SBS Journal of Applied Business Research
Volume XIV, Issue 1, February 2026
DOI: https://doi.org/10.70301/JOUR/SBS-JABR/2026/14/1/2

Examining the Impact of Green Talent on Sustainable Corporate Performance in the Telecommunication Companies Operating within Jordan

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Article Information

- **Date of Receival:** 20.08.2025.
- **Date of Acceptance:** 28.10.2025.
- **JEL Classification Codes:** M12, Q56, M14.

Abstract

The primary goals of this study are to analyze how green talent management affects the sustainable corporate performance of telecommunication companies in Jordan and to assess variations in strategy execution based on employees' age, gender, qualifications, experience, and the organization's size. The research instrument used was a questionnaire. Data were analyzed using SPSS version 24, employing one-way ANOVA. The main result indicates that the hypothesized relationship between green talent management (GTM) and sustainable corporate performance (SCP) was found to be positive and meaningful. Therefore, it is concluded that there is a positive and significant relationship between green talent management and corporate sustainability performance. The study's conclusions have essential ramifications for professionals and decision-makers in business who are creating standards for promoting green hard and soft TM in a telecommunications organization. Leaders and practitioners should consider instilling principles intrinsic to "green soft" rather than "green hard" to ensure that skills are sufficiently cultivated and preserved for promoting environmental sustainability in organizations like telecommunication corporations. The importance of green values and competencies among their employees must be fostered, supported, and acknowledged by Jordanian telecommunications companies.

Keywords: *Green Talent Management, Sustainable Corporate Performance, Telecommunication Companies, Jordan.*

1. Introduction

In general, the business case emphasizes that business processes aimed at achieving sustainable development are necessary for an organization's financial growth. This highlights the critical importance of sustainable corporate performance (SCP) in the contemporary business landscape, particularly in light of escalating environmental challenges and competitive pressures (Wentzel et al., 2023; Rodrigues & Franco, 2019). As organizations globally confront the implications of climate change and resource depletion, there is a growing demand for them to adopt sustainable practices. This shift has prompted a reevaluation of traditional business models, leading to the integration of sustainability into core operational strategies (Aiguobarueghian et al., 2024).

Within this context, Green Talent Management (GTM) has emerged as a strategic approach that emphasizes the recruitment, development, and retention of employees who possess the skills and values necessary to drive sustainability initiatives. GTM is essential for organizations aiming to cultivate a workforce capable of supporting environmental sustainability while also enhancing overall performance (Al-Romeedy & Alharethi, 2024). This study focuses on the telecommunication sector in Jordan, which plays a significant role in the nation's economic development and faces unique challenges in implementing sustainable practices (Mousa & Othman, 2020). By examining how GTM influences SCP, the research aims to provide insights that can inform the development of effective sustainability strategies in this industry.

Despite the increasing recognition of SCP as a vital component of business success, the empirical relationship between GTM and SCP remains insufficiently explored, particularly in the context of developing countries like Jordan. Previous studies have predominantly focused on established markets, leaving a gap in understanding how green talent management can effectively contribute to sustainable outcomes in different cultural and economic environments (Bui & Chang, 2018).

In Jordan, the telecommunication sector is characterized by rapid growth and significant competition, necessitating innovative approaches to resource management. However, many organizations in this sector struggle to align their talent management practices with sustainability goals. The lack of tailored research exploring the dynamics of GTM and its impact on SCP in Jordanian telecommunication companies presents a critical challenge. This study aims to address this gap by examining both the green complex and green soft aspects of GTM and their impact on the environmental, economic, and social dimensions of SCP. The research will also consider variations in strategy execution based on employee demographics such as age, gender, qualifications, and experience (Zhou & Velamuri, 2018).

2. Literature review

An efficient and productive workforce is essential to the long-term sustainability of an organization's performance, making it crucial for businesses to continually enhance their human resources. Human resource capital is regarded as the foundation for every organization's growth and accomplishment of sustainable competitive advantage (SCA) (Siegling et al., 2014). The studies by Bamel et al. (2022), Farndale et al. (2020), and Gardas et al. (2019) highlighted that the "war for talent" and how to manage talent remain a challenge for firms globally, in particular given the need for employees who are technologically compliant to help organizations address the "United Nations Global Compact (UNGC)" request for fostering environmental sustainability.

Environmental and climate change skills needs have not been met in underdeveloped nations. Most studies indicate that governments and formal technical and vocational education and training (TVET) institutions have been unsuccessful in addressing these critical skills shortages. Educational programs are dispersed and uneven, and their impact on industry and economic environmental sustainability is modest. Recent research is more bullish in several industries. Pavlova (2015) observed that TVET providers in various Asian agriculture and construction sectors are more proactive. Multiple institutions have adopted green restructuring and incorporated green capabilities into their training programs, demonstrating a favorable shift toward sustainable skills development across various sectors. The differences across locations and industries show the need for a more coordinated global green skills training strategy. Comprehensive efforts are needed to prepare educational institutions, especially in emerging countries, to fulfill the rising need for environmental skills (Umair et al., 2024).

Businesses now emphasize environmental and green management, recognizing its connection to their goals and strategies. Corporate globalization has changed the economy from a conventional financial and economic structure to a modern, capacity-based one. These include green management and the green economy. Companies now prioritize green workplace practices to green their culture. Green talent management is crucial for organizations to achieve sustainability. Attract and keep competent green human resource professionals to accomplish this. Green organizations are essential in Jordan, yet green practices are understudied (Rawashdeh, 2018).

In a similar vein, Gardas et al. (2019) noted that talent management (TM) conceptualization previously required updating to recognize the contemporary "environmental sustainability" context to attract, nurture, retain, and deploy the appropriate talent to advance workplace "green initiatives." Green human capital development programs must also be a priority of TM practices (green TM).

Similarly, the study by Roca-Puig et al. (2019) examined the connection between financial success and green human resource management in the Spanish context. The authors discovered that adopting green HRM practices, specifically through the mediation of environmental performance, was favorably associated with financial performance. Furthermore, a study by Hassan et al. (2020) found that environmentally friendly HR policies and practices, such as green talent management techniques, benefit environmental consciousness. Employees' environment, thereby having a favorable impact on the sustainable performance of the business.

A new concept known as "green TM" is defined as "a process by which company executives attempt to guarantee the correct talent is systematically found, promoted, and retained," according to Bui and Chang (2018) and Gardas et al. (2019). The "attraction, identification, selection, nurturing, retention, and putting in place of an employee with green-focused skills and values coupled with the capacity to support green initiatives in a firm" are some of the "soft" and "hard" TM components of the "green TM" idea. Investigating whether it could serve as a signpost for consistent business performance was crucial.

The literature review explores key concepts in green talent management (GTM) and sustainable corporate performance, highlighting their interconnections and relevance in the context of organizational sustainability. Traditional talent management focuses on attracting, developing, and retaining employees to achieve organizational goals. However, the review emphasizes the need for an updated approach that incorporates environmental sustainability (Gallardo-Gallardo et al., 2020).

Green talent management encompasses practices designed to cultivate a workforce dedicated to environmental responsibility. This includes both green hard talent management (GHTM), which emphasizes technical skills related to sustainability, and green soft talent management (GSTM), which focuses on cultivating values and social responsibility among

employees (Bui & Chang, 2018; Gardas et al., 2019).

Sustainable corporate performance integrates economic, environmental, and social dimensions, often referred to as the "triple bottom line" (Elkington, 1994). The review examines how GTM practices can improve these performance areas, thereby contributing to a firm's overall sustainability (*Waqas et al., 2024*). Empirical studies suggest that organizations implementing green practices tend to experience enhanced environmental performance, increased employee engagement, and improved financial outcomes (Evans, 2023; Zhou et al., 2020). However, some studies reveal gaps in understanding the full scope of these relationships, particularly in developing countries (Mousa & Othman, 2020).

Similar findings were reported by Sharma & Jain (2013), who discovered that organizations that invest in environmental training for their staff have a better likelihood of receiving environmental certification and improving their environmental performance. Comparing companies that did and did not offer their staff environmental training, it was discovered that this was the case.

Several theoretical frameworks are incorporated in the review, including the resource-based view (RBV), stakeholder theory, and the triple bottom line (TBL) framework. These frameworks provide a foundation for understanding how GTM can create competitive advantages and align with stakeholder expectations (Freeman, 2009; Wang & Lin, 2007).

Turker & Altuntas (2014) state that GSTM policies can improve a company's social performance by raising employee commitment, motivation, and engagement toward sustainability and social responsibility. Similarly, Zafar et al. (2022) investigated the connections between GST and social sustainability. Businesses that use GST often achieve better social sustainability results, according to the research. The authors argued that increasing workers' knowledge and proficiency in sustainable practices will lead to more socially responsible behavior.

Bin Saeed et al. (2019) examined the impact of GHTM practices on employee satisfaction, a crucial component of social performance. The authors claim that GHTM initiatives, including employee involvement in environmental sustainability projects and training and development programs related to environmental sustainability, positively impacted employee satisfaction, which in turn increased social performance levels.

The literature identifies significant gaps in empirical research on GTM, particularly regarding its application across different industries and cultural contexts. The review recommends further investigation into the mechanisms by which GTM influences sustainable corporate performance, aiming to enhance the understanding of this crucial relationship (Adeosun & Ohiani, 2020).

In summary, the literature review establishes a comprehensive foundation for exploring the role of green talent management in enhancing sustainable corporate performance, emphasizing the need for continued research in this evolving field.

3. Methodology

3.1 The Method of Research Used

This study aimed to understand better the link between green talent management and sustainable business performance (social, economic, and environmental). Given that the study was conducted in the context of Jordanian telecommunication companies, a previously understudied area of talent management and sustainable business performance, this study is

critical both theoretically and practically. This is one reason the study is significant. In light of these considerations, based on the understanding of positivism presented in the preceding section, the method of quantitative research is the most appropriate one to use. The data collection for this study was conducted using a well-structured questionnaire. Since this study employs a quantitative research approach, one of the tools available for collecting quantitative data is a questionnaire. The questionnaire included six different sections. The first section addressed the participants' demographic information, while the succeeding sections discussed information on green, complex, and soft talent management.

3.2 Research Population and Sample Size

The research population consists of workers in the Jordanian telecoms sector. Using a simple random sample, the three largest telecommunications companies operating in Jordan were tested: the Jordanian Company for Mobile Services Limited (Zain), the Jordan Telecommunications Group (Orange), and the Amman Phone Security Company (Umniah). With a 5% margin of error, a 95% confidence level, and a response distribution of 50%, the calculations recommend a sample size of 351. Meanwhile, four hundred ten (410) questionnaires were distributed to the members of the study population, out of which three hundred ninety-two (392) questionnaires were retrieved, representing a 95.6% response rate. The number of distributed questionnaires was determined through field visits to the surveyed companies, where the questionnaires were distributed to the study sample members and retrieved by hand by the researcher. After reviewing and auditing the questionnaires, five (5) were excluded because they were not valid for the statistical analysis process. Therefore, the questionnaires analyzed were 387 valid and approved for statistical analysis, representing about 95% of the total questionnaires.

To ensure the linguistic and cultural validity of the study instrument, a double translation method was used, following Brislin and colleagues' (1973) model. This included forward translation, translation review, back translation, and evaluation by experts specializing in management, linguistics, and psychology. A pilot study was conducted on a sample of 45 employees to verify the clarity and ease of understanding of the items, and the results revealed no need for further modification.

The validity and reliability of the instrument were examined through factor analysis, which showed that the loading coefficients for all items exceeded 0.5, indicating the quality of the relationships between the variables. The reliability of the instrument was also confirmed using Cronbach's alpha coefficient, with values ranging from 0.743 to 0.946, which is within acceptable limits.

3.3 Data Analysis and Interpretation of Results

This chapter presents the results of the statistical analysis of the data collected through the questionnaire, using SPSS V.25 and WarpPLS 7.0, to achieve the study’s objectives and test its hypotheses. This choice was motivated by several methodological considerations. First, the dataset did not fully meet the assumption of multivariate normality, which makes PLS-SEM more appropriate than covariance-based SEM techniques. Second, Warp PLS offers additional advantages compared to other PLS software, including the ability to estimate non-linear relationships among variables and provide bias diagnostics that enhance the robustness of the model. These features enhanced the accuracy and interpretability of the results, making Warp PLS particularly suitable for the objectives of this study. It reviews the validity and reliability of the data, verifies the study's assumptions, analyzes the demographic characteristics of the

participants, and presents the statistical results. The study employed PLS-SEM using Warp PLS 7.0 as the main analytical tool. A total of 410 questionnaires were collected, and 5 were excluded due to incompleteness. Analysis was conducted on 387 questionnaires, with a response rate of 95%.

- Data were checked for missing values and replaced with the mean when necessary.
- The assumptions for statistical analysis were tested: data consistency (normal distribution according to the skewness and kurtosis test within acceptable limits), linearity, and homogeneity of variance (with some irregular variance noted in a few cases).
- No outliers were detected that would affect the analysis.
- We tested for multicollinearity using the variance inflation factor (VIF), and all values were less than 3, indicating the absence of multicollinearity.
- Non-response bias was examined by comparing demographic characteristics between early and late respondents. The results showed no statistically significant differences, indicating the absence of bias.
- The presence of common method bias was tested using the VIF coefficient, with values not exceeding 3.3, indicating the absence of such bias.

The following table shows a summary of the significant values (skewness, kurtosis, std. deviation, and VIF) for the main variables:

Table 1. Skewness, Kurtosis, Std. Deviation, and VIF) for the main variables

Variable	Skewness	Kurtosis	Std. Deviation	VIF
Gender	0.149	-1.997	0.500	1.500
Age	0.643	-0.535	1.181	1.281
Education level	0.067	-1.275	0.763	1.763
Years of Experience	0.082	-0.850	0.934	1.934
Job Status	0.482	-1.106	1.210	1.210
Company size	0.191	-0.537	0.798	1.798
GHTM	-0.304	-0.702	1.010	0.512
GSTM	-0.232	-0.468	0.583	2.069
ENP	-0.651	0.133	0.661	2.578
ECP	-1.338	1.114	0.541	1.385
SP	-0.733	-0.096	0.796	2.434

GHTM = Green hard talent management, GSTP = Green soft talent management, ENP = Environmental performance, ECP = Economic performance, SP = Social performance

3.4 Measurement Model

While most items demonstrated factor loadings above the recommended threshold of 0.70, a limited number of items showed loadings between 0.40 and 0.70. These items were retained based on both statistical and theoretical justifications. Specifically, the constructs achieved acceptable levels of composite reliability (CR > 0.70) and average variance extracted (AVE > 0.50), indicating sufficient convergent validity. Moreover, the retained items captured theoretically relevant aspects of the constructs that would have been lost if they were removed. Following the recommendations of Sarstedt et al. (2017), items with meaningful theoretical contributions and acceptable reliability indicators can be retained, even when their loadings fall

slightly below the conventional threshold.

Data Analysis

The variance-based structural equation modeling (PLS-SEM) method was chosen for data analysis. This non-parametric technique is suitable for maximizing explained variance in dependent variables, especially when normal distribution assumptions are violated or important determinants are absent from the model (Garson, 2016; Petter, 2018). This method also provides high statistical power across samples (Hair et al., 2018; Sarstedt et al., 2019). The analysis was conducted using Warp PLS 7.0 software.

1. Descriptive Analysis of Respondents' Demographic Characteristics

A total of 387 valid questionnaires were accepted for analysis, representing 96.75% of the total questionnaires distributed. Of the participants, 61% were male and 39% were female. The age groups showed that the majority (49%) were between 41 and 55 years old, while a smaller percentage (7%) were under 25 years old. In terms of educational level, 76% held a bachelor's degree, and only 1% held a high school diploma. Regarding work experience, 44.7% of participants had spent between 6 and 10 years at their companies, 29.5% had between 11 and 15 years, 8% between 16 and 20 years, and 9% had more than 20 years. Regarding job positions, 73.6% held middle management roles, 16.5% were senior managers, and 9.8% were front-line managers.

Table 2. Demographic Characteristics of Respondents, Source Author (2023)

Variable		**Frequency**	**%**
Gender	Male	236	61.0
	Female	151	39.0
Total		**387**	**100.0**
Age of Respondents	Below 25 years old	27	7.0
	26-40 years old	118	30.5
	41-55 years old	191	49.4
	Above 55 years old	51	13.2
Total		**387**	**100.0**
Education	High School	4	1.0
	Bachelor	294	76.0
	Master	73	18.9
	PhD	16	4.1
Total		**387**	**100.0**
Years of Experience	Less than 5 years	4	
	6-10 years	173	28.0
	11-15 years	114	48.0
	16-20 years	61	24.0
	Above 20 years	35	9.0
Total		**387**	**100.0**
Job Status	Top Managers	64	16.0
	Middle Cadre Manager	285	73.6
	Frontline Manager	38	9.8
Total		**387**	**100.0**

2. Descriptive Statistics for Main Variables

The results show that the standard deviation for all variables is less than 3, indicating the absence of outliers. The mean score for Green Hard Talent Management (GHTM) was 4.306 on a 7-point Likert scale, which is above the midpoint of 3 (neutral), indicating that participants somewhat agreed with the related items. Furthermore, the means for the Soft Talent Management (GSTM), Environmental Performance (ENP), Economic Performance (ECP), and Social Performance (SP) variables were all above average, with low standard deviations.

Table 3. Means and Standard Deviations

Variable	Mean	Std. Deviation
Gender	1.39	.488
Age	2.69	.787
Educational level	2.26	.545
Years of Experience	2.871	.997
Job Status	1.933	.509
GHTM	4.306	.555
GSTM	4.858	.807
ENP	4.053	.772
ECP	4.919	.761

3. Measurement Model Evaluation

To ensure that the necessary requirements outlined in literature were met, the first step in our data analyze was to examine the constructs and factors for model reliability and validity (Hair et al. 2017a). As shown in Table 4, the item loading results in our model show that all items have acceptable loadings of no less than 0.70, as recommended in literature (Sarstedt et al.2017), except two items (0.572 and 0.543) in Green Talent Management (GHTM) build, two items (0.517 and 0.511) also in Soft Talent Management (GSTM), one item (0 .671) of environmental performance (ENP) and one factor (0.585) of economic performance (ECP). Items with loading values below 0.70 were retained because other properties of the construct were deemed suitable for further analyze.

Table 4. Combined Loadings and Cross-Loadings

	GHTM	GSTM	ENP	ECP	SP	SE	P value
GHTM1	0.722	0.291	-0.010	0.015	-0.096	0.046	<0.001
GHTM2	0.736	0.300	0.010	-0.236	0.063	0.046	<0.001
GHTM3	0.572	1.222	-0.727	0.018	-0.535	0.049	<0.001
GHTM4	0.794	-0.193	0.448	-0.070	-0.019	0.046	<0.001
GHTM5	0.713	-0.044	0.593	0.249	-0.548	0.046	<0.001
GHTM6	0.543	-0.640	1.315	0.656	-1.197	0.048	<0.001
GSTM1	0.618	0.517	0.470	0.518	-0.868	0.047	<0.001
GSTM2	0.558	0.511	0.673	0.124	-0.685	0.047	<0.001
GSTM3	-0.241	0.882	-0.264	0.032	0.222	0.045	<0.001
GSTM4	-0.148	0.841	-0.082	0.104	0.455	0.045	<0.001
GSTM5	-0.108	0.825	0.022	0.361	0.097	0.045	<0.001
GSTM6	-0.011	0.738	-0.230	-0.623	0.166	0.046	<0.001

GSTM7	-0.235	0.724	-0.183	-0.394	0.025	0.046	<0.001
ENP1	-0.086	0.175	0.844	0.202	0.101	0.045	<0.001
ENP2	-0.049	-0.337	0.671	-0.218	-0.644	0.046	<0.001
ENP3	0.302	-0.387	0.857	0.109	-0.429	0.045	<0.001
ENP4	-0.283	0.830	0.760	-0.102	0.403	0.046	<0.001
ENP5	0.077	-0.275	0.801	-0.049	0.509	0.046	<0.001
ECP1	-0.918	0.468	-0.391	0.796	-0.006	0.050	0.029
ECP2	-0.002	-0.486	0.553	0.774	0.059	0.046	<0.001
ECP3	0.107	-0.350	0.047	0.826	0.166	0.045	<0.001
ECP4	0.438	0.332	0.041	0.585	-0.886	0.047	<0.001
ECP5	0.124	0.382	-0.501	0.820	0.454	0.045	<0.001
ECP6	-0.386	0.294	-0.378	0.761	-0.100	0.046	<0.001
ECP7	-0.074	-0.130	0.288	0.853	0.048	0.045	<0.001
SP1	-0.043	-0.127	0.055	0.189	0.783	0.046	<0.001
SP2	-0.109	0.234	-0.391	0.132	0.874	0.045	<0.001
SP3	0.053	-0.103	-0.037	-0.017	0.912	0.045	<0.001
SP4	0.099	-0.276	0.316	0.397	0.873	0.045	<0.001
SP5	-0.085	-0.300	0.392	0.275	0.859	0.045	<0.001
SP6	0.048	0.137	0.152	-0.561	0.852	0.045	<0.001
SP7	0.154	0.135	-0.268	-0.564	0.827	0.045	<0.001
SP8	-0.121	0.309	-0.226	0.136	0.833	0.045	<0.001

GHTM = Green hard talent management, GSTP = Green soft talent management, ENP = Environmental performance, ECP = Economic performance, SP = Social performance

The measurement model demonstrated satisfactory reliability and validity. Cronbach's alpha and composite reliability (CR) values for all constructs exceeded the 0.70 threshold, confirming internal consistency. In addition, the average variance extracted (AVE) values were greater than 0.50 for all constructs, supporting convergent validity. These results indicate that the measurement model is robust and suitable for testing the structural relationships proposed in this study.

Additionally, the results, as shown in Table 5, indicate that all the constructs' CR and Cronbach's Alpha values are higher than the cutoff point of 0.7 when determining the reliability of the construct in this study model (Henseler, Hubona, & Ray, 2016). This proves that this study model construct is trustworthy. The "average variance value" (AVE) for each of our constructs is also higher than the suggested cutoff point of 0.5 (Sarstedt et al. 2017). This suggests that this study model's construct has sufficiently converged to explain the item variances, indicating the convergent validity of the constructs. In other words, this study model's structures account for more than 50% of the variation in its elements.

Table 5. Reliability Analyse

	GHTM	**GSTM**	**ENP**	**ECP**	**SP**
CR	0.604	0.887	0.891	0.868	0.955
AVE	0.512	0.538	0.623	0.516	0.727
CA	0.713	0.849	0.846	0.810	0.946
Full collinearity VIFs	1.390	2.069	2.578	1.385	2.434

Note: CR = composite reliability, AVE = average variance extracted, Cronbach's alpha

After assessing convergent validity, the degree of conceptual differentiation in the model was examined. The Fornel-Larcker criteria (1981) and the recently created heterosexist-monotrait (HTMT) ratio (Henseler et al., 2015) were used to conduct the evaluation. As shown

in Table 6, when comparing the correlation between the selected variable constructs with the square root values of the average variance extracted from each construct, the correlation value is lower. As a result, the variables have enough discriminant values. Due to the limitations of the Fornel-Larcker criteria (Henseler et al., 2015), the HTMT was created to improve the assessment of the discriminant validity of the construct.

For discriminant validity of model structure, Henseler et al. (2015) suggested that HTMT values significantly lower than 0.90 are acceptable criteria. Displaying the results of our model evaluation in Table 7 shows that all values are less than 0.90, supporting the Fornel-Larcker criterion for establishing discriminant validity for model constructs. Our picture. Hair et al. (2019) recommend checking the "variance inflation factor" of items to ensure there is no collinearity between them. Depending on the study, the absence of collinearity is indicated by a VIF number greater than 1 but less than 5.

Table 6. Discriminant Validity: Correlations among latent variables

	GHTM	GSTM	ENP	ECP	SP
GHTM	**0.716**				
GSTM	0.464	**0.733**			
ENP	0.248	0.607	**0.789**		
ECP	0.356	0.719	0.757	**0.718**	
SP	0.326	0.705	0.648	0.627	**0.852**

Note: Square roots of average variances extracted (AVEs) shown on diagonal.

Table 7. Discriminant Validity: Hetero-monotrait Ratio (HTMT)

	GHTM	GSTM	ENP	ECP	SP
GHTM					
GSTM	0.691				
ENP	0.467	0.726			
ECP	0.682	0.840	0.658		
SP	0.445	0.819	0.740	0.693	

4. Structural Model Assessment

Following the satisfactory assessment of the model measurement, an examination of the structural model testing was conducted. Firstly, the data were resampled to 5000 using the bootstrapping method (Hubona & Ray, 2016) to assess the significance of the path coefficients. Global model fit and quality indices may be used in some studies using PLS-based structural equation modelling to evaluate the level of model and data fit as well as model-wide collinearity (Adetola et al., 2021; Kock & Moqbel, 2021; Odugbesan et al., 2022).As a result, the Warp PLS 7.0 software used in this work provides twelve quality indices and model fit (see Table 8). As a result, it can be said that this study established 10 model adjustment criteria and quality indicators. Table 7 presents the overall fit of the research model and the quality measures against these models.

The APC, ARS, and AARS indices all resulted in p-values of 0.005, as shown in Table, demonstrating excellent fit between the model and data. The absence of multicollinearity at the latent variable block level as well as in the model is even more evident when the AVIF and AFVIF values are below 3.3. SRMSR and SMAR also support the overall model fit by achieving a threshold value less than or equal to 0.1, as shown in Table 8.

Table 8. Model Fits and Quality Indices

Indices	Coefficient	Threshold
Average path coefficient (APC)	0.438	P<0.001
Average R-squared (ARS	0.600	P<0.001
Average adjusted R-squared (AARS)	P<0.001	P<0.001
Average block VIF (AVIF)	1.153	acceptable if <= 5, ideally <= 3.3
Average full collinearity VIF (AFVIF)	2.771	acceptable if <= 5, ideally <= 3.3
Tenenhaus GoF (GoF)	0.581	small >= 0.1, medium >= 0.25, large >= 0.36
Simpson's paradox ratio (SPR)	0.667	acceptable if >= 0.7, ideally = 1
R-squared contribution ratio (RSCR)	0.961	acceptable if >= 0.9, ideally = 1
Statistical suppression ratio (SSR)	1.000	acceptable if >= 0.7
Nonlinear bivariate causality direction ratio (NLBCDR)	1.000	acceptable if >= 0.7
Standardized root mean squared residual (SRMSR)	0.842	Acceptable if <= 0.1
Standardized mean absolute residual (SMAR)	0.812	Acceptable if <= 0.1

The "common biased method" should be considered account to ensure that the outcomes of our research are not skewed. According to Odugbesan et al. (2022), the CMB can be evaluated in the PLS-SEM study by looking at the VIF. This study's VIF value result, which is shown in Table 5, demonstrates that the model did not deviate from the presumption that the VIF value should be larger than 1 and less than 5, which shows that the model does not contain CMB inaccuracy.

In addition, the "Stone-Geisser Q^2 coefficients" named after the Q2's proponents, Geisser (1974) and Stone (1974) were also used in this work to assess predictive validity, according to Kock (2015). The literature states that measurement models with Q^2 coefficients greater than 0 are thought to have appropriate predictive validity. Endogenous latent variables are the only ones that have coefficients. The result in Table 9 demonstrates that this study model complies with this condition.

Table 9. Q-squared coefficients

GTM	GHTM	GSTM	ENP	ECP	SP	SCP
			0.681	0.576	0.697	0.503

Finally, Table 10 and 11 results for skewness and excess kurtosis, along with the robust modification of the test (Gel & Gastwirth, 2008), which examines the normality of the data, hint to a multivariate nonnormality in our data. The findings of the normalcy test that was employed in this study validated the use of PLS-SEM in our analysis.

Table 10. Skewness (top) and exc. kurtosis (bottom) coefficients. And Tests of Normality

GHTM	GSTM	ENP	ECP	SP
-0.304	-0.232	-0.651	-1.338	-0.733

-0.702	-0.468	0.133	2.114	-0.096

Table 11. Tests of normality: Jarque–Bera (top) and robust Jarque–Bera (bottom)

GHTM	GSTM	ENP	ECP	SP
No	No	No	No	No
No	Yes	No	No	No

Moreover, this study examined the variance of explanation of the variables in the model through the coefficient of determination (R^2). The results as presented in Figure 1 and Table 12 indicate that green talent management (GTM) have about 51.3% variations in explaining "sustainable corporate performance". As for the environmental performance (ENP), the explanation variation of GHTM and GSTM shows to be 64.4% (5%). Similarly, GHTM and GSTM explained about 57.6% in economic performance, while 57.9% of explanation variation in social performance was provided my GHTM and GSTM.

Table 12. R Squared (R^2) and Adjusted R Squared Coefficients

Statistic	GTM	GHTM	GSTM	ENP	ECP	SP	SCP
R Squared				0.644	0.576	0.579	0.513
Adjusted R Squared				0.642	0.574	0.577	0.511

According to Henseler, Hubona, and Ray's (2016) contention that the evaluation of effect size (f^2) should be used to determine the weight of the path coefficient, the study's findings, as shown in Table 13, demonstrate that GTM has a moderate effect size on SCP (0.045), GHTM has a small effect size on ENP (0.018), ECP (0.084), and SP (0.058), and GSTM has a large effect size on ENP (0.662), ECP.

Table 13. Effect Size (f^2), Source Author (2023)

Interaction	Coefficient	Decision
GTM → SCP	.045	Moderate
GHTM → ENP	.018	Small
GHTM → ECP	.084	Small
GHTM → SP	.058	Small
GSTM → ENP	.662	High
GSTM → ECP	.492	Moderate
GSTM → SP	.637	High

Note: GTM = Green talent management, GHTM = Green hard talent management, GSTP = Green soft talent management, ENP = Environmental performance, ECP = Economic performance, SP = Social performance, SCP = Sustainable corporate performance

5. Structural Model Testing

The hypotheses about the direct relationship proposed in this study are evaluated to verify the statistical significance and applicability of the path coefficient to confirm or refute the hypotheses proposed in the study. save this. Table 14 and Figure 1 respectively present the results of the statistical significance of the research hypotheses. The results presented in the table and illustrated in the figure show that the hypothesized relationship between green talent management (GTM) and sustainable corporate performance (SCP) in the first half of the year

was considered positive and meaningful (β = .716, p<.001). Therefore, H1 is accepted and it is concluded that there is a positive and significant relationship between green talent management and corporate sustainability performance. Regarding the hypothesized relationship between green talent management (GHTM) and environmental performance (ENP), economic performance (ECP) and social performance (SP) in H2a-c, the relationship between GHTM and ECP (β = 0.193, p <.001) and on the other hand SP (β = -0.138, p = 0.003) were found to be significantly positive and negative, respectively, while the relationship between GHTM and ENP (β = -0.052, p = 0.154) turned out to be trivial. Therefore, this study accepts H2b-c and concludes that green talent management has a significant relationship with economic and social performance. Finally, the relationship between green talent management (GSTM) and environmental, economic, and social performance was hypothesized in H3a–c.

The results presented in Table 14 and Figure 1 show a positive and significant relationship between GSTM and ENP (β = .804, p < .001), GSTM and ECP (β = .667, p < .001), GSTM and SP (β = .773, p <.001). Therefore, this study accepts H3a-c and concludes that green talent management has a positive and significant relationship with environmental, economic, and social performance.

Table 14. Hypotheses Testing Results, Source Author (2023)

Hypotheses	Interaction	Coefficient	Std. Error	P value	Decision
H1	GTM → SCP	.716	.051	<.001	Accept
H2a	GHTM → ENP	-.052	.051	.154	Reject
H2b	GHTM → ECP	.193	.050	<.001	Accept
H2c	GHTM → SP	-.138	.050	.003	Accept
H3a	GSTM → ENP	.804	.046	<.001	Accept
H3b	GSTM → ECP	.667	.046	<.001	Accept
H3c	GSTM → SP	.773	.046	<.001	Accept

Note: GTM = Green talent management, GHTM = Green hard talent management, GSTP = Green soft talent management, ENP = Environmental performance, ECP = Economic performance, SP = Social performance, SCP = Sustainable corporate performance

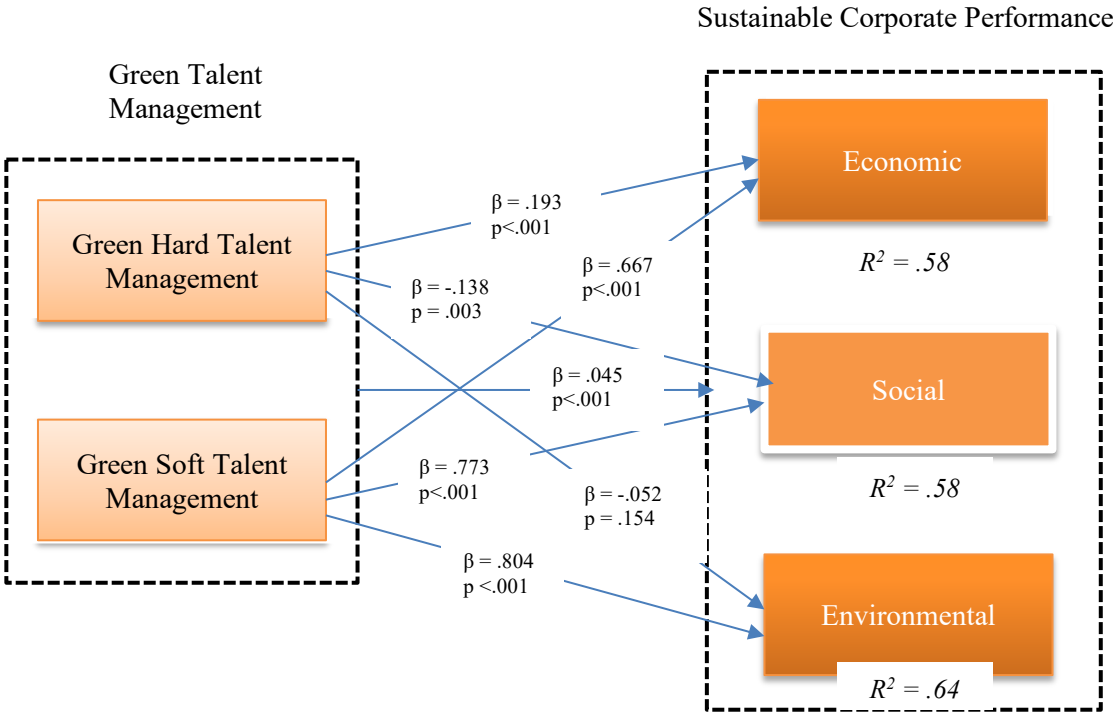

Figure (1): Model Testing Results

4. Discussion

An unexpected finding of this study was the negative relationship between Green Hard Talent Management (GHTM) and social performance (SP), as well as the weak effect of GHTM on environmental performance (ENP). One possible explanation is that hard talent management practices, which emphasize rules, control, and compliance, may initially impose additional costs and administrative burdens that overshadow their long-term benefits. In the context of the Jordanian telecommunications sector, organizations may prioritize short-term operational efficiency over environmental and social goals, thereby reducing the immediate positive impact of GHTM. This result underscores the importance of aligning hard practices with a supportive organizational culture and long-term sustainability strategies to achieve their intended outcomes.

This research, which significantly contributes to the field of studies on what works and what does not for achieving better long-term corporate performance, highlights the role of green talent management (GTM) in the context of sustainability. There is a very strong and positive association between green talent management and sustainable corporate performance. Also, we see that what constitutes effective GTM policies for instance sustainability-oriented training programs which we report on from (Hassan et al., 2020; Gao et al., 2020; Wang & Huang, 2019) do indeed put out great results which in turn improve employee engagement and environmental awareness, which are key to long-term success.

In looking at Green Hard Talent Management (GHTM) we see that there is a large degree of association between it and social and economic performance which does not extend to environmental performance. This puts forth that while GHTM does in fact improve financial

results, for better environmental performance broad based support for sustainability initiatives is required (Roca-Puig et al., 2019; Zhou & Li, 2017). Also we see that GHTM practices do play a role in increasing employee creativity and innovation which in turn plays a role in financial performance (Bin Saeed et al., 2019).

Instead, we saw that Green Soft Talent Management (GSTM) has a positive relationship with environmental, economic, and social performance. We put forth that which implementation of GSTM practices like sustainability-based employee training see which in better financial performance and enhanced social responsibility (Sharma & Jain, 2013). Also, we find that organizations that put a priority on GSTM do, in fact, outperform their competitors in terms of financial performance, which in turn reinforces the importance of investment in environmental and social talent management (Turker & Altuntas, 2014; Zafar et al., 2022).

At the end of the study, we report that which is that GHTM and GSTM play key roles in achieving sustainable corporate performance. We note that GSTM has a large-scale effect across all performance areas which in turn means that companies should put more focus on green talent management as a way to build a dedicated and innovative staff. Also, we see this focus on sustainability not only as a way to improve corporate performance but also to increase stakeholder satisfaction which in the end contributes to the company's long-term success.

5. Theoretical and Practical Contributions

Although the outcomes of generic TM practices have been exhaustively explored in literature, the impact of "green TM" and how it exercises its influence on the dimension (green hard and soft TM) to have an impact on sustainable corporate performance has not been exhaustively investigated, especially within Jordan companies, which represent an interesting case for obtaining insights into how green TM can predict SCP.

The development and achievement of sustainable competitive advantages (SCA) in the market, to which employees' performance contributes significantly (Mahmood et al., 2020).

The growing competitive business environment makes it imperative for firms to require employees who are competent to support an organization's green initiatives. In the absence of empirical studies showing the influence of green talent management, it becomes imperative to investigate how green TM can predict sustainable corporate performance.

This study aims to fill the gaps in the literature, helping various stakeholders and policymakers promote environmental sustainability through green talent management.

This study adds to the literature on human resources and environmental sustainability by examining a direct and significant relationship between green, soft, and hard TM and sustainable corporate performance in the Jordanian telecoms sector.

6. Conclusion

The study demonstrates a significant positive relationship between green talent management (GTM) and sustainable corporate performance (SCP) in Jordanian telecommunications companies. The findings suggest that implementing GTM strategies, particularly those emphasizing sustainability, have a positive impact on employee engagement, commitment, and environmental awareness, thereby enhancing overall corporate performance. In terms of green complex talent management (GHTM), the relationship with both economic and social performance was found to be significant. However, GHTM did not show a substantial impact on environmental performance, suggesting that broader corporate support for sustainability may be necessary to achieve environmental outcomes. Conversely, green soft talent management (GSTM) exhibited a strong positive correlation with ecological, economic,

and social performance, highlighting the importance of cultivating a workforce with green values and competencies. The implications of these findings are substantial. Organizations should prioritize both GHTM and GSTM to enhance sustainable performance across all dimensions—environmental, economic, and social.

Furthermore, this study contributes to the literature by filling gaps in the understanding of the relationship between green talent management practices and sustainable corporate performance, particularly in the context of developing nations. Finally, recommendations for future research suggest that further studies should explore the nuances of GTM practices across different industries and geographical contexts to validate and expand upon these findings. In conclusion, effective green talent management is essential for achieving sustainable corporate performance, and organizations in the telecommunications sector should invest in both green hard and soft strategies.

This study found that green talent management predicts sustainable corporate performance well. Hard and soft TM also predict social, economic, and environmental performance. Researchers and practitioners can utilize this study's model to develop more comprehensive, integrative, and nuanced models for examining green TM or other antecedents of sustainable business performance. The nonprobability sample method and industry focus limit the generalizability of this study. It will be interesting to extend the approach to different sectors. Another problem is that telecommunications professionals and HR managers are unfamiliar with GTM, even if these techniques are new in developing nations.

Providing participants with more information and explanations may have limited the generalizability of the findings. The current study's hypotheses, as proposed in the telecommunications sector, should be tested in other developed and developing countries to confirm the findings, since there haven't been many studies on GTM practices and sustainable corporate performance in this service sector. The conceptual GTM framework should be applied in various scenarios to understand better how GTM practices support sustainable corporate performance. Recent studies suggest cross-functional research is needed. Studies have examined the links between HR green talent management systems and supply chain operations. Therefore, future studies may examine this connection across industries.

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