

Green Human Resource Management, Green Supply Chain Management, Green Lifestyle: Their Effect on Business Sustainability Mediated by Digital Skills

Retnopurwani Setyaningrum¹ , Muafi Muafi² 

¹Universitas Pelita Bangsa (Indonesia)

²Universitas Islam Indonesia (Indonesia)

retno.purwani.setyaningrum@pelitabangsa.ac.id, muafi@uii.ac.id

Received: July 2022

Accepted: December 2022

Abstract:

Purpose: This study aims to empirically test and analyze the role of Green Human Resource Management (GHRM) and Green Supply Chain Management (GSCM) and Green Lifestyle on business sustainability mediated by digital skills.

Design/Methodology: This study involved logistics managers at manufacturing companies in DKI Jakarta and West Java, Indonesia. It is because these two provinces have the largest manufacturing companies in Indonesia. From a late survey, the researchers obtained data from 250 questionnaires that were distributed. Then from all the data, there were 218 data that could be processed for further analysis. This study utilized the Structural Equation Model (SEM) analysis technique with AMOS 24 software in the data testing process.

Findings: This study has confirmed a number of findings including: With the current COVID-19 Pandemic, Green Human Resources Management (GRHM) and Green Supply Chain Management (GSCM) are needed in Business Sustainability. GSCM has a positive effect on Business Sustainability (BS). Indonesia is also facing a revolution of 4.0 and 5.0, and Green Human Resources Management (GHRM) practice has an influence on BS and is deemed having significant and positive effect. In addition, manufacturing companies support the practice of green environment so that Green Supply Chain Management (GSCM) practice needs Digital Skill (DS) in enhancing its performance. Also, it has been proven in this research that GSCM has positive and significant effect. Digital Skill (DS), however, has no direct effect on Business Sustainability (BS).

Research Limitation/Implications: This study focuses on the scope of green human resource management, green supply chain management, and green lifestyle and their impact on business sustainability mediated by digital skills. The next study is expected to examine the concept of green human resource management in service companies in order to obtain unique findings and confirm the relevance of the green human resource management concept in various business phenomena.

Originality/value: This study explains the concept of Green Human Resource Management (GHRM), Green Supply Chain Management (GSCM) and Green Lifestyle (GL) towards Business Sustainability (BS) which is a different concept from the concept of Human Resource Management (HRM) implemented in manufacturing companies. In addition, this study discusses the green supply chain in its influence on business sustainability. Also, this study explains the role of the concept of Digital Skills (DS) in influencing Business Sustainability (BS).

Practical and Social Implication: This study is expected to be a reference for practitioners, especially in the fields of Green Human Resource Management (GHRM), Green Lifestyle (GL), and Green Supply Chain Management (GSCM) in improving Business Sustainability (BS). Furthermore, the concept of green human resource management can be used by organizations as an effective alternative to increase responsibility in increasing business sustainability. Digital skills have a very significant role in implementing the research model.

Keywords: green human resource management, green supply chain management, green life style, digital skills, business sustainability

To cite this article:

Setyaningrum, R, & Muafi, M. (2023). Green human resource management, green supply chain management, green lifestyle: Their effect on business sustainability mediated by digital skills. *Journal of Industrial Engineering and Management*, 16(1), 1-26. <https://doi.org/10.3926/jiem.4152>

1. Introduction

Starting in early 2022, the Covid-19 pandemic have seemed to subside in people's lives. However, many manufacturing companies have experienced significant changes in their organizations, including the implementation of green human resource management (GHRM), as it utilizes teleworking strategies and flexibility of working days. Green HRM refers to the use of HRM practices, policies, and systems that promote the sustainable use of resources within organizations for the benefit and sustainability of individual, society, natural environment, and the business itself (Alqudah, Yusof, Elayan & Paramita, 2022; Kutieshat & Farmanesh, 2022; Muafi & Kusumawati, 2021a).

Besides the implemented change in GHRM, the pandemic also has an impact in the form of supply chain losses, which are experienced by many companies because of the lockdown scenarios, where most of these companies depend on the number of countries that have imposed lockdowns (Guan, Wang, Hallegatte, Davis, Huo, Li et al., 2020; Pricewaterhouse Coopers (PwC), 2020; Fernandes, 2020). These developments, along with the US-China trade war, have fueled a rise in economic nationalism. As a consequence, firms and producers around the world will be put under greater political pressure and competition to increase their domestic production. It requires them to create jobs in their home countries, reduces or eliminates their dependence on perceived risky and non-renewable resources, as well as rethink the use of the resources itself. Furthermore, due to the condition of the environmental degradation that currently occurs, firms that have practice GHRM are considering to adopt more strategies and practices in their organization that are more environmentally-friendly, such as Green Supply Chain Management (GSCM) (van Hoek, Gibson & Johnson, 2020; Barber & West, 2022). GSCM requires the involvement of seniors, management, managers, employees and suppliers (Sugandini, Susilowati, Siswanti & Syafri, 2020; Liu, 2019; Younis, Sundarakani, & Vel, 2016).

One of the aspects that become the basis for both GSCM and GHRM practices in firms is technology. The success of GHRM has been proven to be influenced by digital technology (Bondarouk & Brewster, 2016; Musofa, Yuniardi, Sudiarta, Hendriwibowo, Ekawati, Gunawan et al., 2021). In a similar vein, GSCM also relies heavily on technology with the existence of centralized information management system that is differently and independently exists within the organization. In this regard, when the skills to utilize digital technology is owned by firms or individuals within it, it will enable them to exchange information, facilitate collaboration, and answer to sustainability issues they currently face (Bentalha, Hmioui & Alla, 2019).

The practice of GHRM and GSCM, along with their skills to utilize digital technology, are expected to drive firms toward achieving business sustainability, or the balance between financial, environment, and social performance.

The concept of sustainability arises due to the rapidly changing business environment, environmental degradation, and awareness of the society to protect the environment. GHRM itself is expected to be able to produce a green life style (GLS) in order to increase efficiency, employee engagement and discipline, positive environmental improvement, as well as lower the operational costs of the business (Chuah, Mohd, Kamaruddin, Binti & Noh, 2021; Wulansari, Witiastuti & Ridloah, 2019; Alavi & Aghakhani, 2021). It needs to be realized that GLS is complex facet and is related to individual experiences, hierarchies, values, latent attitudes, multiple behaviors, and barriers (Lubowiecki-Vikuk, Dąbrowska & Machnik, 2021). GLS can be broadly defined as “living well” (Vita, Lundström, Hertwich, Quist, Ivanova, Stadler et al., 2019). For this reason, GLS is important for developing the industry, so that everyone in the community can enjoy their lives under a safe, healthy environment and always maintain business sustainability (Razaq, 2019; Farhud, 2017).

These backgrounds trigger the researchers to fill the research gap in this study, including:

1. GSCM may be a good way to balance environmental, economic and social factors. Many authors have discussed the importance of GSCM in business sustainability (Çankaya & Sezen, 2019; Zaid & Sleimi, 2021), but the results are still inconclusive regarding this relationship. A number of scholars have also stated that GSCM is not directly related to business sustainability (Zhu, Sarkis & Lai, 2013; Chin, Tat & Sulaiman, 2015; Yang, Sun, Zhang & Wang, 2020), but through new mediating variables such as environmental sustainability (Rupa & Saif, 2022; Chin et al., 2015; Herrmann, Barbosa-Povoa, Butturi, Marinelli & Sellitto, 2021).
2. Implementation of GSCM practices will enable the company to achieve technological innovation, which leads to better preparation in achieving business sustainability (Alsuraihi, Ab-Wahab & Rahim, 2020; Jayashree, Reza, Nambi-Malarvizhi, Gunasekaran & Raufe, 2022).
3. GRHM greatly affects business sustainability (Yong, Yusliza, Ramayah & Fawehinmi, 2019; Bombiak & Marciniuk-Kluska, 2018; Sapna & Gupta, 2021; Wulandari & Nawangsari, 2021). However, there are several studies which state that GHRM does not directly affect business sustainability, but through mediating variables such as roles and extra roles through different social and psychological processes (Dumont, Shen & Deng, 2017).
4. GHRM is very concerned about environmental factors such as employer branding, public image, marketing opportunities, digitization, increased sales, potential cost savings, competitive advantage and others (Mishra, 2017; Afedzie, Brace, Quansah & Attah-Panin, 2020; Piwowar-Sulej, 2021a) which ultimately have an impact on business sustainability.
5. GHRM as a direct effect on voluntary and task-related green behavior perceived by prospective employees and an indirect effect through mediating the psychological perception of green climate (Ercantan & Eyupoglu, 2022; Zhu, Tang, Wang & Chen, 2021; Dumont et al., 2017).
6. Several studies state that GHRM has an effect on digital skills. Overall, basic digital skills are at least considered essential for almost all jobs (Kispeter, 2018; Hämäläinen, Alnajjar, Partanen & Rueter, 2021; Ferrari, Punie & Bre, 2013). Information technology has great potential to transform marketing through customization, consumer relations, new market access, business-to-business collaboration, and other means (Huarng, Botella-Carrubi & Yu, 2021; Rachinger, Rauter, Christiana-Müller & SchIrgi, 2018). Several studies have also stated that GHRM has an effect on GLS and work performance of workers (Chuah et al., 2021; Jackson, Renwick, Jabbour & Muller-Camen, 2011; Adawiyah & Putrawan, 2021).

This article is structured into several parts. In introduction part, the author elaborates the backgrounds that become the basis of this study. Furthermore, the literature review is consisted of theoretical and empirical studies that sheds a light on the relationship between the variables studied, namely GHRM, GSCM, and GLS influence on business sustainability, the mediating role of digital skills, and its effect on business sustainability. The third is research method, which provides information on the study design, measurement, population, and analytical tools used to process the data. The fourth part is the results of the data analysis, followed by discussion. Finally, this paper is concluded with the limitations and key recommendations for future studies.

2. Literature Review

As previously explained in the research backgrounds, this study wants to identify the factors that can lead firms to achieve business sustainability. Business sustainability is the ability of firms to keep the balance between their environment, social, and economic or financial performance, which is also known as Triple Bottom Line (TBL) (Das & Singh, 2016; Dumont et al., 2017). In this regard, firms can achieve business sustainability by adopting strategies and activities that aims to protect, sustain, and enhance both the society and natural resources. The strategies and activities proposed in this study is GHRM, GSCM, and GLS that is adopted by firms in carrying out their business activities. Furthermore, this relationship is also mediated by digital skills, or the ability of the firms and individuals within it to utilize digital technology in their business. The following section will discuss the relationship between each variable.

2.1. The Effect of Green HRM (GHRM) on Business Sustainability (BS)

GHRM refers to all activities involved in the continuous development, implementation and maintenance of a system aimed at turning ordinary employees into green employees in order to achieve organizational environmental goals and finally to make a significant contribution to environmental resilience (Masood, 2018; Jia, Liu, Chin & Hu, 2018; Mendis & Welmilla, 2021). GHRM is the future competence which also become the basis to implement the idea of Industry 4.0 (Gunathunge & Lakmal, 2019; Espino-Díaz, Fernández-Caminero, Hernández-Lloret, González-González & Álvarez-Castillo, 2020; Lumen, 2020). The development of human potential in an organization in the background of GHRM principles must be followed by dealing with theories and research results of future competency development.

GHRM practices can help manufacturing organizations to achieve a green corporate culture and improve sustainable performance and balance environmental, economic, and social performance in society which is considered the main responsibility for manufacturing companies to improve business sustainability (Lumen, 2020; Jabbour, Mauricio & Jabbour, 2017; Fasan, Soerger-Zaro, Soerger-Zaro, Porco & Tiscini, 2021).

Companies applying GHRM implement green organizational policies, fulfill their corporate responsibilities and take care of the environment, which in turn will improve their image which has an impact on business sustainability (Wulandari & Nawangsari, 2021; Yong et al., 2019; Amjad, Javaid, Ijaz, Rahman & Fayyaz, 2021; Pham, Hoang & Phan, 2020). In business, GHRM practice is expected to have an impact on business sustainability, where in business it exists without having a negative impact on the environment, community or society as a whole (Svensson & Wagner, 2015; Watson, Klingenberg, Polito & Geurts, 2004; Liute & De Giacomo, 2022).

H1: Green Human Resource Management (GHRM) has a significant effect on Business Sustainability.

2.2. The Effect of Green Supply Chain (GSCM) on Business Sustainability (BS)

Since the industrial revolution and up to a certain period, business has undergone many changes, where business only focuses on activities related to profit. However, due to the increasing competition, environmental damage, and the awareness of importance of quality of life, many manufacturing companies have started to focus on GSCM to maintain business sustainability (Novitasari & Agustia, 2021; Bernal-Torres, Paipa-Galeano, Jarrah-Nezhad, Agudelo-Otálora & Millán, 2021; Yildiz-Çankaya & Sezen, 2019). Other studies have also confirmed that GSCM can be a way for firms to balance their environmental, financial, and social performance (Geng, Mansouri & Aktas, 2017; Hidayat, Crefioza, Kusuma, Habiibii, Nur-Fitria, Nungkiastuti et al., 2022). This is because GSCM involves several elements that can encourage firms to be more environmentally friendly in running their business, such as green product design, green materials, and green manufacturing process. Within this relationship, other studies have also proven that environmental cooperation has been proposed as a moderator of the relationship between GSCM practices and business sustainability (Chin et al., 2015; Al Khattab, Abu-Rumman & Massad, 2015; Ali, Amjad, Nisar, Tariq & Haq, 2022).

H2: Green Supply Chain (GSCM) has a significant effect on Business Sustainability

2.3. The Effect of Green Human Resource Management (GHRM) on Green Supply Chain Management

The emergence of GSCM is due to changes in the new industrial era that demands the role of industry in protecting the environment by reducing waste and pollution (Rupa & Saif, 2022; Lokesh, Jitesh & Gopal, 2017; Feng, Lai & Zhu, 2022). Recently, the integration of GHRM-GSCM has become increasingly important. GSCM and GHRM are essential for effective organizational greening (Dede, 2019; Jabbour & Sousa-Jabbour, 2016; Yu, Chavez, Feng, Wong & Fynes, 2020). Every GSCM has room for green improvement, and this is highly emphasized in industry 4.0. The ecosystem in Industry 4.0 is expected to greatly affect the overall performance of GSCM positively (Sutawijaya & Nawangsari, 2020; Luthra & Mangla, 2018a). In terms of business strategy, increasing downstream customer environment, ecological awareness, and ethical and demands to save energy, reduce pollution and waste have prompted companies to consider their ecological concerns with GSCM (Wang, Wu & Yu, 2022). A significant number of research has been focusing on the topic of linking GHRM to GSCM (Muafi & Kusumawati, 2021b; Bon, Zaid & Jaaron, 2018; Pham et al., 2020). GHRM is currently very important in advancing organizational sustainability, as it is an innovative blend of organizational theory (Jaegler & Sarkis, 2014; Benevene & Buonomo, 2020). GHRM can indeed have a positive impact and influence on GSCM (Ellinger & Kim, 2014; Longoni & Cagliano, 2018; Zaid, Jaaron & Bon, 2018).

H3: Green Human Resource Management (GHRM) has a significant effect on Green Supply Chain Management

2.4. The Effect of Green Human Resource Management (GHRM) on Green Life Style (GLS)

GHRM practices bring great benefits to the organization and its image effectively because it can help employees through many ways, as there is a possibility of spillover of green practices in the workplace to employees into a green lifestyle (Cherian & Jacob, 2012; Ragas, Tantay, Chu & Sunio, 2017). Currently, GHRM has become the main business strategy for important organizations where the HR department plays an active role in the green lifestyle in the office (Ahmad, 2015; Naqvi & Siddiqui, 2019).

GHRM can help manufacturing organizations to achieve a green corporate culture and improve sustainable performance as well as balance environmental, economic, and social performance in society where it is considered the main responsibility for manufacturing companies to improve business sustainability (Piwowar-Sulej, 2021b; Jabbour, Mauricio & Jabbour, 2017; Fasan et al., 2021). Companies applying GHRM implement green organizational policies, fulfill their corporate responsibilities, and take care of the environment, which in turn will have an impact on GLS in the company (Wulandari & Nawangsari, 2021; Yong et al., 2019; Amjad et al., 2021).

H4: Green Human Resource Management (GHRM) has a significant effect on Green Life Style

2.5. The Effect of Green Life Style (GLS) on Business Sustainability

Concern for the environment will affect the green lifestyle (GLS). The GLS fosters the expected positive relationship between a responsible way of life and the environment. Green behavior and sustainable consumption are positively related to life satisfaction (Binder & Blankenberg, 2017). Therefore, many companies in Indonesia are competing to develop environmentally friendly products and present themselves as “green companies” in the hope of attracting environmentally conscious citizens, which in turn can have an impact on maintaining business sustainability (Genoveva & Syahrivar, 2020; Chairy & Alam, 2019; Chariri, Nasir, Januarti & Daljono, 2019).

If the company does not depend on the natural resources of business competitors, it will reduce the environmental impact of the business, so that it has a greater chance of long-term success. Maintaining business sustainability requires policies that consider the consequences of GLS. GLS engages stakeholders (Vita et al., 2019). GLS is a lifestyle that involves actions aimed at minimizing or eliminating the negative effects of behavior on the environment. The majority of customers in many developed countries will see whether the company cares and is aware of the environment or not, so that GLC will affect business sustainability (Chwialkowska, 2019; Hart, 1997; Urbański & Ul-Haque, 2020).

H5: Green Life Style (GLS) has a significant effect on business sustainability

H6: Green Life Style (GLS) mediates Green Human Resource Management (GHRM) on Business Sustainability (BS)

2.6. The Effect of Green Supply Chain Management (GSCM) on Digital Skill (DS).

The fourth industrial revolution offers new technologies to transform conventional supply chain solutions into cyber-physical supply chain solutions. Industry 4.0 technology and the most important Internet of Things tools show their potential to update supply chain operations problems (Douaioui, Fri, Mabrouk & Semma, 2018). Supply chain management (SCM) requires the integration and coordination of business processes and the alignment of strategies across the supply chain. GSCM covers a wide range of scientific issues including innovations in technology or digital skills that continue to drive significant changes in the GSCM field, the extent to which increased digitization affects the role of SCM executives in the future (Rachinger et al., 2018; Wehrle, Lechler, von der Gracht & Hartmann, 2020; Feng et al., 2022). Increased digital technology capabilities coupled with reduced investment costs enable the flow of capital and information to any part of the world, therefore, GSCM is recognized as an important area for digital technology innovation and investment (Sony, 2019; Alsuraihi et al., 2020; Park, Kim & Lee, 2022).

H7: Green Supply Chain Management (GSCM) has a significant effect on Digital Skill (DS).

2.7. The Effect of Digital Skill (DS) on Business Sustainability (BS)

Companies that digitally upgrade the skills of their employees are an important part of social sustainability. In fact, there is a huge advantage for companies that upgrade the skills of their staff in the digital field. The global number of digital jobs will grow from 51 million this year to 190 million in 2025 (Carney, 2020). Digital Skills (DS) has become a new approach for many companies to gain competitive advantage in the context of intense and dynamic market competition. Many organizations have applied digital skills, with a positive impact on business sustainability (El-Hilali & El-Manouar, 2019; Andriushchenko, Buriachenko, Rozhko, Lavruk, Skok, Hlushchenko et al., 2020; Fariás & Cancino, 2021). By using new technology and the Internet, any company can do business in every corner of the world, and with the help of e-skills, everyone can be in touch with anyone, anywhere and anytime (Duică, Florea, Duică & Tănăsescu, 2020; Nanda & Kumar, 2021; Chen, Lin, Chen, Chao & Pandia, 2021).

H8: Digital Skill (DS) has a significant effect on Business Sustainability.

H9: Digital Skills (DS) mediate Green Supply Chain Management (GSCM) on Business Sustainability (BS)

3. Research Method

This study was conducted by surveying the population of logistics managers in manufacturing companies in DKI Jakarta and West Java, Indonesia, which focused on GSCM. This has also been investigated by several previous researchers with the object of manufacturing companies (Srivastava, 2022; Raj, Mukherjee, de Sousa-Jabbour & Srivastava, 2022; Fasan et al., 2021).

The sampling technique in this research was carried out purposively with the following criteria: (1) manufacturing company with more than 50 employees, (2) manufacturing company operating at least 5 years. Questionnaires were distributed to 250 logistics managers as respondents and as many as 218 data could be processed for further analysis because some of the data did not meet the requirements and were categorized as outliers. The scale technique in this study used a Likert scale with a choice of a scale of 1 to 7. This refers to (Joshi, Kale, Chandel & Pal, 2015; Sullivan & Artino, 2013; Harpe, 2015).

Primary data collection is done by distributing questionnaires to the respondents. The data analysis technique was carried out using AMOS 24. The variables studied, operational definitions, indicators, measurement scales and reference sources can be more clearly seen in Table 1.

Hypothesis testing was done by using AMOS 24 analysis technique. From the testing it can be concluded that all variables and questionnaire items are valid and reliable. All AMOS 24 assumption tests are also met (Collier, 2020).

No	Variables and References	Operational Definition	Indicator/item	Measurement Scale	
1.	Green Human Resource Management (GHRM) (Wulandari & Nawangsari, 2021; Yong et al., 2019; Amjad et al., 2021; Pham et al., 2020).	Companies applying GHRM implement green organizational policies, fulfill their corporate responsibilities and take care of the environment, which in turn will improve their image which has an impact on business sustainability.	Consists of 5 indicators - green office - green corporate - green ability - green employees - green opportunity	Score 1 Extremely disagree	Score 7 Extremely agree
2.	Green Life Style (GLS) (Chwialkowska, 2019; Hart, 1997; Urbański & Ul-Haque, 2020)	A lifestyle that involves actions aimed at minimizing or eliminating the negative effects of behavior on the environment	Consists of 3 indicators - green behavior - clean environment - Innovative green	Score 1 Extremely disagree	Score 7 Extremely agree
3.	Green Supply Chain Management (GSCM) (Rupa & Saif, 2022; Lokesh et al., 2017; Feng et al., 2022).	Environmentally based SC practices that demand the role of industry in protecting the environment by reducing waste and pollution	Consists of 3 indicators - Environmental care - Eco-friendly purchases - Customer operation	Score 1 Extremely low	Score 7 Extremely high
4.	Digital Skill (DS) (El-Hilali & El-Manouar, 2019; Andriushchenko et al., 2020; Farias & Cancino, 2021)	Manager's digital skills in facing intense and dynamic market competition	Consists of 3 indicators - Internet of things - Cloud Computing - Artificial Intelligence	Score 1 Extremely low	Score 7 Extremely high
5.	Business Sustainability (Svensson & Wagner, 2015; Watson et al., 2004; Liute & De Giacomo, 2022).	Business sustainability without negatively impacting the environment, community or society as a whole	Consists of 3 indicators - Business performance - Environmental performance - Social performance	Score 1 Extremely low	Score 7 Extremely high

Table 1. variable, operational definition, indicator/item and measurement scale

3.1. Respondent Characteristic

The respondents in this research were: male 68,2 %, female: 31,8 %; age range of 20 – 30: 44,7 %, 31 – 40: 25,3 %, <41: 29 %; education: Senior high school: 48%, Diploma and bachelor: 42,8 %, Magister and doctor: 9,2%.

3.2. Result Analysis

This study analyzed 1 exogenous variable, namely GHRM (Green Human Resource Management) with 6 dimensions, namely job description, green recruitment, green selection, green training, green performance appraisal, green reward. The endogenous variables in this study consist of 4 variables, namely GSCM (Green Supply Chain Management) with 3 dimensions, namely internal environmental management, eco-design, cooperation with customers. GLS (Green Life Style) with 2 dimensions are green health and environmental development greenhouse gas emission reduction. Furthermore, the DS (Digital Skill) dan BS (Business Sustainability) variables come with 3 dimensions namely business performance, social performance dan environmental performance.

To test the hypothesis, this study used a variance-based structural equation (CB-SEM). A covariance-based structural equation modeling (CB-SEM) approach was used to test the conceptual model. Compared to variance-based structural equation modeling, CB-SEM is a powerful method in terms of parameter accuracy if the data has a normal distribution and a reasonable sample size (Reinartz, Michael-Haenlein & Henseler, 2009). Because the data in this study fulfilled both of these requirements, in this study CB-SEM analysis was carried out using AMOS 24 software.

Before further analysis was carried out, the data in the study had to be ensured to pass the feasibility test. The first feasibility test is testing the validity of each indicator. (Hair, Matthews & Sarstedt, 2017) provides criteria that an indicator has a good validity value if the loading factor value is > 0.5 . If an analytical model has an indicator with a loading factor value of < 0.5 , the indicator must be dropped from the analysis. The loading factor values of all indicators are shown in Table 2.

Variable	Indicators	Loading Factor	Validity
GHRM (Green Human Resource Management)	JD1	0.601	Valid
	JD2	0.610	Valid
	JD3	0.735	Valid
	GRT1	0.711	Valid
	GRT2	0.759	Valid
	GS1	0.826	Valid
	GS2	0.795	Valid
	GT1	0.823	Valid
	GT2	0.842	Valid
	GT3	0.840	Valid
	GPA1	0.868	Valid
	GPA2	0.863	Valid
	GPA3	0.526	Valid
	GR1	0.841	Valid
	GR2	0.765	Valid
GSCM (Green Supply Chain Management)	IE1	0.867	Valid
	IE2	0.856	Valid
	IE3	0.855	Valid
	IE4	0.809	Valid
	ED1	0.841	Valid
	ED2	0.856	Valid
	ED3	0.860	Valid
	CC1	0.814	Valid
	CC2	0.881	Valid
	CC3	0.856	Valid
GLS (Green Life Style)	GG1	0.727	Valid
	GG2	0.800	Valid
	GG3	0.632	Valid
	GH1	0.754	Valid
	GH2	0.589	Valid
	GH3	0.818	Valid
	GH4	0.691	Valid
	GH5	0.783	Valid
GH6	0.690	Valid	

Variable	Indicators	Loading Factor	Validity
DS (Digital Skill)	DS1	0.800	Valid
	DS2	0.816	Valid
	DS3	0.892	Valid
	DS4	0.809	Valid
	DS5	0.842	Valid
	DS6	0.770	Valid
	DS7	0.837	Valid
	DS8	0.840	Valid
BS (Business Sustainability)	EP1	0.397	Not Valid
	EP2	0.688	Valid
	EP3	0.643	Valid
	EP4	0.563	Valid
	EP5	0.690	Valid
	EP6	0.762	Valid
	SP1	0.679	Valid
	SP2	0.784	Valid
	SP3	0.844	Valid
	SP4	0.830	Valid
	SP5	0.831	Valid
	SP6	0.754	Valid
	ENP1	0.708	Valid
	ENP2	0.796	Valid
	ENP3	0.741	Valid
	ENP4	0.811	Valid
	ENP5	0.834	Valid
	ENP6	0.791	Valid
	ENP7	0.788	Valid
	ENP8	0.764	Valid
ENP9	0.738	Valid	
ENP10	0.749	Valid	

Table 2. Indicator Validity Test

Table 2 shows that there is 1 invalid indicator, namely EP1 which is an indicator of the BS (Business Sustainability) variable in the EP (Economic Performance) dimension. Invalid indicators should be dropped from the analysis and re-tested for validity. The results of testing the loading factor values are shown in Table 3.

Table 3 shows that all indicators in this study have shown a loading factor value > 0.5 and are declared valid. The next feasibility test is the reliability test. A good variable reliability is if the CR (construct reliability) value is > 0.7 and the VE (variance extracted) value is > 0.5 . The results of the validity and reliability tests are shown in Table 4.

Variable	Indicators	Valid Loading Factor	Validity
GHRM (Green Human Resource Management)	JD1	0.601	Valid
	JD2	0.610	Valid
	JD3	0.735	Valid
	GRT1	0.711	Valid
	GRT2	0.759	Valid
	GS1	0.826	Valid
	GS2	0.795	Valid
	GT1	0.823	Valid
	GT2	0.842	Valid
	GT3	0.840	Valid
	GPA1	0.868	Valid
	GPA2	0.863	Valid
	GPA3	0.526	Valid
	GR1	0.841	Valid
	GR2	0.765	Valid
GSCM (Green Supply Chain Management)	IE1	0.867	Valid
	IE2	0.856	Valid
	IE3	0.856	Valid
	IE4	0.809	Valid
	ED1	0.841	Valid
	ED2	0.856	Valid
	ED3	0.860	Valid
	CC1	0.814	Valid
	CC2	0.881	Valid
CC3	0.855	Valid	
GLS (Green Life Style)	GG1	0.727	Valid
	GG2	0.800	Valid
	GG3	0.632	Valid
	GH1	0.754	Valid
	GH2	0.589	Valid
	GH3	0.818	Valid
	GH4	0.691	Valid
	GH5	0.783	Valid
GH6	0.690	Valid	
DS (Digital Skill)	DS1	0.800	Valid
	DS2	0.816	Valid
	DS3	0.892	Valid
	DS4	0.809	Valid
	DS5	0.842	Valid
	DS6	0.770	Valid
	DS7	0.837	Valid
	DS8	0.840	Valid

Variable	Indicators	Valid Loading Factor	Validity
BS (Business Sustainability)	EP2	0.684	Valid
	EP3	0.638	Valid
	EP4	0.561	Valid
	EP5	0.688	Valid
	EP6	0.760	Valid
	SP1	0.681	Valid
	SP2	0.784	Valid
	SP3	0.845	Valid
	SP4	0.832	Valid
	SP5	0.832	Valid
	SP6	0.754	Valid
	ENP1	0.710	Valid
	ENP2	0.797	Valid
	ENP3	0.743	Valid
	ENP4	0.813	Valid
	ENP5	0.835	Valid
	ENP6	0.791	Valid
	ENP7	0.787	Valid
	ENP8	0.765	Valid
	ENP9	0.738	Valid
ENP10	0.748	Valid	

Table 3. Loading Factor After Dropping Invalid Indicator

Variables	Construct Reliability	Variance Extracted	Reliability
GHRM (Green Human Resource Management)	0.95	0.59	Reliabel
GSCM (Green Supply Chain Management)	0.91	0.54	Reliabel
GLS (Green Life Style)	0.90	0.58	Reliabel
DS (Digital Skill)	0.89	0.55	Reliabel
BS (Business Sustainability)	0.96	0.57	Reliabel

Table 4. Reliability Test

3.3. Goodness of Fit

Furthermore, the conformity test of the confirmatory model was tested using the Goodness of Fit Index. There are 3 goodness of fit criteria, namely absolute fit indices, incremental fit indices and parsimony fit indices. In this study, several criteria were taken from each type of GOFI, namely RMSEA and CMINDF representing absolute fit indices, CFI and TLI representing incremental fit indices, and PGFI and PNFI representing parsimony fit indices.

The goodness of fit test is carried out and it was found that there are still 3 criteria that do not fit, namely CMINDF, CFI and TLI. To increase the GOF value, it is necessary to modify the model that refers to the modification index table by providing a covariance relationship or eliminating indicators that have a high MI (Modification Index) value. In the model modification process, there are indicators that must be removed because they have high MI (Modification Index) values, namely GPA3, GH2, GH5, GG2, CC2, DS6, DS7, SP4 and ENP8.

The results of the goodness of fit after modification are shown in Table 5 and the model after modification is shown in Figure 1.

Fit Index	Goodness of Fit	Criteria	Cut-off value	Result
Absolute Fit	RMSEA	≤ 0.08	0.07	Fit
	CMINDF	≤ 2.00	1.97	Fit
Incremental Fit	CFI	≥ 0.90	0.90	Fit
	TLI	≥ 0.90	0.88	Fit
Parsimony Fit	PGFI	≥ 0.60	0.62	Fit
	PNFI	≥ 0.60	0.73	Fit

Table 5. Goodness of fit test results

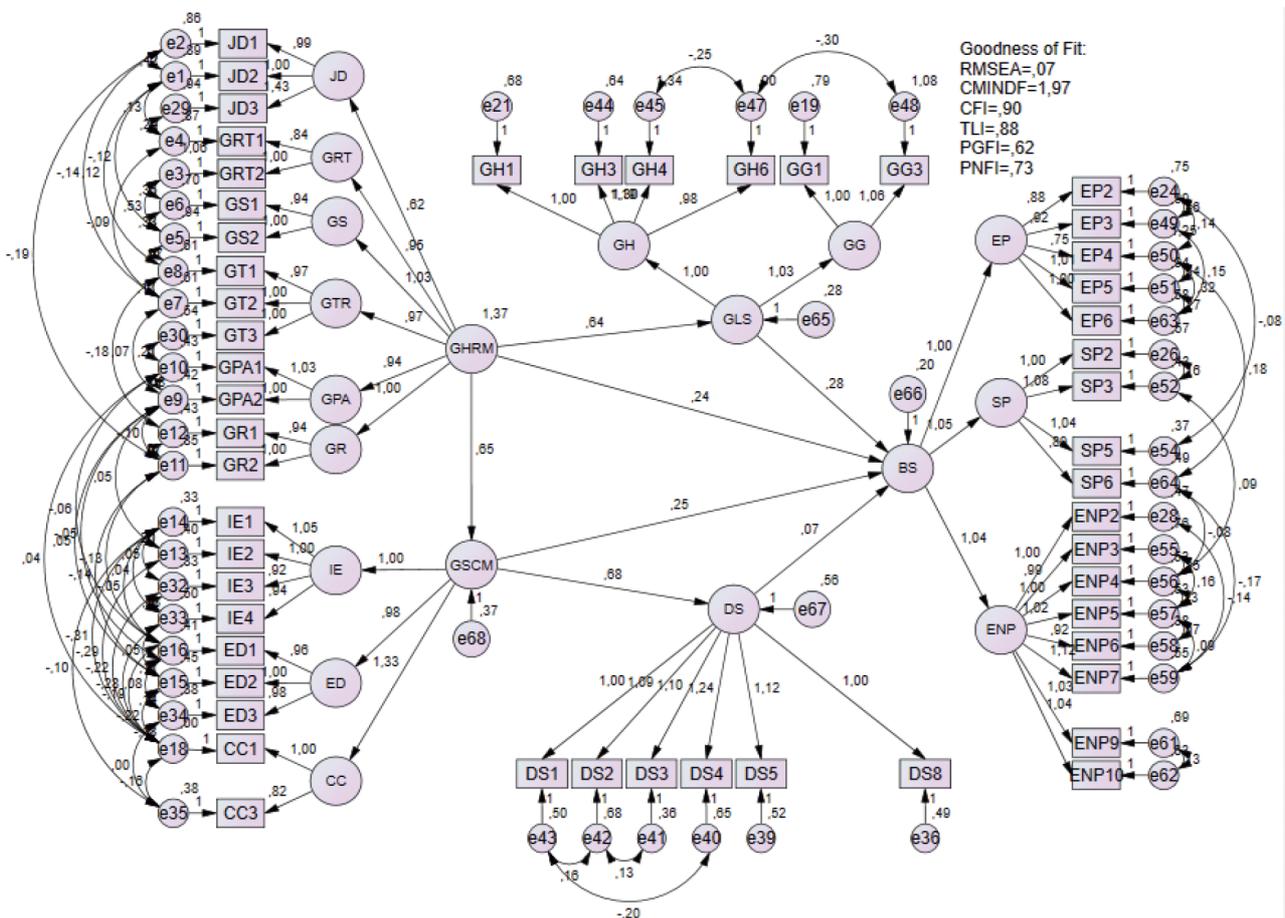


Figure 1. Pathway Diagram of Research Results

Table 5 shows that the Goodness of Fit value has met all the criteria so that the model in this study can be said to be Fit.

3.4. Hypothesis Testing

The next analysis is the full model Structural Equation Model (SEM) analysis to test the hypotheses developed in this study. The results of hypothesis testing can be seen by looking at the Critical Ratio (CR) value and the probability (P) value from the results of data processing. The direction of the relationship between variables can be seen from the estimate value, if the estimate value is positive then the relationship between the variables is positive,

whereas if the estimate value is negative, the relationship is negative. Furthermore, if the test results show the CR value is above 1.96 and the probability value (P) is below 0.05/5%, then the relationship between exogenous and endogenous variables is significant. More details on the results of hypothesis testing are shown in Table 6.

Hypothesis			Estimate	C.R.	P	Result	
H1	BS	<---	GHRM	.238	3.298	.000	Significant Positive
H2	BS	<---	GSCM	.247	4.075	.000	Significant Positive
H3	GSCM	<---	GHRM	.652	11.341	.000	Significant Positive
H4	GLS	<---	GHRM	.636	10.001	.000	Significant Positive
H5	BS	<---	GLS	.276	3.477	.000	Significant Positive
H7	DS	<---	GSCM	.682	9.786	.000	Significant Positive
H8	BS	<---	DS	.075	1.622	.105	Positive Not Significant

Table 6. Regression weight test results

3.5. Mediation Test

The mediation test is seen from the significance of the indirect effect between variables as seen from the table of indirect effects-two tailed significance. The results show a significant mediation role if it has an indirect effect-two tailed significance value less than 0.05. The results of the indirect influence analysis are as follows:

Hypothesis		Significancy	Result
H6	GHRM-GLS-BS	.014	Significantly Mediating
H9	GSCM-DS-BS	.408	Insignificantly Mediating

Table 7. Mediation test results

The direct effect in this study is shown in Table 6 and it can be seen that GHRM has a positive effect on BS, GSCM and GLS which is indicated by a positive estimate value, CR value > 1.96 and probability value < 0.05 . Furthermore, this study proves that GSCM has a positive effect on BS and DS. It was also found that the positive and significant effect of GLS on BS is indicated by a positive estimate value, CR value > 1.96 and Probability value < 0.05 . Therefore, H1, H2, H3, H4, H5 and H7 in this study are supported. However, this study found findings that did not support H8 because it was empirically proven that DS had no effect on BS.

Furthermore, this study analyzed two mediation analyzes, namely H6 and H9. H6 in this study is supported by the finding of the mediating effect of GLS on the relationship between GHRM and BS with a significance value of 0.014. The H9 in this study is not supported because of the significance value of the mediating role of DS in the influence of GSCM on BS because the significance value is > 0.05 , which is 0.408.

4. Discussion and Implication

In order for a company to succeed and move forward in its sustainability, BS needs to be able to compete in a superior manner, so this needs to incorporate GHRM practices (Pallavi & Bhanu, 2016; Hosain & Rahman, 2015; Shahzad, 2020). The results of the research show that GHRM has a significant positive effect on BS (**H1 is accepted**), and this supports previous research (Yong et al., 2019; Bombiak & Marciniuk-Kluska, 2018; Sapna & Gupta, 2021; Wulandari & Nawangsari, 2021). This study contributes to the role of GHRM so that companies are able to maintain BS so that corporate entities can meet all dimensions of sustainability (Cantele & Zardini, 2018). Manufacturing companies that want to maintain BS need to apply digital technology that has a tendency to regulate their production processes in a way that is in accordance with production trends imposed by the Industry 4.0 concept. (Mijatović, Uzelac & Stoiljković, 2020).

Companies can benefit from GSCM especially in the current Covid 19 pandemic era. Without proper GSCM planning, companies will find it difficult to compete in competitive business so that BS continues to run well (Bieńkowska, Koszela, Salamacha & Tworek, 2022; Allaoui & Goncalves, 2013; Park et al., 2022) and the results of the research show that there is a significant positive effect between GSCM on BS (**H2 is accepted**) and this supports previous research. (Çankaya & Sezen, 2019; Zaid & Sleimi, M., 2021). All supply chain activities such as raw material extraction, production, distribution, storage, and packaging when paying attention to the green environment will improve business performance and have an impact on BS (Rupa & Saif, 2022). This research contributes to manufacturing companies that can maintain business sustainability through the implementation of GSCM management and this cannot be done by only one party, but all parties in the supply chain.

Currently, there are many manufacturing companies in the Asian region, so awareness of environmentally friendly operations and sustainability of resources is noteworthy. For this reason, it is very important to study GSCM and GHRM in Asian countries (Lokesh et al., 2017; Dian, Pambudi, Janny, Leonardus, Sukrisno & Kundori, 2022; Muafi & Kusumawati, 2021b). This study aims to explain the relationship between the two fields by bringing together the currently developing fields of GSCM and GHRM and it has been shown in this research that there is a significant positive effect between GHRM on GSCM (**H3 is accepted**) and this supports previous research (Bon et al., 2018; Jabbour & Jabbour, 2016; Pham et al., 2020). In manufacturing companies, GHRM practices namely green recruitment, green training, and consistent and coherent management involvement and green compensation will improve employee performance and play a key role in GSCM which then has an impact on “greening the organization.” (Guerci, Longoni & Luzzini, 2016; Bon et al., 2018).

Employees working in manufacturing companies tend to be forced even with certain incentives to be aware of the environment, with several programs being carried out to ensure that employees move towards green organizational functions in accordance with consumer desires (Hutomo, Marditama, Limakrisna, Sentosa, Lee & Yew, 2020; Arulrajah & Opatha, 2016; Roca-Barcelo, Gaines, Sheehan, Thompson, Chamberlain, Bos et al., 2021). GLS has important components that become criteria in its application in manufacturing companies (Adawiyah & Putrawan, 2021). The current green practice is supported by consumers if the company has the same value, namely focusing on GHRM and GLS (Ragas et al., 2017). It has been shown in this research that there is a positive and significant relationship between GHRM and GLS (**H4 is accepted**), and has been supported by previous researchers namely (Wulandari & Nawangsari, 2021; Yong et al., 2019; Amjad et al., 2021). Manufacturing companies are currently focusing on developing green management capabilities within their organizations. Green management refers to the production of goods or services using workplace strategies, technologies, and practices that aim to reduce industrial waste, minimize pollution, recycle waste, perform paperless operations, and produce environmentally friendly products and services and these become the company’s GLS (Sheikh, Gaines, Sheehan, Thompson, Chamberlain, Bos et al., 2019; Saptaria, Gaines, Sheehan, Thompson, Chamberlain, Bos et al., 2022).

Lifestyle has a significant impact on economic capital. Lifestyle can lead to sustainable development that impacts the nation’s capital city (Farhud, 2017). However, the rapid development of several companies in Indonesia is still at the expense of the natural environment, despite the increasing popularity of green-based products and services in Indonesia (Mychelisda & Firdaus, 2021). For that the government needs to educate and encourage its citizens to take part in a green lifestyle, which basically involves being a “green citizen” through purchasing green products (Lin & Lin, 2015; Farhud, 2017). Likewise, GLS has not been firmly entrenched in the Indonesian way of life to be able to maintain BS (Genoveva & Syahrivar, 2020; Sukoharsono, 2007; Othman, Alamsyah & Aryanto, 2021). For this reason, this research states that GLS has a positive and significant effect on BS (**H5 is accepted**) which is supported by several researchers (Chwialkowska, 2019; Hart, 1997; Urbański & Ul-Haque, 2020). The importance of GLS in manufacturing companies can be seen through the way of life, behavior, people, families, and communities as well as habits that include social basics in encouraging sustainable development so that BS is achieved (Farhud, 2017).

The COVID-19 pandemic has pushed manufacturing companies to pay attention to the environment, therefore GHRM acts as the main driving factor that will encourage resources that are superior to their competitors. This plays an important role in maintaining the value and quality of human resources as a responsibility for the sustainability of the organization (Yadav, Meeker, Mistry, Doctor, Fleming-Dutra, Fleischman et al., 2019; Carnevale

& Hatak, 2020; Marditama, Yuliza, Ghani, Saputra, Muhammad & Bon, 2021). Organizations today must remain alert and adaptive to unexpected events, such as external crises, which create increased uncertainty among their workforce and pose an immediate threat to the organization's performance and survival. Therefore, manufacturing companies need to pay attention to GLS, namely environmentally friendly, green elections, green employee relations and collective bargaining as well as environmentally friendly complaint handling and in the end this will have an impact on BS (Carnevale & Hatak, 2020). This research states that GLS mediates GHRM on BS (**H6 accepted**) which is supported by researchers (Chwialkowska, 2019; Hart, 1997; Urbański & Ul Haque, 2020).

Increasing environmental concerns have led suppliers to adopt a “greener” approach to the functioning of GSCM including product design, material sourcing and selection, manufacturing processes, delivery of final products to consumers as well as end-of-life management of products after their useful lives (Srivastava, 2007; Kurian, 2020). For this reason, there is a need for innovation in technology that continues to drive significant changes in the GSCM field. It is also worth noting that the area of digitalization is leading to a strong mix of SCM and digital technology executives, as well as a clear division of roles, in which SCM or technology leaders will dominate in the future (Wehrle et al., 2020; Alsuraihi et al., 2020; Lee, Azmi, Hanaysha, Alzoubi & Alshurideh, 2022). The associated use of digitization in GSCM contributes to wider social and environmental impacts, explicitly relating to green and sustainable supply chain development (Bondarouk & Ruël, 2008). The results of the research show that it has a significant positive effect on DS (**H7 is accepted**). The results of this research support previous research from (Siswanti & Muafi, 2020; Muafi, 2015; Rachinger et al., 2018; Wehrle et al., 2020; Feng et al., 2022), stating that GSCM is a strategic aspect to improve innovation performance through DS. GSCM must be carried out when creative manufacturing companies have business processes that are oriented towards efficiency and effectiveness. (Bondarouk & Ruël, 2008; Gandhi, Mangla, Kumar & Kumar, 2015) stated that to achieve the successful adoption of GSCM it is necessary to have support from top management for digital technology or DS.

The industrial revolution 4.0 which is marked mainly by digital transformation is booming, especially the COVID-19 pandemic has strengthened the all-digital trend. Therefore, DS needs more attention and support from various parties such as the government, private sector and their own organizations (Kääriäinen, Kuusisto, Pussinen, Saarela, Saari & Hänninen, 2020; Joris, 2021). DS has improved the ability of fast perception, agile response, and intelligent decision making in the digital era, so that they can face risks in a sustainable business. Digital transformation, can improve its operating efficiency by 8-10 times (Teng, Wu & Yang, 2022; Ukko, Nasiri, Saunila & Rantala, 2019). However, several studies have shown that digital transformation is not directly related to DS. Empirical investigation states that in addition to DS managerial skills and operational capabilities are needed to realize a digital business strategy and this will help companies to adjust focus on BS (Baumgartner & Rauter, 2017; Ukko et al., 2019) and in this research it is stated that DS has a positive but not significant effect on BS (**H8 is accepted**).

GSCM as one of the initiatives in manufacturing companies brings thoughts that need to be harmonized with environmental sustainability (Sabri, 2019; Sony, 2019). GSCM is a catalyst for realizing the business transformations needed for a more just and green economy. Therefore, GSCM can be used as a vital tool in a circular economy context for the sustainable use of resources (Luthra & Mangla, 2018b; Bag, Gupta, Kumar & Sivarajah, 2020). Improving digital technology capabilities needs to be considered in GSCM (Bag et al., 2020; Ge, Goetz, Cleary, Yi & Gomez, 2022; Wang, Yu, Shen & Jin, 2022). This research states that DS mediates GSCM on BS (H9 is accepted) and is supported by previous researchers (Duiică et al., 2020; Nanda & Kumar, 2021; Chen et al., 2021).

5. Limitations and Suggestions for Future Research

This research was conducted in several companies and some are holding companies in several cities in Indonesia. However, the companies studied did not have the same product, so the researchers were concerned that this could limit the generalizability of the research findings. In addition, the method of collecting data was done purposively where the researchers used data across work units so that it was not an ideal approach to evaluate the impact of DS on BS, but other variables such as GHRM on GSCM, GHRM on DS the results were very influential and significant. However, this research is very interesting to note considering that currently Indonesia is also facing a revolution of 4.0 and 5.0 so that it is expected to have an impact on business sustainability in the future. In the

future, similar research should also be applied to service companies because it will provide very interesting theoretical and managerial implications.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

References

- Adawiyah, W.R., & Putrawan, I.N. (2021). How Green Lifestyle as Moderator Variable has Influenced Green Human Resource Management (GRHM) and Job Performance? *International Journal of Research and Review*, 8(2), 89-94. <https://doi.org/10.52403/ijrr.20210215>
- Afedzie, R., Brace, R., Quansah, F., & Attah-Panin, J. (2020). *Green Human Resource Management*. <https://doi.org/10.4018/978-1-7998-4522-5.ch002>
- Ahmad, S. (2015). Green Human Resource Management: Policies and practices. *Cogent Business and Management*, 2(1). <https://doi.org/10.1080/23311975.2015.1030817>
- Al Khattab, S.A., Abu-Rumman, A.H., & Massad, M.M. (2015). The Impact of the Green Supply Chain Management on Environmental-Based Marketing Performance. *Journal of Service Science and Management*, 08(04), 588-597. <https://doi.org/10.4236/jssm.2015.84059>
- Alavi, S., & Aghakhani, H. (2021). Identifying the effect of green human resource management practices on lean-agile (LEAGILE) and prioritizing its practices. *International Journal of Productivity and Performance Management*. <https://doi.org/10.1108/IJPPM-05-2020-0232>
- Ali, S., Amjad, H., Nisar, Q.A., Tariq, I., & Haq, A.U. (2022). Impact of Green supply chain management practices and environmental management system on corporate performances and the moderating role of institutional pressures. *Journal of Public Value and Administrative Insight*, 5(1), 12-23.
- Allaoui, H., & Goncalves, G. (2013). Green supply chain: Challenges and opportunities. *Supply Chain Forum*, 14(2), 2-3. <https://doi.org/10.1080/16258312.2013.11517310>
- Alqudah, M.N.K.M., Yusof, Y., Elayan, M.B., & Paramita, C. (2022). Green Human Resource Management and Organizational Environmental Sustainability During Covid-19 Pandemic: A Conceptual Framework. *Proceedings of the International Conference on Management, Business, and Technology (ICOMBEST 2021)* (158-167). <https://doi.org/10.2991/aebmr.k.211117.023>
- Alsuraihi, A., Ab-Wahab, N., & Rahim, S.A. (2020). a Review on the Impact of Green Supply Chain Management Practices on Firm'S Technological Innovation. *International Journal of Modern Agriculture*, 9(4), 587-602.
- Amjad, A., Javaid, N., Ijaz, A., Rahman, I., & Fayyaz, A. (2021). *Health endorsing perspective of cereals and its by products : A systematic review*.
- Andriushchenko, K., Buriachenko, A., Rozhko, O., Lavruk, O., Skok, P., Hlushchenko, Y. et al. (2020). Peculiarities Of Sustainable Development Of Enterprises In The Context Of Digital Transformation. *Entrepreneurship And Sustainability Issues*, 7(3), 2255-2270. [https://doi.org/10.9770/jesi.2020.7.3\(53\)](https://doi.org/10.9770/jesi.2020.7.3(53))
- Arulrajah, A.A., & Opatha, H.H.D.N.P. (2016). Analytical and Theoretical Perspectives on Green Human Resource Management: A Simplified Underpinning. *International Business Research*, 9(12), 153. <https://doi.org/10.5539/ibr.v9n12p153>

- Bag, S., Gupta, S., Kumar, S., & Sivarajah, U. (2020). Role of technological dimensions of green supply chain management practices on firm performance. *Journal of Enterprise Information Management*, 34(1), 1-27. <https://doi.org/10.1108/JEIM-10-2019-0324>
- Barber, A., & West, J. (2022). Conditional cash lotteries increase COVID-19 vaccination rates. *Journal of Health Economics*, 81. <https://doi.org/10.1016/j.jhealeco.2021.102578>
- Baumgartner, R.J., & Rauter, R. (2017). Strategic perspectives of corporate sustainability management to develop a sustainable organization. *Journal of Cleaner Production*, 140, 81-92. <https://doi.org/10.1016/j.jclepro.2016.04.146>
- Benevene, P., & Buonomo, I. (2020). Green human resource management: An evidence-based systematic literature review. *Sustainability (Switzerland)*, 12(15). <https://doi.org/10.3390/su12155974>
- Bentalha, B., Hmioui, A., & Alla, L. (2019). The digitalization of the Supply chain management of service companies: A prospective approach. *SCA 2019: Proceedings of the 4th International Conference on Smart City Applications*. <https://doi.org/10.1145/3368756.3369005>
- Bernal-Torres, C.A., Paipa-Galeano, L., Jarrah-Nezhad, Y., Agudelo-Otálora, L.M., & Millán, J. (2021). Continuous improvement and business sustainability in companies of an emerging market: Empirical analysis. *Journal of Industrial Engineering and Management*, 14(4), 771-787. <https://doi.org/10.3926/jiem.3610>
- Bieńkowska, A., Koszela, A., Salamacha, A., & Tworek, K. (2022). COVID-19 oriented HRM strategies influence on job and organizational performance through job-related attitudes. *PLoS ONE*, 17(4). <https://doi.org/10.1371/journal.pone.0266364>
- Binder, M., & Blankenberg, A.K. (2017). Green lifestyles and subjective well-being: More about self-image than actual behavior? *Journal of Economic Behavior and Organization*, 137, 304-323. <https://doi.org/10.1016/j.jebo.2017.03.009>
- Bombiak, E., & Marciniuk-Kluska, A. (2018). Green human resource management as a tool for the sustainable development of enterprises: Polish young company experience. *Sustainability (Switzerland)*, 10(6). <https://doi.org/10.3390/su10061739>
- Bon, A.T., Zaid, A.A., & Jaaron, A. (2018). Green human resource management, green supply chain management practices and sustainable performance. *Proceedings of the International Conference on Industrial Engineering and Operations Management* (167-176).
- Bondarouk, T., & Brewster, C. (2016). Conceptualising the future of HRM and technology research. *International Journal of Human Resource Management*, 27(21), 2652-2671. <https://doi.org/10.1080/09585192.2016.1232296>
- Bondarouk, T.V., & Ruël, H.J.M. (2008). HRM systems for successful information technology implementation: evidence from three case studies. *European Management Journal*, 26(3), 153-165. <https://doi.org/10.1016/j.emj.2008.02.001>
- Çankaya, S.Y., & Sezen, B. (2019). Effects of green supply chain management practices on sustainability performance. *Journal of Manufacturing Technology Management*, 30(1), 98-121. <https://doi.org/10.1108/JMTM-03-2018-0099>
- Cantele, S., & Zardini, A. (2018). Is sustainability a competitive advantage for small businesses? An empirical analysis of possible mediators in the sustainability-financial performance relationship. *Journal of Cleaner Production*, 182, 166-176. <https://doi.org/10.1016/j.jclepro.2018.02.016>
- Carnevale, J.B., & Hatak, I. (2020). Employee adjustment and well-being in the era of COVID-19: Implications for human resource management. *Journal of Business Research*, 116, 183-187. <https://doi.org/10.1016/j.jbusres.2020.05.037>
- Carney, F. (2020). *Re-envisioning the workforce: Skilling today to thrive tomorrow*. Microsoft Stories Asia. Available at: <https://news.microsoft.com/apac/2020/12/15/re-envisioning-the-workforce-skilling-today-to-thrive-tomorrow/>

- Chairy, C., & Alam, M.E.N. (2019). The Influence of Environmental Concern, Green Perceived Knowledge, and Green Trust on Green Purchase Intention. *Jurnal Manajemen*, 10(2), 131. <https://doi.org/10.32832/jm-uika.v10i2.2431>
- Chariri, A., Nasir, M., Januarti, I., & Daljono, D. (2019). Determinants and consequences of environmental investment: an empirical study of Indonesian firms. *Journal of Asia Business Studies*, 13(3), 433-449. <https://doi.org/10.1108/JABS-05-2017-0061>
- Chen, C.L., Lin, Y.C., Chen, W.H., Chao, C.F., & Pandia, H. (2021). Role of government to enhance digital transformation in small service business. *Sustainability (Switzerland)*, 13(3), 1-26. <https://doi.org/10.3390/su13031028>
- Cherian, J., & Jacob, J. (2012). Green marketing: A study of consumers' attitude towards environment friendly products. *Asian Social Science*, 8(12), 117-126. <https://doi.org/10.5539/ass.v8n12p117>
- Chin, T.A., Tat, H.H., & Sulaiman, Z. (2015). Green supply chain management, environmental collaboration and sustainability performance. *Procedia CIRP* (26, 695-699). <https://doi.org/10.1016/j.procir.2014.07.035>
- Chuah, S.C., Mohd, I.H., Kamaruddin, Binti, J.N., & Noh, M.N. (2021). Impact of Green Human Resource Management Practices Towards Green Lifestyle and Job Performance. *Global Business & Management Research*, 13(4), 13-23. Available at: <https://web.p.ebscohost.com/abstract?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=19475667&AN=153671564&h=j4irs2zlDM%2B0z46uduLfTNWhdtLEuMllr3djQcHzRto8rXs5TvRFRtMCFh02OSwfxz5%2FNNMOMx34ClUpSvnTmg%3D%3D&crl=f&resultNs=AdminWebAuth&resultLoca>
- Chwialkowska, A. (2019). How sustainability influencers drive green lifestyle adoption on social media: The process of green lifestyle adoption. *Management of Sustainable Development*, 11(1), 33-43.
- Collier, J.E. (2020). *Applied structural equation modeling using AMOS: Basic to advanced techniques* (1-354). Routledge. <https://doi.org/10.4324/9781003018414>
- Das, S., & Singh, R.K. (2016). Green hrm and organizational sustainability: An empirical review. *Kegees Journal of Social Science*, 8(1/2), 227-236. Available at: https://www.researchgate.net/profile/Sudhir-Chandra-Das/publication/320686237_Green_HRM_and_Organizational_Sustainability_An_Empirical_Review/links/59f45ca1458515547c2083e7/Green-HRM-and-Organizational-Sustainability-An-Empirical-Review.pdf
- Dede, N.P. (2019). the Relationship Between Green Human Resource Management and Green Supply Chain Management. *Beykoz Akademi Dergisi*, 1(1), 31-63. <https://doi.org/10.14514/byk.m.26515393.2019.sp/31-64>
- Dian, W., Pambudi, W.F., Janny, D.A., Leonardus, S.B.A., Sukrisno, S., & Kundori, K. (2022). The mediating role of environmental sustainability between green human resources management, green supply chain, and green business: A conceptual model. *Uncertain Supply Chain Management*, 10(3), 933-946. <https://doi.org/10.5267/j.uscm.2022.3.001>
- Douaioui, K., Fri, M., Mabrouk, C., & Semma, E.A. (2018). The interaction between industry 4.0 and smart logistics: concepts and perspectives. *2018 International Colloquium on Logistics and Supply Chain Management (LOGISTIQUA)*, (128-132). Tangier, Morocco. <https://doi.org/10.1109/LOGISTIQUA.2018.8428300>
- Duică, M.C., Florea, N.V., Duică, A.O., & Tănăsescu, I.A. (2020). The role of e-skills in developing sustainable organizations and e-activities in the new digitized business world. *Sustainability (Switzerland)*, 12(8). <https://doi.org/10.3390/SU12083400>
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of Green HRM Practices on Employee Workplace Green Behavior: The Role of Psychological Green Climate and Employee Green Values. *Human Resource Management*, 56(4), 613-627. <https://doi.org/10.1002/hrm.21792>

- El-Hilali, W., & El-Manouar, A. (2019). Towards a sustainable world through a SMART digital transformation. *Proceedings of the 2nd International Conference on Networking, Information Systems & Security*. <https://doi.org/10.1145/3320326.3320364>
- Ellinger, A.D., & Kim, S. (2014). Coaching and Human Resource Development: Examining Relevant Theories, Coaching Genres, and Scales to Advance Research and Practice. *Advances in Developing Human Resources*, 16(2), 127-138. <https://doi.org/10.1177/1523422313520472>
- Ercantan, O., & Eyupoglu, S. (2022). How Do Green Human Resource Management Practices Encourage Employees to Engage in Green Behavior? Perceptions of University Students as Prospective Employees. *Sustainability (Switzerland)*, 14(3). <https://doi.org/10.3390/su14031718>
- Espino-Díaz, L., Fernández-Camínero, G., Hernández-Lloret, C.M., González-González, H., & Álvarez-Castillo, J.L. (2020). Analyzing the Impact of COVID-19 on Education Professionals. *Sustainability*, 12(14), 5646. <https://doi.org/10.3390/su12145646>
- Farhud, D.D. (2017). Life style and sustainable development. *Iranian Journal of Public Health*, 46(1), 1-3.
- Fariás, A., & Cancino, C.A. (2021). Digital transformation in the Chilean lodging sector: Opportunities for sustainable businesses. *Sustainability (Switzerland)*, 13(14). <https://doi.org/10.3390/su13148097>
- Fasan, M., Soerger-Zaro, E., Soerger-Zaro, C., Porco, B., & Tiscini, R. (2021). An empirical analysis: Did green supply chain management alleviate the effects of COVID-19? *Business Strategy and the Environment*, 30(5), 2702-2712. <https://doi.org/10.1002/bse.2772>
- Feng, Y., Lai, K.H., & Zhu, Q. (2022). Green supply chain innovation: Emergence, adoption, and challenges. *International Journal of Production Economics*, 108497. <https://doi.org/10.1016/j.ijpe.2022.108497>
- Fernandes, N. (2020). Economic effects of coronavirus outbreak (COVID-19) on the world economy Nuno Fernandes Full Professor of Finance *IESE Business School Working Paper*, 1240-E. <https://doi.org/10.2139/ssrn.3557504>
- Ferrari, A., Punie, Y., & Bre, B.N. (2013). *DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe*. European Commission Joint Research Centre Institute for Prospective Technological Studies. <https://doi.org/10.2788/52966>
- Gandhi, S., Mangla, S.K., Kumar, P., & Kumar, D. (2015). Evaluating factors in implementation of successful green supply chain management using DEMATEL: A case study. *International Strategic Management Review*, 3(1-2). <https://doi.org/10.1016/j.ism.2015.05.001>
- Ge, H., Goetz, S., Cleary, R., Yi, J., & Gomez, M. (2022). Facility locations in the fresh produce supply chain: An integration of optimization and empirical methods. *International Journal of Production Economics*, 249(August 2021), 108534. <https://doi.org/10.1016/j.ijpe.2022.108534>
- Geng, R., Mansouri, S.A., & Aktas, E. (2017). The relationship between green supply chain management and performance: A meta-analysis of empirical evidences in Asian emerging economies. *International Journal of Production Economics*, 183, 245-258. <https://doi.org/10.1016/j.ijpe.2016.10.008>
- Genoveva, G., & Syahrivar, J. (2020). Green lifestyle among Indonesian millennials: A comparative study between Asia and Europe. *Journal of Environmental Accounting and Management*, 8(4), 397-413. <https://doi.org/10.5890/JEAM.2020.012.007>
- Guan, D., Wang, D., Hallegatte, S., Davis, S.J., Huo, J., Li, S. et al. (2020). Global supply-chain effects of COVID-19 control measures. *Nature Human Behaviour*, 4(6), 577-587. <https://doi.org/10.1038/s41562-020-0896-8>

- Guerci, M., Longoni, A., & Luzzini, D. (2016). Translating stakeholder pressures into environmental performance - the mediating role of green HRM practices. *International Journal of Human Resource Management*, 27(2), 262-289. <https://doi.org/10.1080/09585192.2015.1065431>
- Gunathunge, K.L.N.K., & Lakmal, K.G.P. (2019). Industrial Revolution 4.0 and the future of HRM. *Contemporary Innovation in Management*.
- Hair, J.F.J., Matthews, L.M., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123. <https://doi.org/10.1504/IJMDSA.2017.10008574>
- Hämäläinen, M., Alnajjar, K., Partanen, N., & Rueter, J. (2021). Finnish Dialect Identification: The Effect of Audio and Text. In *EMNLP 2021 - 2021 Conference on Empirical Methods in Natural Language Processing, Proceedings* (8777-8783). <https://doi.org/10.18653/v1/2021.emnlp-main.692>
- Harpe, S.E. (2015). How to analyze Likert and other rating scale data. *Currents in Pharmacy Teaching and Learning*, 7(6), 836-850. <https://doi.org/10.1016/j.cptl.2015.08.001>
- Hart, A. (1997). Beyond greening: Strategies for a sustainable world. *Harvard Business Review*.
- Herrmann, F.F., Barbosa-Povoa, A.P., Butturi, M.A., Marinelli, S., & Sellitto, M.A. (2021). Green supply chain management: Conceptual framework and models for analysis. *Sustainability (Switzerland)*, 13(15), 1-20. <https://doi.org/10.3390/su13158127>
- Hidayat, R., Crefioza, O., Kusuma, P.D., Habibi, Y.S., Nur-Fitria, R., Nungkiastuti, F.D. et al. (2022). A Conceptual Model of Green Supply Chain Management Effects on Firm Performance. *IPTEK Journal of Proceedings Series*, 0(1), 469. <https://doi.org/10.12962/j23546026.y2020i1.11951>
- Hosain, M.S., & Rahman, M.S. (2015). Green Human Resource Management: A Theoretical Overview. *Journal of Business and Management*, 03(June), 24-30. <https://doi.org/10.9790/487X-1806035459>
- Huang, K.H., Botella-Carrubi, D., & Yu, T.H.K. (2021). The effect of technology, information, and marketing on an interconnected world. *Journal of Business Research*, 129, 314-318. <https://doi.org/10.1016/j.jbusres.2021.03.004>
- Hutomo, A., Marditama, T., Limakrisna, N., Sentosa, I., Lee, J., & Yew, K. (2020). *Green Human Resource Management, Customer Environmental Collaboration and the Enablers of Green Employee Empowerment: Enhancing an Environmental Performance*, 1(2), 358-372. <https://doi.org/10.38035/DIJEFA>
- Jabbour, C.J.C., & De Sousa-Jabbour, A.B.L. (2016). Green Human Resource Management and Green Supply Chain Management: Linking two emerging agendas. *Journal of Cleaner Production*, 112, 1824-1833. <https://doi.org/10.1016/j.jclepro.2015.01.052>
- Jabbour, C.J.C., Mauricio, A.L., & Jabbour, A.B.L.D.S. (2017). Critical success factors and green supply chain management proactivity: shedding light on the human aspects of this relationship based on cases from the Brazilian industry. *Production Planning & Control*, 28(6-8), 671-683. <https://doi.org/10.1080/09537287.2017.1309705>
- Jackson, S.E., Renwick, D.W.S., Jabbour, C.J.C., & Muller-Camen, M. (2011). State-of-the-art and future directions for green human resource management. *German Journal of Research in Human Resource Management*, 25(2), 99-116. <https://doi.org/10.1177/239700221102500203>
- Jaegler, A., & Sarkis, J. (2014). The theory and practice of sustainable supply chains. *Supply Chain Forum*, 15(1), 2-5. <https://doi.org/10.1080/16258312.2014.11517329>
- Jayashree, S., Reza, M.N.H., Nambi-Malarvizhi, C.A., Gunasekaran, A., & Raufe, M.A. (2022). Testing an adoption model for Industry 4.0 and sustainability: A Malaysian scenario. *Sustainable Production and Consumption*, 31, 313-330. <https://doi.org/10.1016/j.spc.2022.02.015>

- Jia, J., Liu, H., Chin, T., & Hu, D. (2018). The continuous mediating effects of GHRM on employees' green passion via transformational leadership and green creativity. *Sustainability (Switzerland)*, 10(9). <https://doi.org/10.3390/su10093237>
- Joris, W. (2021). *How to Measure Digital Skills and Build Sustainable Digital Skills Policy Together?* Youth Skills. <https://doi.org/10.5281/zenodo.4568760>
- Joshi, A., Kale, S., Chandel, S., & Pal, D. (2015). Likert Scale: Explored and Explained. *British Journal of Applied Science & Technology*, 7(4), 396-403. <https://doi.org/10.9734/bjast/2015/14975>
- Kääriäinen, J., Kuusisto, O., Pussinen, P., Saarela, M., Saari, L., & Hänninen, K. (2020). Applying the positioning phase of the digital transformation model in practice for smes: Toward systematic development of digitalization. *International Journal of Information Systems and Project Management*, 8(4), 24-43. <https://doi.org/10.12821/ijispm080402>
- Kispeter, E. (2018). What digital skills do adults need to succeed in the workplace now and in the next 10 years? *Digital Skills and Inclusion Research Working Group evidence brief*, Issue June. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/807831/What_digital_skills_do_adults_need_to_succeed_in_the_workplace_now_and_in_the_next_10_years.pdf
- Kurian, J. (2020). The role of digitalization in adopting green supply chain management practices: A critical review of literature. *Copyright@ EM International*, 26(1).
- Kutieshat, R., & Farmanesh, P. (2022). The Impact of New Human Resource Management Practices on Innovation Performance during the COVID 19 Crisis: A New Perception on Enhancing the Educational Sector. *Sustainability (Switzerland)*, 14(5). <https://doi.org/10.3390/su14052872>
- Lee, K.L., Azmi, N.A.N., Hanaysha, J.R., Alzoubi, H.M., & Alshurideh, M.T. (2022). The effect of digital supply chain on organizational performance: An empirical study in Malaysia manufacturing industry. *Uncertain Supply Chain Management*, 10(2), 495-510. <https://doi.org/10.5267/j.uscm.2021.12.002>
- Lin, Y.L., & Lin, H.W. (2015). The Benefits and Values of Green Lifestyle Consumers. *International Journal of Marketing Studies*, 7(1), 24-38. <https://doi.org/10.5539/ijms.v7n1p24>
- Liu, L. (2019). Top Management Characteristics, Green Supply Chain Management and Corporate Performance
—Moderating Effects of Competition Intensity. *Journal of Human Resource and Sustainability Studies*, 07(01), 55-71. <https://doi.org/10.4236/jhrss.2019.71005>
- Liute, A., & De Giacomo, M.R. (2022). The environmental performance of UK-based B Corp companies: An analysis based on the triple bottom line approach. *Business Strategy and the Environment*, 31(3), 810-827. <https://doi.org/10.1002/bse.2919>
- Lokesh, V., Jitesh, T., & Gopal, A. (2017). Green supply chain management practices and performance: The role of firm-size for emerging economies. *Journal of Manufacturing Technology Management*, 28(3). <https://doi.org/10.1108/JMTM-09-2016-0123>
- Longoni, A., & Cagliano, R. (2018). Inclusive environmental disclosure practices and firm performance. The role of green supply chain management. Request PDF. *International Journal of Operations & Production Management*. <https://doi.org/10.1108/IJOPM-12-2016-0728>
- Lubowiecki-Vikuk, A., Dąbrowska, A., & Machnik, A. (2021). Responsible consumer and lifestyle: Sustainability insights. *Sustainable Production and Consumption*, 25, 91-101. <https://doi.org/10.1016/j.spc.2020.08.007>
- Lumen (2020). Core Functions of Human Resource Management. *Bloundless Management*. <https://courses.lumenlearning.com/bloundless-management/chapter/core-functions-of-human-resource-management/>

- Luthra, S., & Mangla, S.K. (2018a). Evaluating challenges to Industry 4.0 initiatives for supply chain sustainability in emerging economies. *Process Safety and Environmental Protection*, 117, 168-179. <https://doi.org/10.1016/j.psep.2018.04.018>
- Luthra, S., & Mangla, S.K. (2018b). When strategies matter: Adoption of sustainable supply chain management practices in an emerging economy's context. *Resources, Conservation and Recycling*, 138(June), 194-206. <https://doi.org/10.1016/j.resconrec.2018.07.005>
- Marditama, T., Yusliza, M.Y., Ghani, L.A., Saputra, J., Muhammad, Z., & Bon, A.T. (2021). Green human resource management and sustainable organization literature: A mini-review approach. *Proceedings of the International Conference on Industrial Engineering and Operations Management* (3964-3979).
- Masood, R.Z. (2018). Green Hrm: a Need for 21 St Century. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 5(6), 356-359.
- Mendis, M.V.S., & Welmilla, I. (2021). *Green Consciousness of Employees*.
- Mijatović, M.D., Uzelac, O., & Stoiljković, A. (2020). Effects of human resources management on the manufacturing firm performance: Sustainable development approach. *International Journal of Industrial Engineering and Management*, 11(3), 205-212. <https://doi.org/10.24867/IJIEM-2020-3-265>
- Mishra, P. (2017). Green human resource management: a framework for sustainable organizational development in an emerging economy. *International Journal of Organizational Analysis*, 25(5), 762-788. <https://doi.org/10.1108/IJOA-11-2016-1079>
- Muafi, M. (2015). Green IT empowerment, social capital, creativity and innovation: A case study of creative city, Bantul, Yogyakarta, Indonesia. *Journal of Industrial Engineering and Management*, 8(3), 719-737. <https://doi.org/10.3926/jiem.1341>
- Muafi, M., & Kusumawati, R.A. (2021a). Green Human Resources Management and Its Impact on Supply Chain and Business Performance: An Empirical Study in Indonesia. *Journal of Asian Finance, Economics and Business*. 8(5), 1099-1107. <https://doi.org/10.13106/jafeb.2021.vol8.no5.1099>
- Muafi, M., & Kusumawati, R.A. (2021b). A nexus between green HRM (GHRM), supply chain performance (Scp) and business performance (BP): The mediating role of supply chain organizational learning (Scol). *Journal of Industrial Engineering and Management*, 14(2), 329-344. <https://doi.org/10.3926/jiem.3339>
- Musofa, A., Yuniardi, T., Sudiarta, Y., Hendriwibowo, N., Ekawati, A.D., Gunawan, F.E. et al. (2021). Implementation Green Human Resources Management within Information Technology Companies in Indonesia. *International Journal of Engineering Research and Applications*, 11(8), 07-11. Available at: https://www.academia.edu/50898886/Implementation_Green_Human_Resources_Management_within_Information_Technology_Companies_in_Indonesia
- Mychelisda, E., & Firdaus, N. (2021). What can Indonesian Businesses Learn from the We Mean Business Initiative to Address Climate Change? *BISNIS & BIROKRASI: Jurnal Ilmu Administrasi Dan Organisasi*, 28(2). <https://doi.org/10.20476/jbb.v28i2.1277>
- Nanda, P., & Kumar, V. (2021). Social media analytics: tools, techniques and present day practices. *International Journal of Services Operations and Informatics*, 11(4), 422-436. <https://doi.org/10.1504/IJSOI.2021.120691>
- Naqvi, S., & Siddiqui, D.A. (2019). Effect of GHRM Practices on Work Performance: The Mediatory Role of Green Lifestyle. *SSRN Electronic Journal*, January. <https://doi.org/10.2139/ssrn.3486132>
- Novitasari, M., & Agustia, D. (2021). Green supply chain management and firm performance: The mediating effect of green innovation. *Journal of Industrial Engineering and Management*, 14(2), 391-403. <https://doi.org/10.3926/jiem.3384>

- Othman, N.A., Alamsyah, D.P., & Aryanto, R. (2021). Understanding the factors of green advertising to adopt the environmental strategy. *IOP Conference Series: Earth and Environmental Science*, 824(1). <https://doi.org/10.1088/1755-1315/824/1/012042>
- Pallavi, E.V.P.A.S., & Bhanu, M.V.V. (2016). Green Hrm: a Way for Corporate Sustainability. *International Journal of Human Resource Management and Research (IJHRMR)*, 6(2), 13-20. Available at: <http://www.tjprc.org/view-archives.php>
- Park, S. R., Kim, S. T., & Lee, H.H. (2022). Green Supply Chain Management Efforts of First-Tier Suppliers on Economic and Business Performances in the Electronics Industry. *Sustainability (Switzerland)*, 14(3). <https://doi.org/10.3390/su14031836>
- Pham, N.T., Hoang, H.T., & Phan, Q.P.T. (2020). Green human resource management: a comprehensive review and future research agenda. *International Journal of Manpower*, 41(7), 845-878. <https://doi.org/10.1108/IJM-07-2019-0350>
- Piwozar-Sulej, K. (2021a). Core functions of Sustainable Human Resource Management. A hybrid literature review with the use of H-Classics methodology. *Sustainable Development*, 29(4), 671-693. <https://doi.org/10.1002/sd.2166>
- Piwozar-Sulej, K. (2021b). Human resources development as an element of sustainable HRM - with the focus on production engineers. *Journal of Cleaner Production*, 278. <https://doi.org/10.1016/j.jclepro.2020.124008>
- Pricewaterhouse Coopers (PwC). (2020). Impact of COVID-19 on the supply chain industry. *PricewaterhouseCoopers (PwC)*, 1-16. Available at: <http://www.pwc.com/ng/covid-19>
- Rachinger, M., Rauter, R., Christiana-Müller, W.V., & SchIrgi, E. (2018). Digitalization and its influence on business model innovation. Emerald Insight. *Journal of Manufacturing Technology Management*, 30(8), 1143-1160. Available at: <https://www.emerald.com/insight/content/doi/10.1108/JMTM-01-2018-0020/full/html> <https://doi.org/10.1108/JMTM-01-2018-0020>
- Ragas, S.F.P., Tantay, F.M.A., Chua, L.J.C., & Sunio, C.M.C. (2017). Green lifestyle moderates GHRM's impact on job performance. *International Journal of Productivity and Performance Management*, 66(7), 857-872. <https://doi.org/10.1108/IJPPM-04-2016-0076>
- Raj, A., Mukherjee, A.A., de Sousa-Jabbour, A.B.L., & Srivastava, S.K. (2022). Supply chain management during and post-COVID-19 pandemic: Mitigation strategies and practical lessons learned. *Journal of Business Research*, 142, 1125-1139. <https://doi.org/10.1016/j.jbusres.2022.01.037>
- Razaq, A. (2019). Impact of Green Life Style on Green Innovation in the Banking Sector: Mediated by Manager's Training and Moderation of Green Innovation Strategies. *Journal of Organization and Business*. Available at: <https://journals.ckcpublishing.org/index.php/Job/article/view/16>
- Reinartz, W., Michael-Haenlein, J., & Henseler, Ö. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM — University of Twente Research Information. *International Journal of Research in Marketing*, 26(4), 332-344. Available at: <https://research.utwente.nl/en/publications/an-empirical-comparison-of-the-efficacy-of-covariance-based-and-v> <https://doi.org/10.1016/j.ijresmar.2009.08.001>
- Roca-Barcelo, A., Gaines, A.M., Sheehan, A., Thompson, R., Chamberlain, R.C., Bos, B. et al. (2021). Making academia environmentally sustainable: a student perspective. *The Lancet Planetary Health*, 5(9), e576-e577. [https://doi.org/10.1016/S2542-5196\(21\)00199-6](https://doi.org/10.1016/S2542-5196(21)00199-6)
- Rupa, R.A., & Saif, A.N.M. (2022). Impact of Green Supply Chain Management (GSCM) on Business Performance and Environmental Sustainability: Case of a Developing Country. *Business Perspectives and Research*, 10(1), 140-163. <https://doi.org/10.1177/2278533720983089>

- Sabri, E.H. (2019). *Technology optimization and change management for successful digital supply chains*. IGI Global. Available at: <https://books.google.fr/books?hl=fr&lr=&id=SmSJDwAAQBAJ&oi=fnd&pg=PR1&dq=business+model,+supply+chain+model,+risk+management&ots=8Zgvy9PFKk&sig=-cFHsJtdIbj2-dD9rrbpUjtvok#v=onepage&q&f=false>
- Sapna & Gupta, A. (2021). Implementation of Green Human Resource Management Practices: Barriers and Solutions. *Journal of Scientific Research*, 65(09), 71-77. <https://doi.org/10.37398/JSR.2021.650911>
- Saptaria, L., Soetjipto, B.E., & Wardoyo, C. (2022). Impact of the Implementation of Green Human Resources Management: A Study of Systematic Literature. *Ilomata International Journal of Management*, 3(2), 264-283. <https://doi.org/10.52728/ijjm.v3i2.471>
- Shahzad, M.U. (2020). Green Human Resource Management and Its Strategic Importance in the Modern Era: A Review and Research Framework. *International Journal of Entrepreneurship and Business Development*, 03(04), 484-493.
- Sheikh, W., Islam, M.S., & Rahman, F. (2019). Implementing Green Human Resource Management: Cost-Effective Strategies and Tools. *Journal of Entrepreneurship Organization Management*, 8, 264. <https://doi.org/10.4172/2169-026x.100264>
- Siswanti, Y., & Muafi, M. (2020). Empowering Leadership and Individual Creativity: The Mediation Role of Psychological Empowerment in Facing Covid-19 Pandemic. *The Journal of Asian Finance, Economics and Business*, 7(11), 809-816. <https://doi.org/10.13106/jafeb.2020.vol7.no11.809>
- Sony, M. (2019). Green Supply Chain Management Practices and Digital Technology. In *Technology Optimization and Change Management for Successful Digital Supply Chains* (233-254). <https://doi.org/10.4018/978-1-5225-7700-3.ch012>
- Srivastava, B. (2022). Green Supply Chain Management Post-COVID-19 Pandemic. In *Supply Chain Resiliency, Efficiency, and Visibility in the Post-Pandemic Era*. William Paterson University, USA. Available at: <https://www.igi-global.com/chapter/green-supply-chain-management-post-covid-19-pandemic/302700> <https://doi.org/10.4018/978-1-7998-9506-0.ch021>
- Srivastava, S.K. (2007). Green supply-chain management: A state-of-the-art literature review. *International Journal of Management Reviews*, 9(1), 53-80. <https://doi.org/10.1111/j.1468-2370.2007.00202.x>
- Sugandini, D., Susilowati, C., Siswanti, Y., & Syafri, W. (2020). Green supply management and green marketing strategy on green purchase intention: SMEs cases. *Journal of Industrial Engineering and Management (JIEM)*, 13(1), 79-92. <https://doi.org/10.3926/jiem.2795>
- Sukoharsono, E.G. (2007). Green Accounting in Indonesia: Accountability and Environmental Issues. *The International Journal of Accounting and Business Society*, 15(1), 21-60.
- Sullivan, G.M., & Artino, A.R. (2013). Analyzing and Interpreting Data From Likert-Type Scales. *Journal of Graduate Medical Education*, 5(4), 541-542. <https://doi.org/10.4300/jgme-5-4-18>
- Sutawijaya, A.H., & Nawangsari, L.C. (2020). What is the impact of industry 4.0 to green supply chain? *Journal of Environmental Treatment Techniques*, 8(1), 207-213.
- Svensson, G., & Wagner, B. (2015). Implementing and managing economic, social and environmental efforts of business sustainability propositions for measurement and structural models. *Management of Environmental Quality: An International Journal*, 26(2), 195-213. <https://doi.org/10.1108/MEQ-09-2013-0099>
- Teng, X., Wu, Z., & Yang, F. (2022). Research on the Relationship between Digital Transformation and Performance of SMEs. *Sustainability*, 14(10), 6012. <https://doi.org/10.3390/su14106012>

- Ukko, J., Nasiri, M., Saunila, M., & Rantala, T. (2019). Sustainability strategy as a moderator in the relationship between digital business strategy and financial performance. *Journal of Cleaner Production*, 236. <https://doi.org/10.1016/j.jclepro.2019.117626>
- Urbański, M., & Ul-Haque, A. (2020). Are you environmentally conscious enough to differentiate between greenwashed and sustainable items? A global consumers perspective. *Sustainability (Switzerland)*, 12(5), 1-25. <https://doi.org/10.3390/su12051786>
- van Hoek, R., Gibson, B., & Johnson, M. (2020). Talent Management For a Post-COVID-19 Supply Chain–The Critical Role for Managers. *Journal of Business Logistics*, 41(4), 334-336. <https://doi.org/10.1111/jbl.12266>
- Vita, G., Lundström, J.R., Hertwich, E.G., Quist, J., Ivanova, D., Stadler, K. et al. (2019). The Environmental Impact of Green Consumption and Sufficiency Lifestyles Scenarios in Europe: Connecting Local Sustainability Visions to Global Consequences. *Ecological Economics*, 164(November). <https://doi.org/10.1016/j.ecolecon.2019.05.002>
- Wang, J., Wu, N., & Yu, Z. (2022). Green Supply Chain Management (GSCM) and Green Human Resource Management (GHRM): A Literature Review and Future Research Direction. In *Proceedings of the 2022 7th International Conference on Financial Innovation and Economic Development (ICFIED 2022)* (2246-2252). <https://doi.org/10.2991/aebmr.k.220307.369>
- Wang, Y., Yu, Z., Shen, L., & Jin, M. (2022). Operational modes of E-closed loop supply chain considering platforms' services - ScienceDirect. *International Journal of Production Economics*, 251. <https://doi.org/10.1016/j.ijpe.2022.108551>
- Watson, K., Klingenberg, B., Polito, T., & Geurts, T.G. (2004). Impact of environmental management system implementation on financial performance: A comparison of two corporate strategies. *Management of Environmental Quality: An International Journal*, 15(6), 622-628. <https://doi.org/10.1108/14777830410560700>
- Wehrle, M., Lechler, S., von der Gracht, H.A., & Hartmann, E. (2020). Digitalization and its Impact on the Future Role of SCM Executives in Talent Management - An International Cross-Industry Delphi Study. *Journal of Business Logistics*, 41(4), 356-383. <https://doi.org/10.1111/jbl.12259>
- Wulandari, E.T., & Nawangsari, L.C. (2021). The Effect of Green Human Resources Management on Sustainability Business Companies (Case Study on Employee Claim Department PT. Prudential Life Assurance). *European Journal of Business and Management Research*, 6(1), 238-242. <https://doi.org/10.24018/ejbmr.2021.6.1.745>
- Wulansari, N.A., Witiastuti, R.S., & Ridloah, S. (2019). Green Lifestyle and Pos: Which One Does Have the Biggest Role in Influencing the Influence of Green Hrm on Employee Performance? *Jurnal Bisnis Dan Manajemen*, 20(1), 3-14. <https://doi.org/10.24198/jbm.v20i1.212>
- Yadav, K., Meeker, D., Mistry, R.D., Doctor, J.N., Fleming-Dutra, K.E., Fleischman, R.J. et al. (2019). A Multifaceted Intervention Improves Prescribing for Acute Respiratory Infection for Adults and Children in Emergency Department and Urgent Care Settings. *Academic Emergency Medicine*, 26(7), 719-731. <https://doi.org/10.1111/acem.13690>
- Yang, Z., Sun, J., Zhang, Y., & Wang, Y. (2020). Synergy between green supply chain management and green information systems on corporate sustainability: an informal alignment perspective. *Environment, Development and Sustainability*, 22(2), 1165-1186. <https://doi.org/10.1007/s10668-018-0241-9>
- Yildiz-Çankaya, S., & Sezen, B. (2019). Effects of green supply chain management practices on sustainability performance. *Journal of Manufacturing Technology Management*, 30(1), 98-121. <https://doi.org/10.1108/JMTM-03-2018-0099>

- Yong, J.Y., Yusliza, M.Y., Ramayah, T., & Fawehinmi, O. (2019). Nexus between green intellectual capital and green human resource management. *Journal of Cleaner Production*, 215, 364-374. <https://doi.org/10.1016/j.jclepro.2018.12.306>
- Younis, H., Sundarakani, B., & Vel, P. (2016). The impact of implementing green supply chain management practices on corporate performance. *Competitiveness Review*, 26(3), 216-245. <https://doi.org/10.1108/CR-04-2015-0024>
- Yu, W., Chavez, R., Feng, M., Wong, C.Y., & Fynes, B. (2020). Green human resource management and environmental cooperation: An ability-motivation-opportunity and contingency perspective. *International Journal of Production Economics*, 219, 224-235. <https://doi.org/10.1016/j.ijpe.2019.06.013>
- Zaid, A.A., & Sleimi, M. (2021). Effect of total quality management on business sustainability: the mediating role of green supply chain management practices. *Journal of Environmental Planning and Management*. <https://doi.org/10.1080/09640568.2021.1997730>
- Zaid, A.A., Jaaron, A.A.M., & Bon, A.T. (2018). The impact of green human resource management and green supply chain management practices on sustainable performance: An empirical study. *Journal of Cleaner Production*, 204, 965-979. <https://doi.org/10.1016/j.jclepro.2018.09.062>
- Zhu, J., Tang, W., Wang, H., & Chen, Y. (2021). The influence of green human resource management on employee green behavior—a study on the mediating effect of environmental belief and green organizational identity. *Sustainability (Switzerland)*, 13(8). <https://doi.org/10.3390/su13084544>
- Zhu, Q., Sarkis, J., & Lai, K.H. (2013). Institutional-based antecedents and performance outcomes of internal and external green supply chain management practices. *Journal of Purchasing and Supply Management*, 19(2), 106-117. <https://doi.org/10.1016/j.pursup.2012.12.001>

Journal of Industrial Engineering and Management, 2023 (www.jiem.org)



Article's contents are provided on an Attribution-Non Commercial 4.0 Creative commons International License. Readers are allowed to copy, distribute and communicate article's contents, provided the author's and Journal of Industrial Engineering and Management's names are included. It must not be used for commercial purposes. To see the complete license contents, please visit <https://creativecommons.org/licenses/by-nc/4.0/>.