The Theses of the PhD dissertation

Hungarian University of Agriculture and Life Sciences

JOB SATISFACTION AND PERFORMANCE OF EMPLOYEES AT SMALL AND MEDIUM-SIZED ENTERPRISES IN INDONESIA: THE ROLE OF GOING GREEN AND TECHNOLOGICAL ADAPTATION AFTER COVID-19

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GÖDÖLLŐ, HUNGARY

2023

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Table of contents

List of Tables

List of Figures

ABSTRACT

This study addresses the challenges related to the adoption of green and digital practices by leaders, human resource managers, and employees in small and medium-sized enterprises after the Covid-19 crisis. Its primary goal is to explore the relationships among green transformational leadership, green human resource management practices, employee green behavior, employee technology adaptation, employee job satisfaction, and employee performance. Built upon six hypotheses, which were further subdivided into 11 specific relationships, it examined cross-sectional primary data collected in South Sumatra, Indonesia, during the period of March to June 2023. 569 participants completed an online questionnaire distributed through social media. These respondents were affiliated with 119 small and medium-sized enterprises across various sectors, including manufacturing, services, and trade, located in the cities of Palembang, Lahat, and Lubuk-Linggau. The 6 variables, represented a total of 29 items. During the data analysis, one item was identified as invalid and excluded after a confirmatory factor analysis. Notably, a common method bias test did not reveal any significant bias in the data. The results from the structural equation modeling test, demonstrated that the tested models were well-fitting based on various fit indices. Out of the 11 tests examining the relationships between the 6 variables, four tests were supported. These findings confirmed that employee job satisfaction played a mediating role in the positive relationship between green human resource management practices and employee performance. Also, it was observed that employee technology adaptation had a positive relationship with employee job satisfaction. However, it did not act as a moderator either in the relationships between green transformational leadership and employee job satisfaction or between green human resource management practices and employee job satisfaction. This study underscores the importance of both sustainability and digitalization in the efforts of human resource managers and employees to enhance employee performance in small and medium-sized enterprises in the post-Covid-19 era.

Keywords: green transformational leadership; green human resource management practices; employee green behavior; employee technology adaptation; employee job satisfaction; employee performance; small and medium-sized enterprises

I. INTRODUCTION

1.1. Background

Scholars now explore employee behavior, considering global concerns like environmental and technological factors. Internal perspectives: employee technology adaptation (ETA) and employee job satisfaction (EJS) and external aspects: leadership styles, human resource management practices play pivotal roles in determining employee performance (EP). Moreover, the research landscape, shaped by the Covid-19 crisis, emphasizes the coexistence of sustainability and digitalization for contemporary business competitiveness (Ha et al., 2022; Pylaeva et al., 2022). Even before the crisis, sustainability gained importance, with environmentally conscious leadership facilitating the transition. Studies established a strong link between Industry 4.0 and sustainability, recognizing the environmental impacts of digitalization (Feroz et al., 2021; Chen et al., 2020; Bieser & Hilty, 2018; Ha et al., 2022).

Small and medium-sized enterprises (SMEs), facing environmental challenges, attract significant interest (Lawrence et al., 2006; Burlea-Schiopoiu & Mihai, 2019). Despite barriers, addressing rising energy costs, resource management, and workplace health and safety is an opportunity. While current research explores green activities in SMEs (Yacob et al., 2018; Johnson & Schaltegger, 2016), a gap exists in integrating the 'green' concept with technological adaptation for SME success. Existing studies on green transformational leadership (GTL), green human resource management practices (GHRMPs), and employee

green behavior (EGB) lack exploration of their role in influencing EP, presenting a promising research context for SMEs. Transformational leadership is closely related to EJS, a key determinant of EP (Draj & Saed, 2023; Muhajir et al., 2022; Ningsih et al., 2023). Human resource management practices impact EJS significantly (Hassan & Mohamed, 2023). Despite extensive research, a notable gap is the separation between studies focusing on EGB and those addressing EP, as depicted in Figure 1.

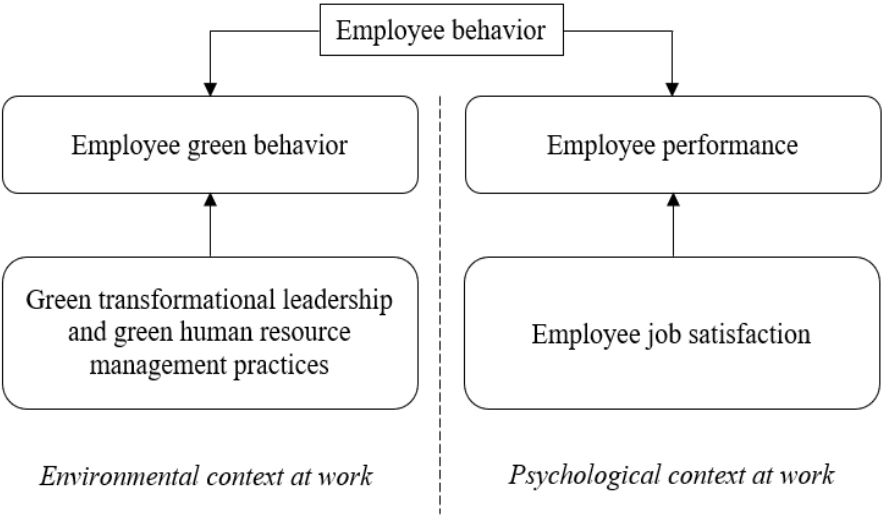**Figure 1**. The gaps between the environmental and psychological contexts in the study of employee behavior
Source: Author's own research

Certainly, recognizing the importance of technological adaptation is crucial in the context of the research framework, particularly considering the impact of the Covid-19 crisis. The surge in job migration towards digitalization has significantly affected GTL, GHRMPs, and EJS. This

intervention is becoming increasingly essential for SMEs, as employees need to adapt to digital demands to maintain performance.

Digitalization was already underway within SMEs before the crisis, but its significance grew dramatically during the global economic impact of 2020. Despite their distinct challenges compared to larger corporations, such as limited financial resources and a smaller pool of well-trained staff, SMEs need to adopt digital technologies to stay competitive. In the post-Covid-19 era, recruiting individuals who are both environmentally sustainable and technologically adept becomes essential for SMEs. While extensive research exists on leadership styles, human resource management practices, and employee behaviors in the context of environmental sustainability, the intersection of technology adaptation by employees within organizations is often overlooked. Technology adaptation has become prevalent and can significantly influence the success of green initiatives.

Therefore, the study of EJS and EP in SMEs should encompass both the green concept and the intervention of ETA in the context of the crisis. In this evolving research landscape, exploring the relationship between GTL, GHRMPs, and their influence on EJS is needed. Addressing the division between studies focused on environmentally sustainable employee behaviors and those addressing ETA within companies is essential to fully understand how these factors intersect and influence EJS and EP within SMEs.

First, the sense of urgency theory, proposed by Kotter in 1996 within the context of organizational change management, is utilized to explain the concepts of GTL, GHRMPs, EGB in an environmental perspective, and ETA in a technological context. This theory, widely applied in various

disciplines, has been studied in the context of sustainability and information systems. Understanding both true and false senses of urgency is the initial step, as observed by Kotter, who turned failures into actionable steps for successful changes. Complacency, a false sense of urgency, must be comprehended by SME employees (Kotter 2011; Bucciarelli, 2015; Mitcheltree, 2023). Acceptance of environmental and technological changes as true urgency can lead to improved job satisfaction and performance. The journey toward sustainability and digitalization requires a collective response from SMEs, driven by a genuine sense of urgency in addressing transformative processes (Isaksson 2019; Ahmad & Jalil, 2013). The urgency to embrace new directions is paramount for achieving technological adaptation (Swenty et al., 2014), and SME leaders must act earnestly in response to environmental demands (Wilson & Erlove, 2021) and technological shifts (Mitcheltree, 2023), actively generating knowledge and fostering a culture of innovation to navigate the future.

Second, sustainable development theory is employed to elucidate GHRMPs, GTL, and EGB within this study. Coined in 1987, sustainable development aims to meet present needs without compromising future generations' ability to meet their own (Zhu et al., 2023). Initially developed by Gro Harlem Brundtland in "Our Common Future," the concept gained global recognition and led to the United Nations' adoption of 17 Sustainable Development Goals (SDGs) in 2015. These goals encompass economic, social, and environmental dimensions, providing a framework for tasks to be achieved by 2030. Within SMEs, sustainable development is a central component of business relationships, reflecting how SMEs perceive sustainability. SMEs play a vital role in advancing SDGs,

focusing on essential performance indicators to evolve into sustainable enterprises, fortify supply chains, and sustain economic growth. Sustainable development theory, applied to large companies by Frecè & Harder (2018), finds relevance in SMEs. Isensee et al. (2020) emphasize that SMEs can actively engage in essential organizational tasks to foster cultural development in response to the imperative of sustainability (Pearce & Atkinson, 1998).

Third, digital business ecosystem theory is applied to elucidate the concept of ETA in this study. Rooted in theoretical computer science, the digital business ecosystem operates as an evolutionary, self-organizing, and self-optimizing environment (Lurgi & Estanyol, 2010). In this context, small organizations within the digital business ecosystem collaborate to provide complementary services, forming coalitions that develop intricate applications based on their services (Khalil et al., 2011). This digital environment facilitates cooperation and service aggregation, with companies interacting through software to establish cooperative relationships. Departing from traditional principles, where collaborative relationships are mainly driven by human actors, the digital business ecosystem relies heavily on the semantic web. This allows companies on the World Wide Web to collaborate and exchange knowledge efficiently. The predominant architecture for service aggregation in this environment is the service-oriented architecture, emphasizing the service-oriented nature of the digital ecosystem. The digital business ecosystem significantly aids SMEs by enabling growth and global expansion. Through internet access, SMEs can tap into global markets, fostering connections with partner organizations, customers, and competitors. The theory of the digital business ecosystem originated from a European Union

5

project in 2006 (Whitley & Darking, 2006), defining a technical infrastructure based on distributed software technology. In the context of SMEs, this theory is applied to elucidate ETA, a crucial variable in the relationship between GTL, GHRMPs, and EJS. Scholars widely recognize the introduction of ETA in the business realm during the Lisbon Agenda in March 2000, with research applying this theory to investigate technological change in SMEs (Isherwood & Coetzee, 2011; Razavi et al., 2010; Herdon et al., 2012).

Fourthly and fifthly, this study employs the theory of reasoned action and the theory of planned behavior to delve into the intricate relationship between EJS as a fundamental work attitude and EP as a crucial work behavior. The fourth theory predicts individual behavior based on pre-existing attitudes and the environmental conditions that either support or hinder the intended behavior (Nguyen et al., 2020). Focused on actions involving conscious and autonomous decisions, it is widely used to investigate human behavior, particularly in the realms of social and individual behavior. Attitudes, representing individual evaluations of liking or disliking a behavior, are shaped by behavioral beliefs and are closely associated with motivational factors predicting the likelihood of specific behaviors (Mishra et al., 2014; Akther & Nur, 2022; Matute et al., 2021). The theory assumes individuals are rational actors, suggesting that if a person believes a positive outcome will result from a behavior, they are likely to exhibit a positive attitude toward that behavior (Emami et al., 2022; Al-Ayed, 2022). The fifth theory, introduced by Ajzen in 1985 (Ajzen & Fishbein, 1987), builds upon the foundations of the fourth theory, delving into the underlying reasons behind human behavior (Al-Mamary & Alraja, 2022). It considers beliefs about socially referenced

expectations and behaviors, resulting in perceived social pressure or subjective norms (Seddig et al., 2022), and acknowledges beliefs about factors facilitating or hindering behavior, impacting perceived behavioral control or self-efficacy (Seddig et al., 2022). Understanding the two theories is particularly relevant in the context of job satisfaction, a critical work attitude that significantly influences EP. The connection between job satisfaction and performance becomes manifest when employees in SMEs express their job satisfaction by articulating beliefs about potential performance outcomes and their corresponding evaluations.

GTL and GHRMPs play a crucial role in influencing and fostering EGB, a key aspect of contemporary workforce behavior emphasizing environmentally sustainable practices. GTL, as a leadership style, aligns values, beliefs, and sustainability principles effectively. It is a distinctive behavior style that transcends conventional leadership paradigms, primarily by serving as a formidable motivator for followers to ardently pursue and attain environmental goals. GHRMPs create a supportive ecosystem, encouraging employees to engage in sustainability initiatives through training, education, communication of ecological importance, and providing necessary resources. These practices are green recruitment and selection processes, green training and development initiatives, green performance management systems, green compensation structures, and green engagement strategies, which are are unified by a common goal: the cultivation of what can be aptly termed as 'green employees.

The dynamic interplay between green transformational leaders and green human resource managers serves as a potent force for stimulating EGB. EGB, also known as eco-friendly or pro-environmental behavior, encompasses habits individuals incorporate into their daily routines (Yang,

2019; Zhang et al., 2021). It is positive employee behavior that supports sustainable practices through eco-conscious actions in the workplace. The impact of GHRMPs extends beyond the workplace, shaping EGB in various settings (Karmoker et al., 2021). GTL complements GHRMPs, forming pivotal intersections: the interplay between GTL and EGB, and the interrelationship between GHRMPs and EGB. These relationships represent the strategic confluence of leadership and human resource practices, paving the way for cultivating EGB within and beyond organizations.

Technological adaptation, defined as the process of changing how information and communication technologies are used, holds great interest for SMEs. Scholars extensively study this concept in both developed and developing nations, as it drives technological innovation and enhances firm performance (Thomas & Bostrom, 2010). This dynamic process empowers companies to strengthen capabilities, extending market presence and impact (Pu et al., 2021). Particularly crucial for SMEs, adopting new technologies significantly boosts business efficiency while reducing operational costs (Kurniawan et al., 2023). Influencing factors include the cost of technological equipment and the continuous need for efficiency improvements (Manyati & Mutsau, 2019). In the modern context, social media has become a critical dimension of job satisfaction (Zhang et al., 2019). Robust evidence supports a positive relationship between transformational leadership and job satisfaction (Abelha et al., 2018; Allozi et al., 2022; Bernarto et al., 2020). Human resource management practices, including GHRMPs, contribute positively to EJS (Noor et al., 2022; Chowdhury et al., 2019; Freire & Pieta, 2022). The intricate relationship between leadership style, human resource practices,

and EJS is influenced by the contemporary business environment and evolving technology. In this dynamic framework, GTL and GHRMPs emerge as instrumental factors influencing EJS. The role of ETA moderates and shapes these relationships, adding greater significance to the connection between leadership, human resource practices, and EJS. ETA is the process through which organizations change how they employ information and communication technologies to carry out their work (Thomas & Bostrom, 2010).

The intricate dynamics of job satisfaction are further illuminated as it plays a mediating role in the relationship between GTL and EP, as demonstrated by the research conducted by Amelia et al. (2022). Job satisfaction assumes a pivotal role as a guiding force, offering insights into the interplay between GTL, EJS, and EP. It serves as a mediating link, elucidating how GTL within SMEs can significantly influence employee work attitudes, with a particular emphasis on job satisfaction. Building upon previous sections that discussed how GTL can catalyze the development of EGB, this section delves deeper into how GTL can exert its influence on employee work behavior through the prism of work attitudes, with job satisfaction as a central component. EJS is individual's job satisfaction of can be shaped by a multitude of elements within the work environment. The insights from this mediation process contribute to our understanding of behavioral research, shedding light on the nuanced dynamics within organizations and unveiling the profound impact that environment-oriented leadership can have on shaping employee attitudes, job satisfaction, and overall work performance. These concepts collectively form crucial facets of the intricate tapestry of behavioral

research and organizational dynamics, offering valuable insights for SMEs and researchers alike.

The relationship between transformational leadership and EP has been extensively explored and well-documented in organizational research, as corroborated by studies conducted by Eliyana & Muzakki (2019) and Hussain & Khayat (2021). However, it is imperative to consider the mediating role played by job satisfaction in this intricate relationship, introducing a nuanced layer of understanding. Since its conceptualization in 1985, transformational leadership has been persistently examined in relation to job satisfaction, as indicated by the research conducted by Gan & Voon (2021). EP stands as a pivotal element in organizations, demanding comprehensive understanding and effective management (Mansyur et al., 2022). So, it is about how proficiently employees carry out their roles, directly impacting the organization's capacity to achieve objectives.

South Sumatra is a big province of Indonesia, situated in the southeastern part of the island of Sumatra. The province covers an area of 91,592.43 km2 (35,364 sq mi) and had a population of 8,467,432 as per the 2020 census. The official estimate as of mid-2022 stood at 8,657,008 Indonesians. The provincial capital is the city of Palembang. Administratively, the province is divided into 13 regency governments and 4 city governments, in addition to the regional people's representative council (Pemerintah Provinsi Sumatera Selatan, 2023).

According to BPS (2022), the 2020 annual survey by Industri Kecil dan Menengah (IMK) recorded a total of 75,569 SMEs in the province. Among these, the food industry was the largest category, with 23.44 thousand businesses, followed by the textile industry and the non-metal

minerals industry as the second and third most common types, each with over 10,000 businesses.

Before the crisis, data on SMEs in South Sumatera indicated a negative growth trend in both the number of establishments (units) and employment levels (Tange, 2015). These SMEs were not following environmentally friendly practices in their production, manufacturing, and distribution of food products (Chotibah et al., 2022). The majority of them avoided using environmentally friendly but expensive materials due to the high cost (Mellita et al., 2020). On average, the owners or managers of these SMEs had an understanding of the green concept, but most of them were not fully aware of its application in the production process (Heriyanto et al., 2018). The adoption of green innovation was limited in these SMEs, with many parts of the production process still relying on traditional technology. People working in them have limited education and understanding of the benefits of going green and adopting new technologies (Khairani et al., 2021).

According to BPS Sumsel (2017), the business landscape in this province is primarily dominated by SMEs. The results of the 2016 economic census listing by BPS Sumsel (2017) revealed that micro and small businesses were prevalent, accounting for 648 thousand businesses or 98.7 percent of the total non-agricultural businesses in the province. These businesses also played a significant role in providing employment, as they absorbed over 1.7 million people in South Sumatra, constituting approximately 86 percent of the total non-agricultural workforce. Based on available data, the advanced economic census revealed that this province had over 40,000 micro-small businesses in 2017, spread across various districts and cities. Additionally, the 2020 annual SMEs survey

recorded a total of 75,569 businesses in South Sumatra, showing an increase from 80,307 in 2019 (BPS Sumsel, 2022). Despite their large number, their technology and environmental practices remains low. Several studies conducted in the province have shown that they have not been innovative in environmentally friendly practices and adopting technology. The micro and small businesses are considered less promising and face higher risks, as higher education graduates or bachelor's degree holders show less interest in becoming SME entrepreneurs. Human resource development in the SMEs should focus on improving the quality of human resources in technology (Trihandayani & Yamaly, 2022).

Internet use by SMEs in South Sumatra in 2020 indicated that 87.94% did not use the internet, although this percentage was lower than the previous year, which was 93.04%. Only 12.06% of SMEs utilized the internet in their businesses. The food industry had the highest number of businesses using the internet, with 4,354, followed by the apparel industry with 1,103 businesses (12.10%). They found it challenging to implement e-commerce (Chetibah et al., 2022; Bashir et al., 2020), but they lacked understanding of digital marketing, information and communication technology, and effective utilization of social media (Karimudin et al., 2022). Also, they had not adopted efficient technology from renewable energy (Bizzy & Santoso, 2018) and lacked innovation in leadership (Perizade et al., 2022). According to Mellita et al. (2020), they had not yet implemented environmentally friendly systems in the production, manufacturing, and distribution of food products. Most of them did not consider obtaining certification for environmental management in their business processes, citing a lack of information, capacity, a lengthy

certification process, and high certification costs in the field of environmental management.

According to BPS Sumsel, in 2020, around 57,480 SMEs in the province reported being affected by the crisis. The impact was felt across various industrial groups, with varied percentages. In general, the percentage of SMEs affected by the crisis was higher than those that were not affected, and the primary impacts included reduced demand or sales (55.16%), increased costs of raw materials (14.71%), and delays in buyer payments (14.59%). Changes in consumer behavior during the crisis, influenced by evolving policies and financial constraints, led to a decrease in the sale of goods or services. Other impacts included raw material shortages (8.11%) and reduced worker attendance (3.92%), among others.

SMEs in South Sumatra implemented various strategies to cope with the crisis. These strategies included reducing working hours or days, downsizing the workforce, and suspending production. Reducing working hours or days and trimming the workforce were measures taken to cut labor costs and ensure business continuity during the crisis. Online marketing strategies were also adopted, businesses explored new sectors, and some even shifted their products or services. However, these changes presented their challenges, such as the potential loss of workforce in the production of goods or services.

1.2. Problems

Problems in this study refer to the following six questions:
1. When going green has become a competitive value for SMEs since the pre-Covid-19 era, do the leaders, human resource managers,

and employees of SMEs go green in their work after the Covid-19 era?

2. By going green, are SME leaders and human resource managers support EGB?

3. When digitalization had been valuable since the pre-Covid-19 era, and essential in the Covid-19 era, do SME employees adapt the technology after the Covid-19 era?

4. By going green, do SME leaders and managers interact with ETA to support EJS?

5. By going green and being digital, do SME employees feel more satisfaction in their job after Covid-19 era?

6. By going green and being digital, are EJS related to EP after Covid-19 era?

1.3. Objectives

This study focuses on sustainability and digitalization in the context of human resources in SMEs in the post-Covid-19 era, in South Sumatra of Indonesia. It is to reveal a causal relationship between leadership styles, human resource management practices, employee attitudes and behavior within an updated framework. Methodologically, this study aims to investigate the relationship between GTL, GHRMPs, EGB, ETA, EJS, and EP. The relationship is in the following fours ways:

1. Direct relationship between GTL and EGB, and GHRMPs and EGB.

2. Direct relationship between GTL and EJS, and GHRMPs and EJS moderated by ETA.

14

3. Direct relationship between GTL and EP, and GHRMPs and EP.

4. Indirect relationships between GTL and EP, and GHRMPs and EP mediated by EJS.

1.4. Hypotheses and framework

Based on the phenomena, research gaps, problems and objectives, this study tested 6 hypotheses which included 11 relationships between variables. Hypotheses 1, 2, 4, 5, 6 each consist of two relationships, while hypothesis 3 only has one relationship. The explanation of these eleven relationships is as follows, where two relationships of hypothesis 1 are based on explanation of GTL, GHRMPs, and EGB (section 2.4), and others relationships of other hypotheses are based on explanation of moderation of ETA (section 2.5), and mediation of EJS, and EP (section 2.6).

Hypothesis 1. GTL and GHRMPs are positively related to EGB

Hypothesis 2. GTL is positively related to EP and EJS.

Hypothesis 3. EJS is positively related to EP.

Hypothesis 4. GHRMPs are positively related to EP and EJS.

Hypothesis 5. ETA moderates the relationship between GTL and EJS, and GHRMPs and EJS.

Hypothesis 6. EJS mediates the relationship between GTL and EP, and GHRMPs and EP.

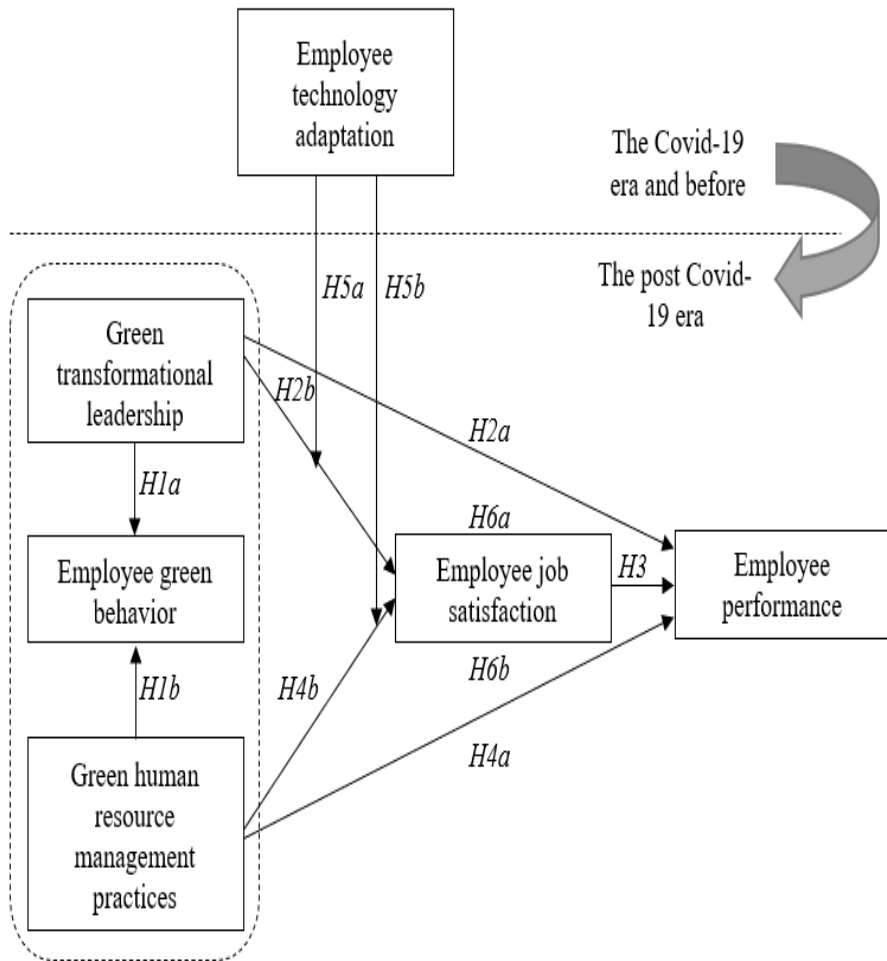Then, based on the six hypotheses, a research framework was created as shown in Figure 3.

Figure 2. The research framework

Source: Author's own research

II. MATERIALS AND METHODS

This study utilized a quantitative approach complemented by a qualitative strategy. The approach was supported by a confirmatory approach, which began by establishing a framework based on pre-existing theories and phenomena to address research questions related to the hypotheses. This study also employed a qualitative strategy to yield comprehensive results. It emphasized both the process and meaning in the research.

The questionnaire items in this study were measured using a "seven-point Likert scale from 1 to 7," ranging from strongly disagree to strongly agree. Previous quantitative research in the field of human resource management has commonly utilized 7-point Likert scales to obtain more detailed information about the attitudes and views of respondents. In some cases, five levels may be too limited to describe the more subtle degrees of agreement or disagreement. Increasing the number of levels on the Likert scale can enhance the validity of the measurement instrument. In specific situations, such as academic research or research requiring a deeper understanding, a 7-level Likert scale can offer higher accuracy in describing the attitudes of respondents.

The study employed a mixed-method approach for data collection, utilizing an online questionnaire in Indonesian as the primary instrument. Additionally, a hybrid questionnaire was used for approximately 200 respondents in Lubuk-Linggau who preferred a paper-based format. Data collection spanned from January to June 2023. To address potential biases, a common method bias test could be applied before structural equation modeling (SEM) analysis. The questionnaire, designed to be neutral and

unbiased, aimed to ensure honest responses without external influences. Non-probability purposive sampling was chosen to gather data from SME employees in South Sumatra, particularly Palembang, Lahat, and Lubuk-Linggau, with an actual sample size ranging from 500 to 600, providing a robust dataset for analyzing variable relationships.

The ethical approach employed in primary data collection for this study prioritized the well-being of research subjects. It emphasized fair treatment, data protection, and additional safeguards for vulnerable subjects. Integrity, honesty, and fairness were key values upheld throughout the research process. The approach aimed to avoid conflicts of interest, maintain honesty in data submission, and ensure transparency about research objectives, benefits, and funding. A cross-sectional approach was chosen for data collection, involving three waves with relatively short time intervals between them (March, April, and May 2023). This approach allowed for a snapshot of data at different points in time but differed from a longitudinal study, which involves repeated measurements over an extended period to track developmental changes.

The primary data collection process in the field involved three field assistants (enumerators): a male native residing in the city of Palembang, aged between 35 to 45 years; another male native residing in the city of Lahat, aged 20 to 30 years; and the other male native residing in Lubuk-Linggau, aged 30 to 40 years. The target was to receive responses from 900 individuals (300 from each of the three cities).

In Harman's single-factor test, the percentage of variance associated with the first component (or factor), which corresponds to the highest eigenvalue, is compared to a threshold of 0.5. Harman's single-factor test

is widely used, and it is employed by researchers to detect common method variance (Fuller et al., 2015).

In this study, the three-wave data collection process involved grouping the data into independent variables, moderating and mediating variables, and dependent variables. This grouping was determined based on the sub-framework, which served as the reference for the hypotheses. The independent variables were obtained from waves 1 and 2, the moderating and mediating variables were derived from wave 2, and the dependent variable was collected in wave 3.

This section consisted of two parts: descriptive analysis (quantitative and qualitative) and structural equation modeling. The first analysis elucidated the mean, median, and mode of the collected data, while the subsequent analysis examined the relationships between GTL, GHRMPs, EGB, ETA, EJS, and EP.

Since the framework in this study was constructed to establish a step-by-step causal relationship between the two dependent variables, the moderating and mediating variables, and the dependent variable, the analysis process was conducted in two stages:

1. Simultaneously tested two direct relationships between GTL, GHRMPs, and EGB.
2. The second stage involved testing the direct relationship between GTL, GHRMPs, ETA, EJS, and EP with the moderating and mediating variables.

The analysis unfolds in two stages. Initially, the focus is on the relationship between GTL, GHRMPs, and EGB. GTL and GHRMPs act as independent variables, and EGB is the dependent variable. In the second stage, attention shifts to exploring the relationship between GTL and EJS,

and GHRMPs and EJS, moderated by ETA. ETA, the moderating variable, links the independent and dependent variables, revealing the connections between them. Moderation analysis delves into the circumstances or conditions where variables exert a significant influence and the extent of that influence. It examines how the moderator interacts with independent variables to impact dependent variables. For model validation, mediation analysis with covariance-based SEM is employed, often necessitating substantial sample sizes, typically exceeding 100 subjects and preferably surpassing 200 subjects as suggested by various authors.

SEM represents specific, theory-based causal relationships between latent variables and their corresponding indicator variables. Model parameter estimates aim to make the indicator variance/covariance matrix closely resemble the data's variance/covariance matrix. Amos, short for Analysis of Moment Structures Amos is a powerful SEM software that extends standard multivariate analysis methods like regression, factor analysis, correlation, and analysis of variance. It is an IBM Statistical Package for Social Sciences (SPSS) designed for analyzing covariance structural models, including SEM, path analysis, and confirmatory factor analysis (CFA) (Barnidge & Zúñiga, 2018).

III. RESULTS AND DISCUSSION

3.1. Profile of respondents and small and medium-enterprises

The study involved a total of 569 respondents after the screening process, conducted across three waves of data collection. Palembang had the highest representation with 259 respondents, followed by Lahat with 107 and Lubuk-Linggau with 203. The majority of respondents were born between 2002 and 2011, representing Generation Z, with Palembang dominating in their representation. Female respondents constituted 45.34 percent, and the age group of 21 to 30 had the highest percentage at 47.80%. The majority of respondents had senior high school education (over 78%), with Palembang being dominant. Those with 1 to 5 years of work experience comprised over fifty percent, mostly from Palembang.

In the survey of SMEs, manufacturing businesses in Lubuk-Linggau were more extensively covered, mainly in the food and beverage sector. Notably, only small enterprises were surveyed, with a variety of types in each city. The location-wise distribution showed higher percentages of surveyed SMEs in Palembang. Medium-sized enterprises were surveyed in Palembang and Lubuk-Linggau, while all surveyed service SMEs in Lahat remained small.

3.2. Analyses

First, based on common method bias testing, hypothesis 1 tested 19 items as parameters, covering 6 for GTL, 6 for GHRMPs, and 7 for EGB.

The absence of CMB was confirmed, allowing for the use of collected data in subsequent analyses. In hypothesis 2, there are 22 parameters tested, including 6 items each for GTL and GHRMPs, 5 items for ETA, 1 item for EJS, and 4 items for EP. Similar to hypothesis 1, it was found that there was no bias based on the data collected for hypothesis 2, as the cumulative percentage value was well below 50 percent. Both had CMB test result variance values of 25,809 and 24,548 (below 50%).

Second, based on descriptive analysis, it is worth noting that the overall answers from the respondents ranged from 1 to 7, indicating that not all respondents fully agreed with all variables. After finding that the six variables tested in this study exhibited relatively high values, they were analyzed based on Hofstede's Insight about Indonesia as explained below:

1. Indonesian strongly emphasize hierarchy and unequal power distribution (78% of power distance).
2. Indonesian have a collectivist society (14% of individualism).
3. Indonesian have feminine culture (46 % of masculinity).
4. Indonesian are used to taking risks (48% on uncertainty avoidance).
5. Indonesian exhibit a pragmatic culture with a high score (62 of long-term orientation).
6. Indonesian have a restraint culture (38% indulgence score).

This study had provided relatedness among these six variables and the six cultural dimensions by Hofstede, based on the meaning of each variable and each of these cultural dimensions. As a result, it was found that four dimensions to be particularly relevant: individualism, power distance, long-term orientation, and indulgence. The relationship between each variable and cultural dimension was explained as follows:

1. GTL and individualism: The relatively high GTL in Indonesian SMEs was consistent with the low level of individualism in Indonesian society. GTL encouraged collaborative efforts to achieve environmental goals, considers environmental beliefs of project members, stimulates collective thinking about green ideas, and fosters a sense of collectivity.

2. GHRMPs and power distance: The relatively high GHRMPs in Indonesian SMEs aligned with the high-power distance in Indonesian society. These practices determined EGB and EJS through formalities in setting goals, providing training, conducting performance appraisals, offering rewards and compensation, and promotions.

3. EGB and long-term orientation: The relatively high EGB in Indonesian SMEs aligned with the high long-term orientation of Indonesian society. This consistency was evident in the acceptance of green practices among SME employees, including the use of green printing, materials, lighting, and sustainability programs.

4. ETA and long-term orientation: The relatively high ETA aligned with the high long-term orientation of Indonesian society. This consistency was reflected in SME employees' acceptance of new technology as a long-term investment.

5. EJS and indulgence: The relatively high EJS was inconsistent with the low indulgence of Indonesian society. While job satisfaction was quite high, indicating that employees were not cynical or pessimistic, the rate of indulgence remains low among the Indonesian population.

6. EP and indulgence: The relatively high EP was inconsistent with low indulgence in Indonesian society. The overall high-quality performance at work, productivity, and competition among SME employees demonstrated that they were not cynical or pessimistic, despite the low level of indulgence within the Indonesian culture.

Third, based on model fit testing, this model could be considered reasonably fit based on the baseline comparison, which encompasses normed fit index (NFI), relative fit index (RFI), incremental fit index (IFI), Tucker Lewis index (TLI), comparative fit index (CFI), and root mean square error of approximation (RMSEA). This model could be considered reasonably fit based on the baseline comparison, which encompassed NFI, IFI, TLI, CFI, and RMSEA. In first analysis, all items for the GTL, GHRMPs, and EGB variables were considered valid, further manual calculations using Excel revealed that the composite reliability (CR) and average variance extracted (AVE) values for the three variables were satisfactory, with CR values above 0.7 and AVE values above 0.5, confirming the reliability of all items or parameters for each variable. In the second analysis, all items for GTL, GHRMPs, EJS, ETA, and EP variables were considered valid, except for the fourth item of EP. Manual calculations using Excel indicated that the CR and AVE values for these three variables were satisfactory, with composite reliability values above 0.7 and average variance extracted values above 0.5. Therefore, all items or parameters of each variable were found to be reliable, except for the last item from EP. Consequently, item Y2.4 was excluded from further analysis, and a new analysis process, including CMB, model fit, and CFA, was conducted. Consequently, there was no CMB found in the data collected for hypothesis 2 after omitting item Y2.4, as the cumulative

percentage value remained well below 50 percent. The collected data can be confidently used for subsequent analyses. Then, following the omission of item Y2.4 from the model, the CMIN/DF value remained almost unchanged, at 4.352, still exceeding the threshold of 2. The GFI value was 0.879, and the RFI value was 0.895, both falling below the recommended threshold of 0.9. However, NFI, TLI, and CFI values all exceeded 0.9, and the RMSEA value remained below 0.8. Therefore, this model can still be considered reasonably fit based on the baseline comparison, which encompasses NFI, TLI, CFI, and RMSEA. Consequently, all items for GTL, GHRMPs, EJS, ETA, and EP variables were considered valid. Further manual calculations using Excel confirmed that the CR and AVE values for these three variables were satisfactory, with CR values above 0.7 and AVE values above 0.5. Therefore, all items or parameters of each variable were found to be reliable, except for the last item from EP.

Fourth, based on hypothesis analysis, statistically, there was no significant positive relationship between GTL and EP. Therefore, hypothesis 1a was rejected. On the other hand, the relationship between GHRMPs and EGB exhibited a positive, critical ratio (C.R) value greater than 1.96, specifically 3.477, with a probability value of 0.000 or less than 0.05. Hence, both variables were statistically significantly positively related, leading to the acceptance of hypothesis 1b.

First, in Table 1 reveals that the relationship between GTL and EGB had a negative C.R value and a probability value greater than 0.05. Statistically, there was no significant positive relationship between the two. Therefore, hypothesis 1a was rejected. On the other hand, the relationship between GHRMPs and EGB exhibited a positive C.R value greater than 1.96, specifically 3.477, with a probability value of 0.000 or

less than 0.05. Hence, both variables were statistically significantly positively related, leading to the acceptance of hypothesis 1b.

Table 1. Regression weights of hypothesis 1

Test	Esti-mate	Standard error	Critical ratio	Probability
a. GTL and EGB	0.013	0.043	-0.315	0.753
b. GHRMPs and EGB	0.174	0.050	3.477	0.000

Source: Author's own research

In Tabel 2, the relationship between GTL and EP displayed a negative C.R value of -1.638 and a probability of 0.101, indicating no significant positive relationship between the two. Consequently, hypothesis 2a was rejected. Second, the relationship between GTL and EJS showed a negative C.R value of -1.853 and a probability of 0.064, signifying no significant positive relationship. This led to the rejection of hypotheses 2b and 2e. Third, the interaction between GTL and ETA (INTER1) and EJS revealed a negative C.R value of -2.624 and a probability of 0.009, again suggesting no significant positive relationship, resulting in the rejection of hypothesis 2c. Fourth, the relationship between EJS and EP demonstrated a C.R value of 20.376 and a probability of 0.000, indicating a significant positive relationship and the acceptance of hypothesis 2d. Fifth, the relationship between GHRMPs and EP displayed a negative C.R value of -1.680 and a probability of 0.093, signifying no significant positive relationship, leading to the rejection of hypothesis 2f. Sixth, the relationship between GHRMPs and EJS showed a C.R value of 6.785 and a probability of 0.000, indicating a significant positive relationship and the acceptance of hypothesis 2g. As this result aligned with hypothesis 2d,

26

hypothesis 2i was also accepted. Seventh, the interaction between GHRMPs and ETA (INTER 2) and EJS had a C.R value of 0.639 and a probability of 0.523, indicating no significant positive relationship and leading to the rejection of hypothesis 2h. Eighth, the relationship between ETA and EJS displayed a C.R value of 4.987 and a probability of 0.000, indicating a significant positive relationship. However, ETA did not moderate the positive relationship between GTL and EJS, and GHRMPs and EJS.

Table 2. Regression weights of hypothesis 2

Test	Esti-mate	Standard error	Critical ratio	Pro-bability
a. GTL and EP	-0.062	0.038	-1.638	0.101
b. GTL and EJS	-0.103	0.055	-1.853	0.064
c. INTER1 and EJS	-0.114	0.044	-2.624	0.009
d. EJS and EP	0.685	0.034	20.376	0.000
e. GHRMPs and EP	-0.060	0.036	-1.680	0.093
f. GHRMPs and EJS	0,339	0.050	6.785	0.000
g. INTER2 and EJS	0,030	0.047	0.639	0.523
h. ETA and EJS	0.311	0.062	4.987	0.000

Source: Author's own research

In Table 3, it is evident that out of the 11 hypotheses tested in this study, only 4 hypotheses have been accepted. Among the two independent variables, GTL and GHRMPs, only GHRMPs have emerged as predictors for EJS. ETA does not act as a mediating factor in the relationships between GTL and EJS, as well as between GHRMPs and EJS. Conversely, EJS serves as a mediator in the relationship between GHRMPs and EP. This mediation role is complete and remains unaffected by any direct relationship between GHRMPs and EP.

Table 3 reveals that the relationship value between GTL and EP is 0.014, while the relationship value between GHRMPs and EGB is 0.159. Both of these values are very weak, measuring below 0.3.

Table 3. Standardized direct effects of hypothesis 1

	GTL	GHRMPs
EP	0.014	0.159

Source: Author's own
research

Table 4 provides the following relationship values:

1. The relationship value between GHRMPs and EJS is 0.281.
2. The relationship value between the interaction variables of GHRMPs and ETA (INTER2) and EJS is 0.026.
3. The relationship value between ETA and EJS is 0.215, with a (C.R) of 4.987 and a probability of 0.000.
4. The relationship value between EJS and EP is 0.774. Out of these four values, only the relationship value between EJS and EP is strong, measuring above 0.7. The other three are very weak, measuring below 0.3.

Table 5 show that the value of the indirect relationship between GHRMPs and EP, which is mediated by EJS, is 0.218. This value is very weak, measuring below 0.3. Table 6 displays that the total effect value between GHRMPs and EP is 0.161. This value is very weak, measuring below 0.3.

Table 4. Standardized direct effects of hypothesis 2

	INTER 2	ETA	GHRM Ps	INTER 1	GTL	EJS	EP
EJS	0.026	0.215	0.281	-0.106	-0.079	0.000	0.000
EP	0.000	0.000	-0.056	0.000	-0.054	0.774	0.000

Source: Author's own research

Table 5. Standardized indirect effect of hypothesis 2

	INTER 2	ETA	GHRM Ps	INTER 1	GTL	I	EP
I	0.000	0.000	0.000	-0.000	-0.000	0.000	0.000
EP	0.020	0.167	0.218	-0.082	-0.061	0.000	0.000

Source: Author's own research

Table 6. Standardized total effect of hypothesis 2

	INTER 2	ETA	GHRM Ps	INTER 1	GTL	I	EP
I	0.026	0.215	0.281	-0.106	-0.079	0.000	0.000
EP	0.020	0.167	0.161	-0.082	-0.115	0.774	0.000

Source: Author's own research

The relationship value between GTL and EP is 0.014, while the relationship value between GHRMPs and EGB is 0.159. Both of these values are very weak, measuring below 0.3. The relationship value between GHRMPs and EJS is 0.281. The relationship value between the interaction variables of GHRMPs and ETA (INTER2) and EJS is 0.026. The relationship value between ETA and EJS is 0.215, with a Critical Ratio (CR) of 4.987 and a probability of 0.000. The relationship value between EJS and EP is 0.774. Out of these four values, only the

relationship value between EJS and EP is strong, measuring above 0.7. The other three are very weak, measuring below 0.3. The value of the indirect relationship between GHRMPs and EP, which is mediated by EJS, is 0.218. This value is very weak, measuring below 0.3. The total effect value between GHRMPs and EP is 0.161. This value is very weak, measuring below 0.3.

As shown in Table 7, Figure 3, and Figure 4, out of the 11 hypotheses tested in this study, only 4 hypotheses have been accepted. Among the two independent variables, GTL and GHRMPs, only GHRMPs have emerged as predictors for EJS. ETA does not act as a mediating factor in the relationships between GTL and EJS, as well as between GHRMPs and EJS. Conversely, EJS serves as a mediator in the relationship between GHRMPs and EP. This mediation role is complete and remains unaffected by any direct relationship between GHRMPs and EP.

Table 7. Decision for hypotheses

Hypothesis	Test	Related variables	Decision	Theses
1	a	GTL and EGB	Rejected	An increase in GTL does not lead to an increase in EGB.
	b	GHRMPs and EGB	Accepted	An increase in GHRMPs results in an increase in EGB.
2	a	GTL and EP	Rejected	An increase in GTL does not result in an increase in EP.

	b	GTL and EJS	Rejected	An increase in GTL does not lead to an increase in EJS.
3	a	EJS and EP	Accepted	An increase in EJS lead to an increase in EP.
4	a	GHRMPs and EP	Rejected	An increase in GHRMPs does not result in an increase in EP.
	b	GHRMPs and EJS	Accepted	An increase in GHRMPs lead to an increase in EJS.
5	a	GTL, ETA, EJS	Rejected	An increase in GTL does not lead to an increase in EJS, which is moderated by an increase in ETA.
	b	GHRMPs, ETA, EJS	Rejected	An increase in GHRMPs does not lead to an increase in EJS, which is moderated by an increase in ETA.
6	a	GTL, EJS, EP	Rejected	An increase in GTL does not lead to an increase in EP, which is mediated by an increase in EJS.
	b	GHRMPs, EJS, EP	Accepted	An increase in GHRMPs

				results in an increase in EP, which was mediated by an increase in EJS.

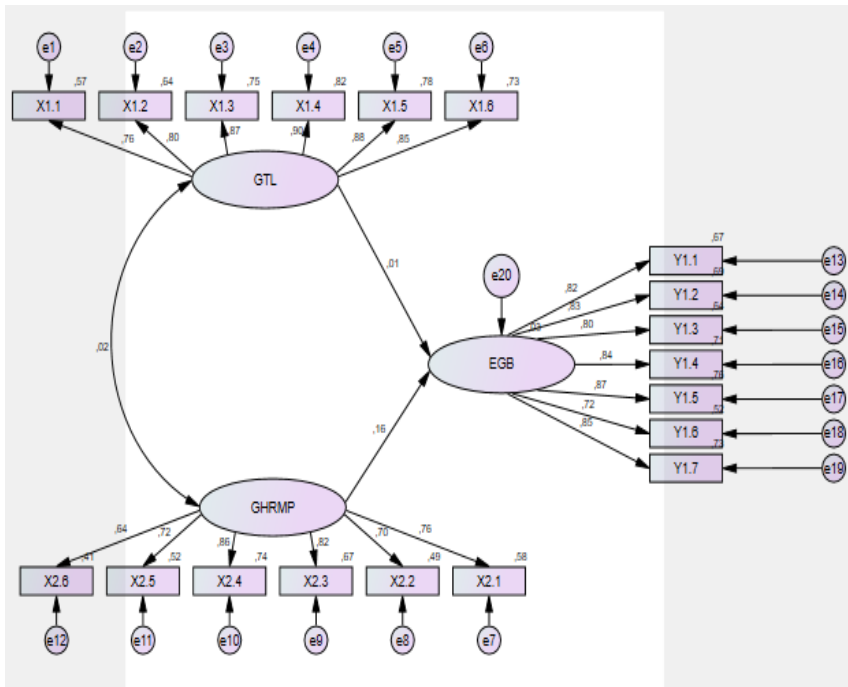Source: Author's own research

Figure 3. Output of analysis of moment structure of hypothesis 1
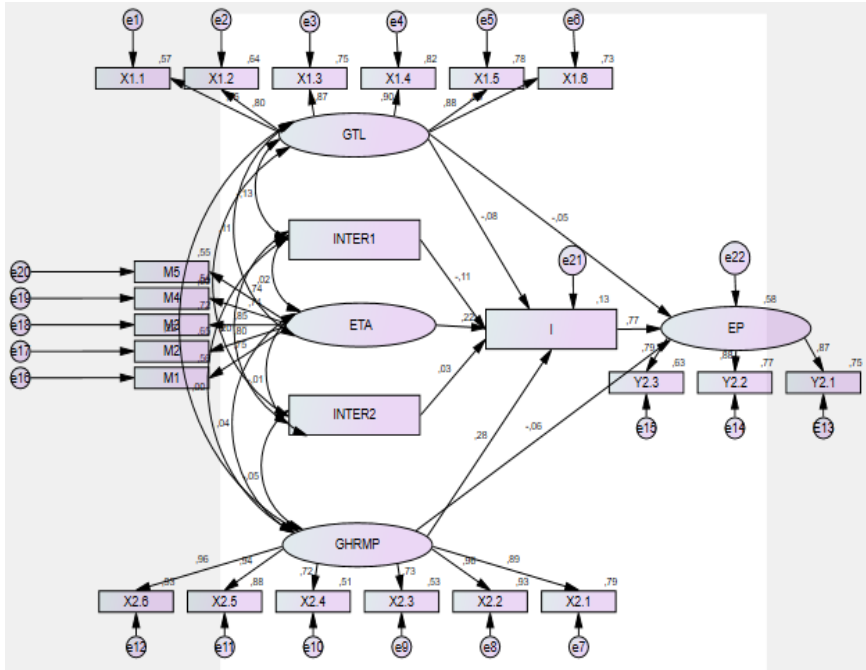
Source: Author's own research

Figure 4. Output of analysis of moment structure of hypothesis 2

Source: Author's own research

3.3. Discussion

The shift from Industry 4.0 to Industry 5.0 signifies a leap in industrial evolution, emphasizing the integration of technology with human expertise. Industry 5.0 prioritizes collaboration between humans and technology, focusing on efficiency, flexibility, and worker well-being. Unlike Industry 4.0's concerns about artificial intelligence replacing humans, Industry 5.0 views technology as a tool for collaboration. Key components like big data, artificial intelligence, and robotics continue to play a crucial role, but the emphasis is on holistic production systems that adapt to market demand and optimize resource use. This evolution reflects

a societal shift towards prioritizing social values and worker welfare in addition to economic considerations. The transition underscores the importance of technological adaptation in the contemporary world of work, impacting various aspects of human resource management processes. Future research, incorporating cultural dimensions, is essential for a comprehensive understanding of leadership styles and their alignment with sustainability.

To commence this discussion, it is essential to highlight the consistency of the results in this study with findings from previous research, particularly with regard to the items employed. This study integrated multiple items from various sources to shape this research constructs. Specifically, it adopted multi-items from GTL (X1.1 to X1.6), GHRMPs (X2.1 to X2.6), and ETA (M1 to M5) from previous studies. In addition, a single item from EJS (I) was incorporated into this study. Regarding EP, it adapted three out of four multi-items (Y2.1, Y2.2, Y2.3), as these adequately represented the construct, with Y2.3 and Y2.4 being used for the same indicator, specifically the comparison aspect. In this study, the concepts were operationalized as follows:

1. Green plans, vision, goals, beliefs, and ideas implemented by SME leaders were indicative of GTL.
2. Green goals, training, performance appraisal, rewards, compensation, and promotions implemented by human resource managers of SMEs were reflective of GHRMPs.
3. Green practices, encompassing green printing, use of green materials, green utensils, green lighting, green programs, and green suggestions implemented by SME employees, represented EGB within SMEs.

4. The adoption of new technology by SME employees was used as a measure of their job satisfaction.

5. Working quality, productivity, and comparisons made by SME employees were employed to gauge their work performance.

As a result, this study aligned with previous research, such as the work of Chen & Chang (2013) on GTL, Dumont et al. (2017) on GHRMPs, Robertson & Barling (2013) on EGB, Rubel et al. (2016) on ETA, and Yousef (2000) on EJS and EP. This study conducted a survey on GTL in various SMEs in South Sumatra, Indonesia, with employees serving as respondents. In a similar vein, Chen & Chang (2013) conducted a survey on GTL, focusing on SMEs in Taiwan's electronics industry. However, they gathered input from chief executive officers and managers. As a result, GTL measures, encompassing elements like green plans, vision, goals, beliefs, and ideas implemented by SME leaders, can be gleaned from both leaders and employees' perspectives.

Dumont et al. (2017) collected data for their study on GHRMPs from a Chinese subsidiary of an Australian multinational enterprise involved in paper packaging production. Their data sources included the general manager, the human resource manager, officers, employees, and their direct supervisors. Consequently, GHRMPs measures, including green goals, green training, performance appraisal, rewards, compensation, and promotions implemented by human resource managers, can be sourced from the perspectives of both human resource managers and employees.

Robertson & Barling (2013) tested the measurement model of EGB using a sample of undergraduate students who had prior full-time work experience and reported to a supervisor. This implies that EGB measures, including green printing, use of green items, materials, utensils, lighting,

programs, and employee suggestions, could be applied to working students and employees alike.

Rubel et al. (2016) tested the measurement model of (ETA) with data gathered from frontline employees in private commercial banks. Thus, the adaptation to new technologies implemented by employees could be applied to both large corporations and SMEs.

Yousef (2000) tested measures related to EJS and EP using data from individuals employed in major service and government organizations. Therefore, the EJS and EP measures, encompassing aspects like current job satisfaction and working quality, productivity, and comparisons made by employees, could be applied to a range of organizations, including large private and government-owned companies, as well as SMEs. Consequently, research on GTL, GHRMPs, ETA, EJS, and EP, along with their measures used in this study, could be generalized to various types and sizes of organizations.

Secondly, the results of the quantitative descriptive analysis of GTL and GHRMPs aligned with the qualitative insights from Hofstede's cultural dimensions, specifically focusing on how the dimensions of Indonesian culture correspond to these concepts. This alignment indicated consistency between these two analyses. The high level of power distance in Indonesia was incongruent with GTL but was harmonious with GHRMPs. The low level of individualism in Indonesia was consistent with both GTL and GHRMPs. The low level of masculinity in Indonesia was congruent with GTL but not with GHRMPs. The low uncertainty avoidance in Indonesia did not correspond to GTL but was in alignment with GHRMPs. The high long-term orientation in Indonesia was present in both GTL, which needed change, and GHRMPs. A low Indulgence

score was not characteristic of GTL, which promoted togetherness, and was similarly not associated with GHRMPs. Thus, there were three dimensions in Hofstede's cultural dimension theory—power distance, uncertainty avoidance, and long-term orientation—that were compatible with GHRMPs. Meanwhile, two dimensions align with GTL—individualism and long-term orientation. There was one dimension, indulgence, which did not correspond with either GTL or GHRMPs.

Continuing this discussion, it is important to examine the consistency of the results of this study with previous research regarding the collaborative role of GTL and GHRMPs in determining EGB. Omarova & Jo (2022) explored the relationship between GTL and EGB and the moderating role of GHRMPs in this relationship, utilizing a sample of employees from both public and private organizations. Their findings confirmed that GTL had a positive impact on EGB. They employed different items for GTL and the same parameters for EGB. However, their study indicated that GHRMPs did not significantly enhance the effect of GTL on EGB. Consequently, the results of this study revealed a lack of joint influence between GTL and GHRMPs in determining EGB, as well as a weak relationship between GHRMPs and EGB. In contrast to the findings of Omarova & Jo (2022), this study suggested that GHRMPs could act as an independent variable influencing EGB. Naturally, further research was needed to explore the relationships between GTL, GHRMPs, and EGB in a broader context, including both SMEs and large privately and publicly owned companies.

Previous studies had explored the relationship between GTL and EGB. Kura (2016) found that environmentally specific transformational leadership was associated with green workplace behavior among public

sector employees. However, the results of this study did not align with Kura's findings, as GTL was not positively related to EGB. This discrepancy may be attributed to the use of different items for GTL, specifically the seven-item transformational leadership measure, suggesting that the inconsistency may not be fundamental.

Wang et al. (2018) investigated GTL's influence on EGB in large manufacturing companies, employing the same items for GTL and EGB as used in this study. In contrast to their study, the results of this research did not support the positive relationship between GTL and EGB. This represented a fundamental inconsistency with the outcomes of Wang et al. (2018) research.

Draj & Saed (2023) explored the relationship between transformational leadership and job satisfaction, focusing on Jordanian pharmaceutical company employees. Their study did not delve into the green aspects of transformational leadership and employed a different measure of EGB. Consequently, the results of this study were not fundamentally inconsistent with the findings of their research.

Furthermore, Wang et al. (2018) also highlighted GTL's impact on EGB in large manufacturing companies, using the same items for GTL and EGB. In contrast to their research, this study's results did not support the positive relationship between GTL and EGB. This represented a fundamental inconsistency.

Ningsih et al. (2023) examined the impact of transformational leadership on employee satisfaction and EP within the insurance and pension fund service cluster of state-owned enterprises. Their study did not address the green aspects of leadership, nor did they use the same

measures for EJS. Thus, the results of this study were not fundamentally inconsistent with Ningsih et al. (2023) findings.

Thirdly, the role of ETA in influencing the relationship between GTL, GHRMPs, and EJS in this study could be compared with the findings of previous research. It is crucial for SMEs to embrace digitalization initiatives to maintain competitiveness and sustainability (Das et al., 2020). ETA remained a predictor of EJS. The relationship between technology, organization, and the environment has been examined through the lens of structuration, and its impact on institutional structures has been explored (Haggerty & Golden, 2002). In contemporary times, the use of social media has become an integral part of job satisfaction (Zhang et al., 2019). However, this study revealed that ETA did not appropriately moderate the relationship between GTL and EJS, nor in the case of the relationship between GHRMPs and EJS. Consequently, the results of this study were not fundamentally inconsistent with the findings of these previous studies. ETA remained associated with EJS, although the environmental aspects of transformational leadership and human resource management practices were not supported by ETA in determining EJS.

Fourthly, regarding GTL and EJS, Bernato et al. (2020) highlighted the positive effect of transformational leadership on job satisfaction. It was worth noting that they employed different parameters for both constructs compared to this study. As a result, the results of this study were not fundamentally consistent with their research. In the context of GHRMPs and EJS, several previous studies (Cherif, 2019; Chowdhury et al., 2019; Freire & Pieta, 2022) had explored this relationship. Cherif (2019) found a positive correlation between human resource management and EJS using different items than those in this study. Hence, the results of this study

were not fundamentally consistent with Cherif's research (2019). Chowdhury et al. (2019) demonstrated that GHRMPs had a substantial and significant influence on EJS within the banking sector in Bangladesh, using different parameters for both constructs. Therefore, the results of this study did not fundamentally align with their research. Meanwhile, Freire & Pieta (2022) established a relationship between GHRMPs and EJS using different items compared to this study. While the findings were consistent, they were not fundamentally so.

Based on the results of this study, EJS proved to be an appropriate mediator in the relationship between GHRMPs and EP. However, it was not found to be a suitable mediator in the relationship between GTL and EP. This implied that GHRMPs, when implemented by human resource managers, could enhance EP, but only when mediated by EJS. Roberts & David (2020) have emphasized the significance of job satisfaction as a predictor of performance, supporting the notion that job satisfaction played a crucial role in the workplace. Similarly, Shaju & Subhashini (2017) had explored the connection between job satisfaction and EP. It was important to note that the measures they used for job satisfaction and EP differed from those in this study, and they did not focus on SMEs. Nevertheless, the results of this study aligned with the findings of Roberts & David (2020) and Shaju & Subhashini (2017) to some extent, albeit not in a fundamental way. Amelia et al. (2022) conducted their study at a hospital and found that job satisfaction had a positive but not statistically significant effect on EP. The results of this study diverged from the findings of their research, where EJS significantly and positively determined EP. In a similar vein, Lai et al. (2020) explored the impact of transformational leadership on followers' performance and their

willingness to provide assistance, focusing on leaders and members within the context of hospitals. However, the results of this study did not align with the outcomes of their research, in which GTL significantly and positively determined EP.

Eliyana & Muzakki (2019) explored the relationship between transformational leadership, job satisfaction, and EP. Their study involved data from 30 middle-level leaders of varying organizational sizes to analyze these factors. However, the results of this study did not align with their findings regarding the relationship between transformational leadership and job satisfaction. Nonetheless, the results of this study were consistent with their research in terms of the relationship between EJS and EP. Hussain & Khayat (2021) investigated the relationship between transformational leadership and job satisfaction using data collected from hospital staff and leaders. It was worth noting that they utilized different measures compared to the ones used in this study. Consequently, the results of this study did not fundamentally align with their findings, but there was a non-fundamental inconsistency between the two. Kurdi et al. (2021) discovered that human resource management practices influence job satisfaction. Their study gathered data from a broad population, encompassing top management employees, ministry employees, and all departments both inside and outside the ministry's head office, including training institutes, educational zones, educational offices, schools, and kindergartens. Consequently, the results of this study were not fundamentally in line with their findings. Noor et al. (2022) delved into the effects of human resource management practices on job satisfaction among academics in higher education, employing specific measurements

for GHRMPs and job satisfaction. Their research provided valuable insights into this relationship.

On the other hand, Alsafadi & Altahat (2021) investigated the impact of human resource management practices on EP using different measurement approaches. Their study focused on employees in commercial banks but did not incorporate a green approach to the variable. Consequently, the results of this study did not align with their findings. Khan et al. (2019) explored the relationship between job satisfaction and EP, highlighting job satisfaction as a significant mediator for the relationship between human resource practices and EP. Their study included data from academic staff members in public sector universities. However, they employed different measures for human resource management, EJS, and EP, and did not incorporate a green approach to human resource management. Therefore, this study aligned with Noor et al. (2022) findings but did not support the conclusions of Alsafadi & Altahat (2021) and Khan et al. (2019).

3.4. Theoretical implication

This study delves into the green aspects of leadership and human resource management practices in both large companies and SMEs. It emphasizes the varying results that different measures can yield when investigating GTL, GHRMPs, and EGB. Notably, EJS seems more influenced by human resource managers, while EP is not significantly affected by the green activities of these leaders.

The study underscores the crucial role of a Sense of Urgency in driving sustainability and technology changes in SMEs. GHRMPs and

EGB contribute to sustainability, while technology adoption is facilitated by ETA. Recognizing the genuine Sense of Urgency in embracing these changes leads to enhanced EJS and EP.

Sustainable Development Theory is highlighted, emphasizing the role of SMEs in achieving the United Nations' 17 Sustainable Development Goals by 2030. SMEs contribute significantly to these sustainability goals. While the study does not establish the moderating role of ETA, it emphasizes the influence of the Digital Business Ecosystem theory in shaping EJS. SME employees, with the capacity to foster collaborative environments through ETA, enable global competitiveness. This technology facilitates regional competitiveness, benefiting all stakeholders.

The Theory of Reasoned Action is also emphasized, revealing that SME EP is determined by their pre-existing attitudes, primarily job satisfaction. Motivated by job satisfaction, they act as rational actors, contributing to their perceived behavioral control or a sense of self-efficacy.

3.5. Practical implication

The study emphasizes the significant role of human resource managers in promoting green activities within SMEs compared to SME leaders. EJS proves more critical than the green initiatives of leaders and managers, suggesting that GTL may not be a determining factor in green behavior, job satisfaction, and performance.

In the post-Covid-19 era, sustainability becomes crucial for the global economy, with environmental issues taking center stage. SMEs must adapt

to climate-induced impacts and evolving trends in consumption, production, and policy. While adopting green recovery measures is crucial for SMEs, they may struggle to understand sustainability as a driving force for growth. The findings suggest a considerable gap in the integration of green concepts and technology adoption among SMEs in South Sumatra. The challenges faced by these SMEs, such as negative growth, incomplete implementation of green innovation, and reliance on traditional technology, point towards a need for comprehensive strategies to bridge the sustainability-technology gap. It is noteworthy that the lack of employee education on the benefits of going green and embracing technology indicates a potential avenue for improvement. A targeted approach to raising awareness and providing training could contribute significantly to enhancing sustainability practices and technological adaptation within these SMEs. The categorization of SMEs into different sustainability behaviors, ranging from resistant to sustainability-rooted, offers a nuanced understanding of their varied approaches. Tailoring interventions based on these categorizations could be a strategic move to address the specific challenges faced by each group. Overall, the study highlights the intricate relationship between sustainability, technology adoption, and the barriers faced by SMEs. Addressing these challenges could not only contribute to environmental conservation but also enhance the overall competitiveness and resilience of SMEs in the region.

IV. CONCLUSIONS

4.1. Closure

As the importance of sustainability and green practices for SMEs increased in the pre-Covid-19 era, leaders, human resource managers, and employees within these SMEs have embraced eco-friendly approaches following the Covid-19 crisis. Notably, GHRMPs played a positive role in influencing EGB, However, it is worth mentioning that while leaders have embraced and implemented green initiatives, they have not significantly impacted EGB in the post-Covid era.

While the significance of digitalization had been recognized prior to the Covid-19 era and became essential during the pandemic, SME employees have actively embraced technology following the crisis. However, it is noteworthy that this digital adaptation by employees does not significantly impact the relationship between GTL and EGB, or the relationship between GHRMPs and EGB. Nevertheless, the digital adaptation does influence their job satisfaction.

This objective of this study is accomplished through four types of findings: a direct relationship between GHRMPs and EGB, a direct relationship between GHRMPs and EJS, a direct relationship between EJS and EP, and an indirect relationship between GHRMPs and EP mediated by EJS. The study presents five hypotheses: a direct relationship between GHRMPs and EGB, a direct relationship between ETA and EJS, a direct relationship between GHRMPs and EJS, a direct relationship between EJS and EP, an indirect relationship between GHRMPs and EP mediated by EJS. This study provides five key insights:

45

1. Going green become a competitive value for SMEs in the pre-Covid-19 era. After the crisis, leaders, human resource managers, and employees in SMEs have adopted environmentally friendly practices in their work.

2. The green initiatives and practices implemented by SME leaders and managers are not significantly influencing EGB even after they have adopted these practices.

3. The importance of digitalization has been evident since before the Covid-19 era and became essential during the crisis. SME employees have adapted to these technological changes after the crisis.

4. Despite the green initiatives by SME leaders and managers, they are not effectively leveraging ETA to support EJS.

5. When SME employees embrace both green practices and digitalization, they experience higher levels of job satisfaction in the post Covid-19 era.

The six questions posed in this study did not yield uniform responses, as some were supported, some were partially supported, and one was not supported.

1. Question 1 received support. Therefore, SME leaders, human resource managers, and employees have embraced environmentally friendly practices after the Covid-19 crisis, as going green became a competitive necessity for SMEs in the pre-Covid-19 era.

2. Question 2 was partially supported. Consequently, the adoption of green practices by SME leaders and human resource managers indicates some level of support for EGB in the pre-Covid-19 era.

46

3. Question 3 found support. As a result, given the significance of digitalization before and during the Covid-19 era, SME employees have adapted to technology after the Covid-19 crisis.

4. Question 4 was not supported. Hence, green initiatives undertaken by SME leaders and managers do not appear to lead to interactions with ETA to support EJS in the pre-Covid-19 era.

5. Question 5 received support. Consequently, the adoption of green and digital practices has resulted in increased job satisfaction among SME employees after the Covid-19 crisis.

6. The final question found support. The adoption of green and digital practices demonstrates a positive relationship with EJS and EP after the Covid-19 crisis.

Objective 1 is partially supported as it established a direct link between GHRMPs and EGB. Objectives 2 and 3 are not supported. Objective 4 is partially supported as it confirmed indirect relationships between GHRMPs and EP, mediated by EJS. Trough positive responses and the achievement of these objectives, this study effectively addressed prevailing research gaps. In particular, it bridged the gap between environmental and psychological perspectives by integrating GHRMPs as an independent variable, EJS as a mediating variable, and EP as the dependent variable. Additionally, it highlighted the potential for ETA to function as an independent variable influencing EJS.

4.2. Recommendations

It is recommended that human resource managers in SMEs concentrate on sustainability and digitalization strategies in the post-

Covid-19 era. They should formulate clear objectives, offer training programs, ensure EP, establish reward and compensation structures, and provide opportunities for career advancement. This approach is intended to stimulate environmentally responsible work behavior, boost job satisfaction, and ultimately enhance overall EP. Furthermore, it is advisable to continue promoting digitization in SME business operations, as this factor has a significant impact on EJS, and in turn, leads to improved overall performance. Therefore, prospective human resource managers in SMEs should incorporate both green and digitalization strategies into their human resource management practices to align with the evolving demands of the post-Covid-19 era.

4.3. Limitations

Methodologically, this study faced limitations in terms of the comprehensiveness of available data for Indonesia. the study did not specifically investigate these four types individually. It relied on data collected in three waves, without access to longitudinal data spanning a more extended period, such as quarterly, semesterly, or annually. Consequently, it could not present variations in the results of data analysis between waves 1, 2, and 3, which constitutes a limitation. Fourth, the study solely gathered the perspectives of SME employees concerning all the variables under investigation.

In summary, this study provided confirmation for only four out of the 11 tested hypotheses. Three distinct limitations were evident in the findings. Firstly, the moderation model did not receive empirical support. Secondly, the combined impact of the two independent variables under

investigation (GTL and GHRMPs) was not substantiated. Thirdly, it appeared that GTL did not play a significant role in influencing EGB, EJS, and EP. Therefore, it is imperative to undertake further research to establish and validate the relationship between GTL and the mediating and dependent variables.

V. NEW SCIENTIFIC RESULTS

This study has revealed several newly emerged scientific discoveries:

1. human resource managers in SMEs play a more prominent role compared to leaders in shaping employee behavior. GHRMPs have the capacity to define EP through EJS, whereas GTL does not have the same impact.

2. A direct correlation can be identified between the ecological and psychological aspects in the study of human resource management and organizational behavior. This link indicates that conversations surrounding these two viewpoints have pivoted toward sustainability in the aftermath of the Covid-19 crisis.

3. In the context of SMEs, ETA does not function as a moderating variable affecting EJS. Instead, ETA functions as a dependent variable that influences EJS.

4. It is affirmed that EJS and EP can be studied in both large companies and SMEs in the post-Covid-19 era.

5. The examination of GTL, GHRMPs, EGB, ETA, EJS, and EP is closely intertwined with the national culture of Indonesia. In SMEs, GTL aligns with the collectivist cultural values in Indonesia, while GHRMPs in SMEs align with the characteristics of a high-power distance culture. EGB and ETA in SMEs correspond to the long-term orientation inherent in Indonesian culture, and EJS and EP are linked to the culture of indulgence that prevails in Indonesia.

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LIST OF AUTHOR'S PUBLICATIONS

This section presents the author's publications in academic journals and conferences. Additionally, the last subsection details peer-review activities in academic journals that the author has completed. These publications and peer-reviewed activities can be accessed through the author's Scopus ID (57223928414) at https://www.scopus.com/authid/detail.uri?authorId=57223928414, Orcid ID (0000-0002-0874-1175) at https://orcid.org/0000-0002-0874-1175, and the author's Google Scholar profile at https://scholar.google.com/citations?user=qwhQAagAAAAJ&hl=en.

1. Publication in foreign language

    Scientific journal article in English:

    1. Cahyadi, A. (2015). The causal relationship of business innovation training and development, and job satisfaction of SME manufacturing in palembang. *Journal of economics, business, & accountancy ventura*, 18, 1. http://dx.doi.org/10.14414/jebav.v18i1.384

    2. Cahyadi, A., Magda, R. (2021). Digital leadership in the economies of the g20 countries: a secondary research. *Economies*, 9, 32. https://doi.org/doi:10.3390/economies9010032 (Scopus Q2)

    3. Cahyadi, A., Natalisa, D., Poór, J., Perizade, B., Szabó, K. (2022). Predicting the relationship between green transformational leadership, green human resource management practices, and

employees' green behavior. *Administrative Sciences*, 13, 5. https://doi.org/10.3390/admsci13010005 (Scopus Q2)

4. Cahyadi, A., Poór, J., Szabó, K. (2022). Pursuing consultant performance: the roles of sustainable leadership styles, sustainable human resource management practices, and consultant job satisfaction. *Sustainability*, 14, 3967. https://doi.org/10.3390/su14073967 (Scopus Q1)

5. Cahyadi, A., Taufiq, M., Hágen, I., Siraj, M. N., Santati, P., Poór, J., Szabó, K. (2022). Leadership styles, high-involvement human resource management practices, and individual employee performance in small and medium enterprises in the digital era. *Economies*, 10, 162. https://doi.org/10.3390/economies10070162 (Scopus Q2)

6. Siraj, N., Hágen, I., Cahyadi, A., Tangl, A., Desalegn, G. (2022). Linking leadership to employees performance: the mediating role of human resource management. *Economies*, 10, 111. https://doi.org/10.3390/economies10050111 (Scopus Q2)

2. Publication in Indonesian language

Scientific journal article in Indonesian:

1. Ariska, Y., Zunaidah, Cahyadi, A. (2015). The effect of training & development and motivation on job satisfaction in micro and small-sized enterprises managers in plaju ulu village. *Jembatan: jurnal ilmiah manajemen*, 12, 1, 23-32.

2. Damayanti, R., Hanafi, A., Cahyadi, A. (2018). Pengaruh kepuasan kerja terhadap kinerja karyawan (studi kasus karyawan non medis

rs islam siti khadijah palembang). *Jembatan - Jurnal Ilmiah Manajemen Bisnis dan Terapan*, 15, 2. https://doi.org/10.29259/jmbt.v15i2.6655

3. Dewi, C., Zunaidah, Cahyadi, A. (2019). Pengaruh lingkungan kerja fisik terhadap disiplin kerja guru formal madrasah tsanawyah bina bangsa di pondok pesantren al-falah desa suka maju kecamatan sungai lilin. *Jembatan - Jurnal Ilmiah Manajemen*, 16, 1. https://doi.org/10.29259/jmbt.v16i1.9258

4. Muliawan, Y., Perizade, B., Cahyadi, A. (2017). Pengaruh keterikatan karyawan (employee engagement) terhadap kinerja karyawan di pt. badja baru palembang. *Jurnal Ilmiah Manajemen Bisnis dan Terapan*, 2. https://doi.org/10.29259/jmbt.v14i2.5293

5. Umrie, R. H. S., Yuliani, Cahyadi, A. (2011). Analisis kebijakan dividen dan kebijakan hutang terhadap nilai perusahaan go publik di indonesia. *Jurnal Manajemen dan Bisnis Sriwijaya*, 9, 17. https://doi.org/10.29259/jmbs.v9i17.7861

6. Siregar, M. I., Cahyadi, A., Igamo, A. M., Nurdiawansyah, M., Saggaf, A. (2022). Analisis kinerja keuangan badan usaha milik negara (bumn) se-kota palembang. *Owner: Riset dan Jurnal Akuntansi*, 6, 3. Doi: 10.33395/owner.v6i3.996

7. Wahyuningsih, G., Hanafi, A., Cahyadi, A. (2016). Pengaruh kompetensi terhadap kinerja pengusaha usaha mikro kecil (umk) batik jambi di wilayah seberang kota jambi. *Jurnal Ilmiah Manajemen Bisnis dan Terapan*, 6, 1. https://doi.org/10.29259/jmbt.v13i1.4020

8. Zen, M. K., Cahyadi, A. (2013). Analisis kepuasan kerja karyawan divisi sdm pt pusri (persero) palembang. *Jembatan - Jurnal Ilmiah Manajemen*, 10, 2. https://doi.org/10.29259/jmbt.v10i2.3290

3. Publication in foreign language

International conference publication:

1. Diah, Y. M., Cahyadi, A. (2020). Improving organizational performance through job satisfaction based on employee empowerment. 5th Sriwijaya Economics, Accounting, and Business Conference (seabc 2019). *Advances in Economics, Business and Management Research*, 142. Doi: 10.2991/aebmr.k.200520.025

2. Hanafi, A., Wahab, Z., Cahyadi, A. (2020). Transactional leadership and transformational leadership, their impacts on job satisfaction: islamic banking in south sumatra. 5th sriwijaya economics, accounting, and business conference (seabc 2019). *Advances in Economics, Business and Management Research*, 142. Doi: 10.2991/aebmr.k.200520.023

3. Cahyadi, A., Hanafi, A., Diah, Y. M. (2020). Organizational learning culture through job satisfaction based on servant leadership and transcendental leadership. 5th sriwijaya economics, accounting, and business conference (seabc 2019). *Advances in Economics, Business and Management Research*, 142. Doi: 10.2991/aebmr.k.200520.024

4. Other research activities

Journal peer review:

2022:

1. 1 article in Administrative Sciences, MDPI (Scopus Q2).

2. 2 articles in Sustainability, MDPI (Scopus Q1).

2023:

1. 5 articles in Administrative Sciences, MDPI (Scopus Q2).

2. 6 articles in Sustainability, MDPI (Scopus Q1).

3. 2 articles in Economies, MDPI (Scopus Q2).

4. 2 articles in International Journal of Environmental Research and Public Health, MDPI (Scopus Q1).

5. 1 article in Journal of Environmental Planning and Management, Taylor & Francis (Scopus Q1).