employees and analyzed using Smart-PLS. The research results show that green training and employee involvement are important drivers to strengthen individual commitment and voluntary environmental behavior, as well as hotel environmental performance. However, there is no significant influence of green performance management on employees’ voluntary green behavior. Another study showing that GHRM does not significantly affect change-oriented OCB can be found in Kim et al., 2019, and Zhang et al., 2019. The inconsistency adds to the importance of conducting this research. Based on the theoretical and empirical studies, the second hypothesis is as follows:

H2: GHRM has a positive and significant influence on Change-Oriented OCB.

Change-Oriented OCB and Service Innovation Performance

Research on Change-Oriented OCB and service innovation performance was conducted by Wu et al. (2023) with the title “Formation of hotel employees’ service innovation performance: Evolving mechanisms in the workplace and Change-Oriented Organizational Citizenship Behavior.” This study proposed a framework that examines the formation of service innovation performance. Data were collected from 374 hotel employees in Taiwan and analyzed using SEM. This research provided verification that when learning and vitality of hotel employees are enhanced to reach a strong evolving psychological state, employees will be motivated to engage in
Change-Oriented OCB and have more initiatives, which can then enhance hotel service innovation performance. This study found a positive influence of Change-Oriented OCB on service innovation performance. Another study conducted in the hotel industry by Elshaer et al. (2022) aimed to investigate the relationship between environmental transformational leadership, OCBE, and green innovation. The study found a significant positive relationship between OCBE and green innovation. In another study, it was mentioned that CO-OCB provides some unique contributions to overall performance assessment (Chiaburu et al., 2017). Research conducted by Escrig-Tena et al. (2018), developing a model of the relationship between quality management and innovation performance testing the role of proactive employee behavior as a mediator, also yielded research findings indicating that proactive behavior has a significant positive relationship with innovation performance. Based on these empirical studies, the third and fourth hypothesis are as follows:

H3: Change-Oriented OCB has a positive and significant influence on Service Innovation Performance.

H4: Change-Oriented OCB mediates the relationship between GHRM and Service Innovation Performance

Narcissism as moderator

Narcissism is a characteristic rooted in an exaggerated view of oneself, magnified due to an individual's desire for attention and recognition (Campbell et al., 2005). Over time, narcissism-related literature has evolved, portraying narcissism as a common trait found in individuals. Individuals with narcissism are characterized by their ability to generate grand ideas as they tend to be arrogant, aggressive, and elitist (Rosenthal & Pittinsky, 2006). This confidence is a bright side signifying they are at their best (Hogan & Kaiser, 2005). In the context of the Cognitive-Affective System Theory, narcissism can be explained as a result of the interaction between the cognitive system (self-perception and the need for recognition) and the affective system (the feeling of the need for attention and recognition).

A previous study titled "The moderating effect of CEO narcissism on the relationship between CSR and green technology innovation" by Yang et al. (2021) focuses on the impact of corporate social responsibility (CSR) on green technology innovation (GTI) in companies and the moderating influence of CEO narcissism through the lenses of stakeholder theory and upper echelons theory. The results show that CSR fulfillment has a significant positive impact on GTI, and this relationship is strengthened when the CEO is narcissistic. Other hypotheses were also accepted, such as CEO narcissism having a positive impact on green technology innovation performance, and CEO narcissism positively moderating the impact of CSR fulfillment on green technology innovation performance. Another study conducted in the tourism context titled "Green and non-green outcomes of GHRM" examines nuances of employee responses to GHRM and tests narcissism as an individual trait and boundary condition, affecting the relationship between GHRM and green or non-green employee outcomes. The research reveals a significant relationship between GHRM and employee performance, and narcissism proves to have a significant moderating effect on the relationship between GHRM and task performance (Tandon et al., 2023). Based on this theoretical and empirical review, the fifth hypothesis is as follows:

H5: Narcissism moderates the relationship between GHRM and Service Innovation Performance

Figure 1: Conceptual Model of the Study
Research and Methodology

Data and Method

The population in this study has specific criteria that must be met concerning the research concept, which are the employees in the city of Yogyakarta working at hotels that have implemented environmentally friendly concepts. There is no available data on the list of hotels officially implementing GHRM (Green Human Resource Management), therefore, this study selected 5-star hotels, boutique hotels, and hotels that have received certifications or awards related to the environment. Based on the preliminary study conducted for this research, a total population of 475 individuals was identified from total of 4 hotels in Yogyakarta that fulfill the criteria. The research sampling technique is simple random sampling. The sample size obtained using the Slovin's formula with a maximum error of 5% is 218 samples. The research was conducted on December 20, 2023. This research uses Structural Equation Model (SEM) analysis with Variance Based SEM approach or better known as Partial Least Square (PLS) and the software used in data analysis to test the hypothesis in this study is Smart PLS.

Measurement

Indicators used to measure the variables in this study were adopted from several previous studies. Green Human Resource Management (X) using indicator adopted from Al-Ghazali & Afsar (2020). The study adapted a 23-item scale on GHRM consisting of 5 indicators developed from Masri and Jaaron (2017) and Jabbour (2011). This research used indicators from Al-Ghazali & Afsar (2020), namely green recruitment and selection, green training and development, green performance management and appraisal, green rewards and compensation, as well as green empowerment and participation. The sample item for green recruitment and selection were “I am interested in working at this hotel because it strives to minimize its negative impact on the environment;” “I believe that awareness of reducing negative environmental impacts is crucial;” and “I am willing to take responsibility for environmental conservation efforts;” The sample item for green training and development were “I’ve been given training on how to preserve the environment;” “Training materials offered online to reduce paper usage;” and “Hotel where I work prioritizes environmental training;” The sample item for green performance management and appraisal were “My performance is evaluated based on the efforts I make to conserve the environment;” “My supervisor provides feedback on the environmental conservation efforts I undertake;” and “I receive good performance evaluations when I work with environmental consciousness;” The sample item for rewards and compensation were “Employees are rewarded with cash or goods for successfully implementing more environmentally friendly work practices;” “Ceremonial events are held to celebrate employees’ achievements in preserving and maintaining the environment;” and “The success of employees in implementing more environmentally friendly work practices is announced through official announcements;” Change-Oriented OCB (Z) using indicator adopted from Choi (2007), with innovative as the indicator. The study adapted items from previous scales on CO-OCB from (Scott et al., 1994) and (Morrison & Phelps, 1999). The sample items were “I often propose new ideas;” “I often provides recommendations to colleagues to work more effectively;” “I Often suggests changes to rules that limit productivity;” and “I adapt to situations at work to improve efficiency;” Service Innovation Performance (Y) using indicator adopted from Baradarani & Kilic (2018), namely employee service innovation behavior and new service development. The study focuses on the service innovation culture in shaping frontline employee innovation performance. Innovation performance is measured using a 14-item scale proposed in two previous study, those are Matear et al. (2004) and Scott et al. (1994). The sample items for service innovation behavior were “I strive to find new ways to perform my daily tasks;” “I often, propose ideas to my superiors;” and “I work to get those ideas approved;” The sample items for service development were “I am willing to collaborate if there is a trial of a new service method;” “Approved ideas for new services can be implemented quickly;” and “The hotel where I work has sufficient personnel to maintain service quality;” Narcissism (M) using indicator adopted from Tandon et al. (2023). The study utilized a previously validated scale to develop the questionnaire used in the research. For narcissism, the study selected 7 items from the NPI (Narcissistic Personality Inventory)-16 scale (Ames et al., 2006). The sample items were “I enjoy being the center of attention;” “I feel special;” “I can persuade others;” and “I am a great person;” The questionnaire used passed through validity and reliability testing before being distributed to 218 target respondents. Initially, the questionnaire was distributed to 30 respondents who shared similar characteristics with the research respondents for a pilot test. Instrument validity testing was conducted using the SPSS program. An item was stated valid if the calculated r-value exceeded the table R value. Based on the table R value for a significance level of 5%, which was 0.361. All items were considered valid as their significance values were less than 0.05. All items used to measure the research variables are also reliable, with a Cronbach’s Alpha value above 0.7. Therefore, all items used in the questionnaire met these requirements and were stated valid and reliable.

Findings and Discussions

Findings

Based on the processed results of respondent data, from 218 hotel employees, it is known that according to gender, hotel employees in Yogyakarta who were respondents in this study mostly were male (52.8%), while the remaining 47.2% were female. But it’s not
a big difference we got here. Furthermore, it is noted that the majority of respondents fell within the age range of 23 – 29 years, accounting for 45.4%. The smallest number of respondents fell into the age range of > 39 years, at 5%. The remaining respondents were 30.7% aged 30 – 39 years and 18.8% aged < 23 years. This indicates that the majority of respondents were in the productive and relatively young age group of 23 – 29 years. Additionally, based on education, the majority of respondents were bachelor’s degree (43.6%), while 30.3% had a high school education or equivalent, and 26.1% had a diploma. Furthermore, the majority of respondents had been working for less than 1 year (39.9%), while 31.7% had been working for 1 – 2 years, 19.7% had been working for 3 – 5 years, and 8.7% had been working for more than 5 years.

**Table 1: Composite Reliability, Cronbach’s Alpha, and AVE**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Human Resource Management</td>
<td>0.983</td>
<td>0.984</td>
<td>0.805</td>
</tr>
<tr>
<td>Change-Oriented OCB</td>
<td>0.949</td>
<td>0.963</td>
<td>0.868</td>
</tr>
<tr>
<td>Service Innovation Performance</td>
<td>0.967</td>
<td>0.973</td>
<td>0.857</td>
</tr>
<tr>
<td>Narcissism</td>
<td>0.919</td>
<td>0.943</td>
<td>0.806</td>
</tr>
</tbody>
</table>

**Source:** Processed Primary Data, 2024

Table 1 shows the indicators used in the analysis of reliability and construct validity in the study. The Cronbach's alpha, Composite Reliability, and AVE values in this research have met the statistical adequacy or have been accepted. The average variance extracted (AVE) value of all latent variables shows a score of 0.805 for Green Human Resource Management (GHRM), 0.868 for Change-Oriented OCB, 0.857 for Service Innovation Performance (SIP), and 0.806 for Narcissism variable, where all AVE values > 0.5. Cronbach's alpha and Composite reliability value is considerably high. GHRM has the highest cronbach’s alpha and composite reliability value. Sequentially, the value of the cronbach’s alpha coefficient for all variables used in this study ranged from 0.919 to 0.983 and the value of the composite reliability ranged from 0.943 to 0.984, where all cronbach’s alpha and composite reliability values > 0.7. These results indicate that all variables are valid and reliable.

**Table 2: Direct Hypothesis Testing Result**

<table>
<thead>
<tr>
<th>Path</th>
<th>Path Coefficient, t-statistic &amp; p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHRM → SIP</td>
<td>Path Coefficient = 0.477, t-statistic = 4.255, p-value = 0.000</td>
<td>Positive &amp; Significant</td>
</tr>
<tr>
<td>GHRM → CO-OCB</td>
<td>Path Coefficient = 0.743, t-statistic = 12.482, p-value = 0.000</td>
<td>Positive &amp; Significant</td>
</tr>
<tr>
<td>CO-OCB → SIP</td>
<td>Path Coefficient = 0.253, t-statistic = 2.740, p-value = 0.006</td>
<td>Positive &amp; Significant</td>
</tr>
<tr>
<td>Narcissism → SIP</td>
<td>Path Coefficient = 0.143, t-statistic = 1.944, p-value = 0.052</td>
<td>Positive but insignificant</td>
</tr>
<tr>
<td>GHRM X Narcissism → SIP</td>
<td>Path Coefficient = -0.091, t-statistic = 1.624, p-value = 0.105</td>
<td>Negative &amp; insignificant</td>
</tr>
</tbody>
</table>

**Source:** Processed Primary Data, 2024

The bootstrapping method is applied to assess the significance level of the direct effects as shown in Table 2. If the obtained p-value < 0.05 and the t-statistic value > t-table (1.96 – t-value two-tail, α=5%), then it is concluded that the independent variable significantly influences the dependent variable in the direction indicated by the path coefficient. Conversely, if p-value > 0.05 and the t-statistic value < t-table, then it can be concluded that the independent variable does not significantly influence the dependent variable.

GHRM has a positive and significant effect on SIP, indicated by p-value of 0.000 < 0.05 and t-statistic of 4.255 > 1.96 (t-table). The path coefficient in the positive direction is 0.477. This means that as GHRM increases, SIP also increases, and conversely, as GHRM decreases, SIP also decreases. H1 is accepted since GHRM as a strategy to achieve competitive advantage in the hospitality industry has a significant influence towards SIP of hotel employees. GHRM has a positive and significant influence on CO-OCB, as indicated by p-value of 0.000 < 0.05 and t-statistic of 12.482 > 1.96 (t-table). The path coefficient is also positively directed at 0.743. This means that the higher the GHRM, the higher the CO-OCB, and vice versa. H2 is accepted since GHRM has a significant influence
towards CO-OCB as it drives by implemented GHRM in the organization. CO-OCB has a positive and significant impact on SIP, as indicated by p-value of 0.006 < 0.05 and t-statistic of 2.740 > 1.96 (t-table). The path coefficient is also positively directed at 0.253. This means that the higher the CO-OCB, the higher the SIP, and vice versa. H3 is accepted since CO-OCB as an employee behavior to create progressive and adaptive work environment has a significant influence towards SIP as the result of the behavior. Narcissism has a positive but insignificant impact on SIP, as indicated by p-value of 0.052 > 0.05 and t-statistic of 1.944 < 1.96 (t-table). The path coefficient is positively directed at 0.143. This means that there is a tendency for changes in narcissism that lead to changes in SIP in the same direction (positive). However, these changes aren’t large enough to be considered significant. In testing the moderation effect of narcissism on the relationship between GHRM and SIP, p-value of 0.105 > 0.05 and t-statistic of 1.624 < t-table (1.96) were obtained. These results don’t allow us to conclude a significant moderation effect of narcissism on the relationship between GHRM and SIP. The negative path coefficient (-0.091) also indicates that the relationship between GHRM and SIP tends to decrease as narcissism increases, but the effect size is small and not statistically significant. So we conclude that H5 is denied.

Table 3: Indirect Hypothesis Testing Result

<table>
<thead>
<tr>
<th>Path</th>
<th>Path Coefficient</th>
<th>t-statistic</th>
<th>p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHRM → CO-OCB → SIP</td>
<td>0.187</td>
<td>2.426</td>
<td>0.016</td>
<td>Positive &amp; Significant</td>
</tr>
</tbody>
</table>

Source: Processed Primary Data, 2024

In the indirect path based on Table 3 above, it can be seen that the influence of GHRM on SIP through CO-OCB produce p-value of 0.016 with t-statistic of 2.426 and path coefficient of 0.187. Since the obtained p-value < 0.05, t-statistic > 1.96 (t-table), and the path coefficient is positive, it can be concluded that CO-OCB is proven to be a mediating variable between GHRM and SIP. Therefore, H4 is accepted.

Discussion

The influence of Green Human Resource Management on Service Innovation Performance

It is known from the result that GHRM as a strategy to achieve competitive advantage in the hospitality industry has a significant influence towards SIP of hotel employees, indicated by p-value of 0.000 < 0.05 and t-statistic of 4.255 > 1.96 (t-table). The path coefficient in the positive direction is 0.477. This means that as GHRM increases, SIP also increases, and conversely, as GHRM decreases, SIP also decreases.

The result is in line with prior research of Khammadee (2022) which revealed that GHRM has a significant and positive influence on green organizational culture, green service innovation, and environmental performance. Many organizations in the hospitality industry have been making use of creativity and service innovation to sustain competitive advantages (Liang et al., 2022; Sharma et al., 2021). Additionally, in addressing sustainability-related issues, organizations must engage in environmentally friendly activities and implement GHRM to remain resilient in business. The concept of “green business” and environmental issues has gradually captured the attention of the hospitality industry, especially in emerging markets in recent years (Verma & Chandra, 2018). Consumers desire environmentally friendly products and prefer to stay and dine at hotels and restaurants with eco-friendly concepts. Furthermore, “green business” is also driven by global issues such as environmental pollution and resource limitations (Wong et al., 2021). These issues compel organizations to seek more sustainable methods and focus on eco-friendly practices that can also enhance organizational performance (El-Kassar & Singh, 2019).

Based on the frequency distribution of the GHRM variable, the indicator with the highest mean value is green recruitment and selection with a score of 3.815. This value indicates that the hotel management has indeed begun to implement requirements for environmental commitment among its employees. This is necessary because when an organization commits to the environment through HR management, members of the organization also see that their efforts are supported by the organization they work for. Therefore, if an employee demonstrates environmentally committed behavior and awareness of green practices, it will align with the organization, in this case, the hotel where they work. Meanwhile, indicator with the lowest mean value is rewards and compensation with a score of 3.607. However, this score is still interpreted as high, and respondents still perceive agreement with statements related to this indicator. This value may indicate that the rewards and compensation system in the hotel related to environmental performance still needs improvement.

The influence of Green Human Resource Management on Change-Oriented OCB

It is known from the result that GHRM has a significant influence towards CO-OCB as it drives by implemented GHRM in the organization. CO-OCB has a positive and significant impact on SIP, as indicated by p-value of 0.006 < 0.05 and t-statistic of 2.740 > 1.96 (t-table). The path coefficient is also positively directed at 0.253. This means that the higher the CO-OCB, the higher the SIP, and vice versa.

The result is in line with prior research of Anwar et al. (2020) which revealed that GHRM significantly impacts OCBE (Organizational Citizenship Behavior toward the Environment). OCB (Organizational Citizenship Behavior) refers to voluntary behaviors performed by employees beyond their primary job duties that contribute positively to organizational performance. CO-
OCB (Change-Oriented Organizational Citizenship Behavior) is defined as employees' constructive efforts to introduce positive changes into the organization related to work methods, policies, and procedures (Bettencourt, 2004). In the context of the Cognitive-Affective System Theory, OCB can be explained as the outcome of the interaction between the cognitive system (understanding the importance of positive contributions to the organization) and the affective system (intrinsic motivation or positive feelings towards the organization). Elshaer et al. (2021) fill the knowledge gap and test the direct effect of GHRM on environmental performance in small tourism enterprises, as well as the indirect effect through employees' pro-environmental behavior. The research findings demonstrate a significant positive effect of GHRM on both types of pro-environmental behaviors, namely task-related and proactive behaviors.

Based on the frequency distribution of the CO-OCB variable, the item with the highest mean value is "I adapt to the situation at work to improve efficiency" with a score of 3.972. This result indicates that employees tend to use alternative methods that are considered more efficient in their work. Meanwhile, the item with the lowest average score is "I often provide suggestions to change rules that limit productivity" with a score of 3.757. This score is still interpreted as high, but compared to the tendency of employees to use alternative methods they consider more efficient in their work without providing suggestions for changes in rules or policies that can expedite the completion of work, as they tend to do, it may give the impression of non-compliance with organizational standard operating procedure.

**The influence of Change-Oriented OCB on Service Innovation Performance**

It is known from the result that CO-OCB as an employee behavior to create progressive and adaptive work environment has a significant influence towards SIP as the outcome of the behavior. CO-OCB has a positive and significant impact on SIP, as indicated by p-value of 0.006 < 0.05 and t-statistic of 2.740 > 1.96 (t-table). The path coefficient is also positively directed at 0.253. This means that the higher the CO-OCB, the higher the SIP, and vice versa.

The result is in line with prior research of Annamalah et al. (2022) which revealed that OCB positively and significantly influences open innovation. The research fill the literature gap related to behavioral factors and costs of influencing the adoption of open innovation and to study the effects of OCB, organizational culture, and managerial ties on the adoption of open innovation. Although not directly testing service innovation, open innovation can influence various sectors including service innovation, for example through consumer collaboration, joint concept development, or utilizing external resources to enhance the quality and effectiveness of services. Chiaburu et al. (2017) conducted a meta-analysis to determine which form of OCB is relatively more important in predicting overall job performance. The study mentioned that CO-OCB provides some unique contributions to overall performance assessments. For example, in research and development teams, supervisors assign greater weight to CO-OCB given the importance of voice and innovative behaviors in enhancing team learning and performance.

Based on the frequency distribution of the SIP variable, the indicator of service innovation behaviors received a higher average score compared to new service development, specifically scoring 3.858. This result suggests that employees in the hospitality industry demonstrate a higher level of engagement in adopting innovative behaviors related to service. Employees show a proactive orientation towards enhancing service quality. This awareness reflects a drive to continuously seek new solutions to meet hotel guests' expectations and create a workplace environment that is responsive to change. The indicator for new service development obtained a lower average score, specifically scoring 3.810. Despite being within the high interpretation category, the hospitality sector in Yogyakarta not only acknowledges the importance of service innovation but also demonstrates a commitment to continuously improving service quality. With a workforce considered adequate, the hospitality industry has a solid foundation to implement the necessary changes and innovations to maintain and enhance their competitiveness in the market.

**The Role of Change-Oriented Organizational Citizenship Behavior**

The research findings indicate that GHRM significantly impacts SIP through CO-OCB. However, the mediating effect of CO-OCB is partial (partial mediation). Thus, it can be interpreted that CO-OCB bridges the influence of GHRM on SIP. However, even without CO-OCB, GHRM essentially enhances SIP. This research confirms that GHRM has a direct and significant impact on SIP. Additionally, the finding that CO-OCB acts as a partial mediator between GHRM and SIP indicates that some of the influence of GHRM on SIP is executed through employees' change-oriented behaviors within the organization. This suggests that GHRM not only enhances SIP directly but also through its influence on employee behaviors that support change. The finding that CO-OCB acts as a mediator highlights the importance of employees' role in implementing GHRM practices in the context of service innovation. This indicates that although GHRM provides direction and support, employees with attitudes and behaviors that support change must be present to translate policies and programs into tangible actions. CO-OCB plays a crucial role as a mediator between the implementation of sustainable HRM practices and SIP within the hospitality industry. This not only highlights the importance of implementing environmentally-friendly HRM practices but also building an organizational culture that fosters adaptation and innovation.

The role of CO-OCB in mediating the influence of GHRM on SIP can be seen from the results of indirect testing between GHRM and SIP. This study found that CO-OCB partially mediates the relationship between GHRM and SIP. This result is consistent with the statement by Podsakoff et al. (2000) that OCB has long been considered one of the most desired outcomes from employees in the workplace. The significant role of CO-OCB in enhancing SIP is also consistent with several previous studies, namely Wu et al.
Narcissism

Narcissism doesn’t moderate the relationship between GHRM and SIP. Therefore, it can be inferred that the level of employee narcissism will not affect GHRM and SIP in the hospitality industry in Yogyakarta. Although the test results of the direct influence of narcissism on SIP show a positive path coefficient, the results aren’t significant and don’t change the fact that narcissism doesn’t moderate this relationship. This is due to other factors related to GHRM, such as environmental awareness, employee engagement, or organizational culture, which may play a more dominant role in driving service innovation, thus rendering the narcissistic characteristics of employees irrelevant in influencing how effective GHRM practices are in fostering service innovation. Another possible reason is the lack of relevance of narcissism in the context of GHRM and Service Innovation in the hospitality industry. This may be attributed to GHRM's focus on sustainable practices and the environment rather than individual personality traits like narcissism.

The indication of a positive relationship between narcissism and SIP, as shown by a positive path coefficient, is not sufficiently strong to be considered statistically significant. This may suggest that the independent effect of narcissism is not influential enough in predicting SIP. These results emphasize the importance of considering other factors that may be more significant in influencing SIP in the hospitality industry. For example, factors such as leadership, organizational culture, or employee motivation may play a greater role in facilitating or hindering service innovation than employees' narcissistic characteristics. Thus, the research findings indicate that narcissism doesn’t have a significant influence on the relationship between GHRM and SIP, nor does it moderate this relationship. This confirms that in the context of the hospitality industry in Yogyakarta, employee narcissism doesn’t play a significant role in influencing how GHRM practices affect service SIP.

The findings of this study contradict the research conducted by Tandon et al. (2023), whose results demonstrate that narcissism has a significant moderating effect on the relationship between GHRM and task performance. This research outcome also differs from the viewpoint of Fay & Sonnentag (2012), who suggest that individuals with narcissism often take on daring and risky challenges to appear impressive. The conflicting research findings may stem from the different aspects of performance studied. Task performance focuses more on the execution of existing tasks, whereas SIP is more related to the ability to introduce new changes and enhance customer experiences, specifically hotel guests, through innovation.

The research findings also contradict the opinion of Lang et al. (2022), who state that in practice, it has been observed that many effective leaders actually exhibit narcissistic traits. Previous research by Yang et al. (2021) also confirms that CEO narcissism has a positive impact on green technology innovation performance, and CEO narcissism positively moderates (strengthens) the impact of CSR fulfillment on green technology innovation performance. These conflicting results may be due to differences in perspectives, roles, knowledge, experience, as well as interests or priorities between leaders and employees. The analysis of moderation effects on leaders is more related to strategic influence and organizational policies, whereas for hotel employees, the focus is more on the implementation of GHRM practices in daily operations and their impact on the quality of service provided.

There is a theory called the dynamic self-regulation model of narcissism developed by Joshua D. Foster and W. Keith Campbell. This model explains how individuals with narcissistic traits regulate their behavior in various situations (Morf & Rhodewalt, 2001). The model assumes that narcissism is a complex and multidimensional phenomenon. It is not just about self-aggrandizement but also about the need for praise, recognition, and dominance. This theory is consistent with the findings of this research because GHRM emphasizes the importance of responsible HR management practices towards the environment, which includes awareness of the environmental impact of organizational activities. On the other hand, narcissism describes a personality trait that tends to prioritize self-interest over the interests of others. In this context, individuals with narcissistic traits are less likely to care about environmental responsibilities and prioritize their personal gains. The dynamic self-regulation model of narcissism includes the word "dynamic," indicating that narcissistic behavior can change over time and in different contexts. This reflects the complexity of narcissism as a psychological concept. One of the GHRM practices is employee participation in environmental policies and the implementation of sustainable incentives. However, individuals with narcissistic traits are less likely to actively participate in environmental initiatives if there is no direct benefit or significant personal recognition for them. Therefore, according to this theory, narcissistic individuals may enhance their performance, but if the direct benefits or personal recognition they receive are not significant enough, narcissism will not influence performance.

Potential Limitations and Future Research Directions

The research method employed in this study has certain limitations, such as the use of a quantitative approach in data collection and analysis that may not fully represent the complexity of the phenomena under study. Additionally, despite efforts to minimize them, there remains a possibility of sampling bias or measurement bias that could affect the internal and external validity of this study. There is a possibility of other unmeasured factors in this study that could influence the relationships among the studied variables,
such as other individual characteristics or environmental factors not included in the research model. For example, the direct effect of narcissism on SIP, which showed a positive path coefficient but wasn’t further discussed in this study due to the research question. Moreover, the possibility of other unconsidered variables that could moderate or link the relationships among the studied variables cannot be ruled out. As for narcissism, although it was investigated as a variable in this study, limitations may lie in how narcissism was measured or understood. There is variation in how narcissism is operationalized and measured, and the approach used in this study may not encompass all relevant aspects of narcissism. This research also is limited to the hospitality industry in Yogyakarta only, so the generalization of findings can only be applied to that context. The results cannot be directly applied to other industries or different geographical regions. Additionally, this study only captures a snapshot of SIP and the influence of GHRM practices within a specific time frame. If there are changes in management practices or individual characteristics over time, then the findings of this study may not reflect longer-term dynamics.

Considering all the limitations identified, the researchers hope that future studies can address and complement the existing findings to expand understanding of the relationships among GHRM practices, CO-OCB, SIP, and narcissism. Considering that narcissism didn’t moderate the relationship, future research can identify other potential moderating variables that might influence the relationship between GHRM and SIP, such as organizational culture or personality traits. Future research can also dig deeper into understanding how individual traits like narcissism impact other aspects of organizational behavior or any outcomes within the hospitality industry, such as exploring the effects of narcissism on employee engagement or leadership styles. Future research can investigate the impact of SIP enhancement resulting from GHRM practices on customer satisfaction or loyalty. By understanding the link between internal practices and external perceptions by customer, it can provide insight for hotel management.

Conclusions
All of the hypotheses are proved except for H5. H1 is proved since GHRM enhances SIP among hotel employees in Yogyakarta. H2 is proved since GHRM enhances CO-OCB among hotel employees in Yogyakarta. H3 is proved since CO-OCB enhances SIP among hotel employees in Yogyakarta. H4 is proved since CO-OCB mediates the relationship between GHRM and SIP among hotel employees in Yogyakarta. H5 isn’t proved since narcissism doesn’t moderate the relationship between GHRM and SIP among hotel employees in Yogyakarta. In general, the conclusion drawn from this research is that implementing GHRM practices and developing CO-OCB are important in enhancing SIP among hotel employees in Yogyakarta. Hotel management in Yogyakarta can focus on these aspects to strengthen competitive advantages and provide quality service to hotel guests.

This study provides a better understanding of the relationship between the investigated variables, such as how GHRM practices can enhance an organization’s ability to innovate in services and how individual characteristics like narcissism in this study don’t affect the relationship between GHRM practices and SIP. This study also identifies factors that may influence the studied phenomena and helps in developing a more comprehensive conceptual model, such as understanding the factors influencing SIP in the hospitality industry, highlighting the role of narcissism as a relevant variable. Although in this study, narcissism wasn’t found to moderate the relationship between GHRM and SIP. It retests and expands existing concepts and generates new insights into the studied phenomena. This study provides empirical support for theories emphasizing the role of CO-OCB in enhancing SIP, as well as highlighting the mediating role of CO-OCB in the relationship between GHRM and SIP. It also provides a foundation for further research by paving the way for other researchers to explore the same or related topics, especially regarding the relationship between narcissism and SIP, which wasn’t thoroughly discussed in this study.

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