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Stakeholders' Engagement in the Company's Management as a Driver of Green Competitiveness within Sustainable Development

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Abstract: The world's transition to green economic growth, considering the Agenda for Sustainable Development, provokes relevant structural changes in the world market. Consequently, it boosts the business sector's ability to incorporate green dimensions into their development policies to intensify their green competitiveness in the market. In this case, it is necessary to identify the appropriate indicators that affect a company's green competitiveness. Thus, stakeholders and management could intensify or decline a company's green competitiveness depending on the efficiency of communication between them. The paper aims to analyze the role of stakeholders' engagement in the company's management in enhancing green competitiveness. The research data were compiled from a questionnaire of 75 respondents, who represent the Ukrainian company's management. The study applies PLS-SEM to test the hypotheses of the investigation. The empirical results allow us to conclude that stakeholders' engagement in the company's management positively affects the company's green competitiveness. The most statistically significant impact on the company's green competitiveness is experience in communication with stakeholders and managing stakeholders' conflicts, with loading factors of 0.802 and 0.806, respectively. The findings show that to improve green competitiveness, the company's management should develop targeted stakeholder communications and extend knowledge and awareness of stakeholder interests and values. At the same time, management should incorporate stakeholders' suggestions and recommendations when promoting a company's green competitiveness.

Keywords: inclusive economic growth; sustainable growth; economic development; green products; communication



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1. Introduction

The acceptance of the 2030 Agenda for Sustainable Development [1] boosts transformation at all sectors and levels through simultaneous consideration of economic, social, and ecological effects. Consequently, governments around the world have already introduced stricter environmental regulations to attain sustainable development. It should be noted that the business sector has already started to incorporate relevant policies to strengthen its green competitiveness and advantages in the world market. In addition, companies that prioritize green growth are likely to be more competitive in the long run as they are able to meet the evolving green needs and expectations of customers, employees, and stakeholders [2,3]. At the same time, stakeholders and consumers are increasingly becoming aware of environmental issues and are actively seeking out environmentally friendly products and services. By outlining environmentally sustainable products and services, companies can tap into this growing demand and increase their market share [4,5]. Furthermore, implementing environmentally sustainable practices allows for declining green costs for

companies in the long term, such as reducing energy consumption and waste generation, utility bills for resources, operating costs, and green taxes [2,6]. Scholars [3,4] confirm that companies that promote green competitiveness through close collaboration and communication with stakeholders have higher customer loyalty and better relationships with regulators and local communities. Past studies [6,7] have outlined that stakeholders play a significant role in promoting the green competitiveness of companies. Direct and mediated stakeholders' involvement in internal corporate greening processes ensures and strengthens their motivation for close cooperation with local and national authorities and develops trusting relations with customers and intermediaries [3,8]. Stakeholders' engagement stimulates the sharing of knowledge and best practices on resource use [9,10], waste management, and the implementation of green innovations [11] and technologies [12], which consequently promote a company's green competitiveness [13,14]. In this case, it is important to identify the communication channels with stakeholders to deepen their engagement in the company's management, which could boost the green competitiveness of the company.

Considering the above, the paper aims to analyze the role of stakeholders' engagement in the company's management in enhancing green competitiveness. The object of investigation is Ukrainian companies from the leading sectors of Ukraine's economy (engineering, agriculture, and the food industries, which generate more than 65% of countries' GDP) [15,16]. For Ukrainian companies, the development of green competitive advantages, the implementation of green innovations, and the formation of sustainable, transparent, and responsible communication with stakeholders are quite relevant for several reasons:

1. Environmental concerns: With growing awareness of environmental issues, businesses are expected to act responsibly and take steps toward reducing their environmental impact [17].
2. Competitive advantage: Implementing green innovations and developing green competitive advantages can give Ukrainian enterprises a competitive advantage in the global marketplace. Consumers are increasingly seeking out environmentally responsible products and services, and companies that demonstrate a commitment to sustainability are likely to be more attractive to customers, investors, and partners [9,18].
3. Regulatory compliance: Many countries have environmental regulations that businesses must comply with [19,20].
4. Reputation: Sustainable, transparent, and responsible communication can help to build a positive reputation for Ukrainian enterprises in the leading sectors of economic activity. This can lead to increased customer loyalty, improved relations with stakeholders, and an enhanced brand image [21,22].

Despite the powerful background in the analysis of the theoretical framework of green competitiveness and stakeholders' roles [13,14,23–25], their results are fragmental and do not consider the impact of stakeholders' engagement in the company's management. As mentioned above, the paper fills the scientific gaps in promoting companies' green competitiveness by developing approaches for the assessment of stakeholders' engagement in the company's management impact on companies' green competitiveness based on partial least squares structural equation modeling (PLS-SEM).

This study has the following structure: the literature review investigates the development of companies' green competitive advantages and their linking with stakeholder engagement in the company's management to justify the research hypothesis; materials and methods describe the methodology used in the study; results—explanation of the findings of the investigation; discussion—comparison analysis of the obtained findings with similar past investigations; conclusion—explaining the core study's results, policy recommendations considering the findings, limitations, and further direction for the investigations.

2. Literature Review

The results of the analysis allow us to outline the significant stakeholders' impact on green competitive advantages for companies. At the time, the results showed that scholars

applied a vast range of indicators for the assessment of stakeholders' engagement in companies' management. Thus, the pull of researchers [26,27] proves that personalization of communications with stakeholders and their awareness of green companies' management are the crucial dimensions of green competitiveness. However, studies [28] confirm that stakeholder communication should be developed considering the experience in communications. In addition, stakeholders' decisions, suggestions, and ideas should be incorporated into the company's development policy. From the other point of view, stakeholders should have good knowledge of companies' green values and policies that allow them to be active and suggest prolific decisions on promoting companies' green competitiveness. Considering past studies [29,30], stakeholders are sensitive to conflict, which could be caused by different values and interests in companies' growth. Thus, companies should develop and improve conflict management and eliminate it at the first stage. Eryürük Ş. et al. [23] used the AHP model and the multiple criteria decision-making method (MCDM) to evaluate the level of stakeholder integration in the construction industry. They proposed using the main criteria related to issues of construction quality, functionality, impact, and sustainable development. Sagie H. and Orenstein D. [31] implemented a multilevel approach to evaluation that considered the composition of interested parties, the opinions of stakeholders obtained in the process of interviews, and the frequency of conducting seminars and workshops as elements of raising awareness of stakeholders. The authors concluded that the evaluation catalyzed productive interactions between scientists and stakeholders. At the same time, Malaeb Z. and Hamzeh F. [24] apply the SPV approach to determine the level of stakeholder integration in public-private partnerships as platforms for communication and interaction between designers, contractors, and service providers. Ominde et al. [25], by conducting semistructured interviews, identified the key determinants of stakeholder involvement in the implementation of information and communication projects. They concluded that communication processes and stakeholder interaction are key to increasing the effectiveness of project implementation and sustainability. Cansino-Loeza B. and Ponce-Ortega J. [32] use a multiobjective optimization model to assess the level of satisfaction of all stakeholder groups regarding the implementation of resource-consuming decisions and study the priority set of stakeholder decisions in providing sustainable water consumption projects at agricultural enterprises. Additionally, Maseko L. and Root D. [33] assess the inseparable risks of stakeholder communication in green buildings. Using empirical data, conducting semistructured interviews with stakeholders, and applying an abductive approach, the authors were able to form a system of decisions for managing inseparable risks. Thus, it is relevant to improve the toolkit for assessing the impact of stakeholder integration on the level of green competitiveness of enterprises.

Considering the accepted SDGs [1], all countries have started the transformation from recourse economic development to green economic growth by decarbonizing all sectors. Scholars [34,35] prove that companies with high green competitiveness incorporate sustainable development principles into their activities, which is conducive to the country's green development. He et al. [36] emphasize the crucial role of green competitiveness in accelerating the process of solving natural resource deficiency and environmental degradation. The results of our analysis of the theoretical landscape [37,38] of a company's green competitiveness allow us to conclude that it is a multifaceted category and depends on a vast range of economic, financial, environmental, and organizational dimensions [39–41]. The representatives of Harvard Scientific School [42] in the late 1990s described green competitiveness as an integral component of production development and gaining sustainable competitive advantages. Cheng et al. [43] noticed that green competitiveness is a development approach that foresees improving social and economic performance, resource-use indicators, and environmental quality. Scholars [44,45] have confirmed that improving a company's green competitiveness requires affordable financial and human resources with appropriate knowledge and competencies. Moreover, past studies [46] outline that stakeholders and their incorporation into making decisions significantly affect a company's green competitiveness. In addition, communications with stakeholders could increase or

decrease a company's green competitiveness. Bhupendra and Sangle [47] indicate that stakeholder integration promotes a company's sustainable development and allows quicker overcoming of uncertain market conditions. In addition, according to Sagie and Orenstein [31], proactive stakeholders stimulate environmental management implementation, which is one of the core dimensions of a company's green competitiveness. Scholars [31] outline that proactive stakeholders are open to new ideas and innovations and ready for dialog with society to extend green knowledge and strengthen green awareness, which are core postulates of sustainable development. The study [48] notes that management functions (optimization, adaptation, and control) and interactions with employees and stakeholders should be based on the personalized interaction, integration, and achievements of Industry 4.0. Scholars [18] emphasize that communication should be the main priority for the interaction of stakeholders at all levels.

As mentioned above, companies that engage their stakeholders in making decisions on green development are more likely to implement sustainable practices and create value for both them and their stakeholders. However, stakeholder engagement is constantly changing due to the dynamic landscape of government and company policies aimed at promoting sustainable practices, including environmental regulations, eco-innovation, green marketing, and green supply chain management. This study incorporates stakeholder engagement variables as a latent variable in the research model to reflect the dynamic nature of these changes and assess companies' green competitiveness [49].

Considering the above, the following research hypothesis is checked:

Hypothesis: stakeholders' engagement in the company's management has a positive effect on companies' green competitiveness.

3. Materials and Methods

Based on previous studies [50–52] that advocate the important role of stakeholder integration into the enterprise management system and their role toward green competitiveness and sustainable development [53], the present study attempts to assess the effect of the integration of stakeholders into enterprise management on companies' green competitiveness based on partial least squares structural equation modeling (PLS-SEM) [48,49,54,55]. The key advantage of PLS-SEM is its ability to establish relationships between observed variables and latent constructs that are not directly observable but are inferred from the observed variables. Moreover, PLS-SEM can handle a broad range of data types and account for measurement errors and other sources of bias [56]. Furthermore, this method has a unique performance with small set samples, and it is useful for understanding the relationships between variables and making predictions about future outcomes [48,49,54,55].

The process of applying PLS-SEM requires several steps. The first step is to measure the model to identify the set of measurement variables that are related to the latent variables of interest. The reflective model was utilized in this study to represent the latent variable *LSI*, where the observed indicators, such as targeted stakeholders' communications (N1), knowledge and awareness of stakeholders' interests and values (N2), experience in communication with stakeholders (N3), incorporation of stakeholders' suggestions and recommendations in promoting a company's green competitiveness (N4), and managing stakeholders' conflicts (N5), are driven by the underlying construct:

$$N_{jk} = \mu_{jk}LSI + \varepsilon_j \quad (1)$$

where μ_{jk} —load factor and connection direction; K_{jk} —explicit SI variables (styles of communicative interaction of stakeholders and the enterprise); ε_j —standard error; j —block of relevant variables for the t -th period; and k is the number of variables.

The latent variable *LSI* is measured in this study by the explicit variables *GCEcon* to *CCorp*, which correspond to economic (Econ), environmental (Env), marketing (Mark), social (Soc), and corporate (Corp) components, respectively:

$$GC_{jk} = \mu_{jk}LGC + \varepsilon_j \quad (2)$$

where μ_{0j} is a free variable; μ_{jk} —the input factor and communication direction; GC_{jk} —measurement variables (economic (GC_{Econ}), environmental (GC_{Env}), marketing (GC_{Mark}), social (GC_{Soc}), and corporate components (GC_{Corp})) of the index of green competitiveness of enterprises; ε_j —standard error; j —block of relevant variables for the t -th period; k —number of variables.

The research data was compiled from the online questionnaire, which contained 31 items and allowed analysis of green competitiveness and stakeholders' engagement with the company's management. The questionnaire was developed by the following studies: assessment of green competitiveness [57–59]; stakeholder engagement [60–62]. In the first stage, 167 questionnaires were received. The questionnaires with many unanswered questions were excluded from the analysis. After the verification, 75 questionnaires were taken for analysis. It should be noted that in Ukraine, not a lot of companies (among industrial companies, it is less) have already accepted ESG principles and published the non-financial report that allows estimating green competitiveness and stakeholder engagement. As previously stated, the small proportion of questionnaires chosen for analysis is justified. The questionnaire was distributed online among Ukrainian companies' management from January to August 2021. It was developed considering the Likert scale (0—disagree (seldom), 5—totally agree (frequent)). All questions were divided into groups, which reveal the relevant indicators. The values of each indicator were calculated by the arithmetic mean of all answers within each block. The list of questions and descriptive statistics of the data are shown in Table 1.

Table 1. Survey descriptive statistics.

Symbols	Query	Mean	Min	Max	IM
GC_{Econ}	To what extent has your company experienced cost savings from implementing environmentally friendly practices?	3.7	1	5	3.8
	To what extent does your company invest in research and development of environmentally sustainable products or services?	3.8	2	5	
	To what extent has your company implemented resource-saving measures in its operations?	3.9	2	5	
GC_{Env}	To what extent does your company measure and monitor its environmental impact (e.g., greenhouse gas emissions, water usage, and waste generation)?	3.4	1	5	3.2
	To what extent does your company have environmental sustainability goals and targets in place?	3.2	2	5	
	To what extent does your company use sustainable materials and/or source materials from suppliers who prioritize environmental sustainability?	3.0	1	5	
	To what extent does your company consider the environmental impact of its business decisions and factor this into its overall decision-making process?	3.0	1	5	
GC_{Soc}	To what extent does your company prioritize social responsibility, including environmental impact, in its business practices?	4.2	1	5	3.9
	How important is it for your company to have a positive reputation for environmental responsibility among its customers and other stakeholders?	3.9	2	5	

Table 1. Cont.

Symbols	Query	Mean	Min	Max	IM
	To what extent has your company developed partnerships with local communities to promote environmentally sustainable practices?	4.0	1	5	
	To what extent does your company support environmental causes and initiatives beyond its own operations, such as through donations or volunteer work?	3.5	1	5	
	To what extent does your company set specific and measurable environmental sustainability goals and regularly report on progress towards meeting them?	3.2	1	5	
GC _{Corp}	To what extent does your company have an environmental management system (ISO 14001 or similar) in place to manage environmental risks and opportunities?	3.8	2	5	3.4
	To what extent does your company consider the full life cycle impacts of its products and services, from raw material sourcing to end-of-life disposal or recycling?	3.2	2	5	
GC _{Mark}	To what extent does your company use social media and other digital platforms to communicate its environmental sustainability initiatives and engage with customers on sustainability-related topics?	3.6	3	5	
	To what extent does your company provide environmental information on product packaging, such as recycling instructions or carbon footprint information?	3.8	3	5	3.6
	To what extent has your company experienced benefits, such as increased customer loyalty or employee satisfaction, from its environmental initiatives?	3.3	2	5	
N1	How have your company's environmental initiatives affected its relationships with employees, customers, and other stakeholders?	3.0	1	5	
	To what extent does your company involve suppliers in its environmental initiatives, such as promoting sustainable sourcing practices?	3.0	1	5	3.2
	How does your enterprise collaborate with targeted stakeholders to co-create environmental communication strategies and campaigns?	3.6	1	5	
N2	How does your enterprise measure and evaluate the effectiveness of its efforts to understand and respond to stakeholder interests and values?	3.2	2	5	
	To what extent do stakeholders view your enterprise as responsive to their environmental concerns and values?	3.6	1	5	3.3
	How does your enterprise collaborate with stakeholders to develop and implement environmental initiatives that align with their interests and values?	3.0	2	5	
N3	How frequently does your enterprise engage in dialogue with stakeholders about green competitiveness issues?	4.0	2	5	
	To what extent does your company work with suppliers and partners who share its commitment to environmental sustainability and use this as a selling point in its marketing efforts?	3.2	2	5	3.5
	To what extent do stakeholders view your enterprise as a leader in environmental responsibility and sustainability?	3.2	1	5	
N4	To what extent does your company engage with stakeholders and customers to gather feedback on its environmental sustainability initiatives and incorporate this feedback into its marketing efforts?	3.4	1	5	3.4
	How does your company typically incorporate stakeholders' suggestions and recommendations related to green competitiveness issues?	3.4	1	5	

Table 1. Cont.

Symbols	Query	Mean	Min	Max	IM
	How effective do you think your company's approach to incorporating stakeholders' suggestions and recommendations related to green competitiveness issues is?	3.4	1	5	
	How effective do you think your company's approach to managing stakeholder conflicts related to green competitiveness issues is?	4.0	1	5	
N5	To what extent does your company have formal processes in place for identifying and addressing stakeholder conflicts related to green competitiveness issues?	3.6	1	5	3.8

Note: GC_{Ekon}—Economic determinant of green competitiveness; GC_{Env}—Environment determinant of green competitiveness; GC_{Soc}—Social determinant of green competitiveness; GC_{Corp}—Corporate determinant of green competitiveness; GC_{Mark}—Marketing determinant of green competitiveness; N1—targeted stakeholders' communications; N2—knowledge and awareness of stakeholders' interests and values; N3—experience in communication with stakeholders; N4—incorporation of stakeholders' suggestions and recommendations in promoting a company's green competitiveness; N5—managing stakeholders' conflicts.

The second step involves testing the relationship among latent variables to assess the statistical significance of the empirical model:

$$LGC = \mu_{0j} + \mu_{jk}LSI_{jk} + \varepsilon_j \quad (3)$$

where μ_{0j} is a free variable; μ_{jk} —input factor and communication direction; K_{jk} —explicit SI variables (styles of communicative interaction between stakeholders and the enterprise); GC_{Ec}, GC_{Env}, GC_M, GC_S, and GC_C—explicit variables (economic, environmental, marketing, social, and corporate components, respectively) of the index of green competitiveness of enterprises; ε_j —standard error; j —block of relevant variables for the t -th period; k —number of variables; LSI is a latent variable of the stakeholders' integration in the enterprise management system; LGC is a latent variable of the green competitiveness of enterprises.

In model (3), the latent variable LSI is exogenous and LGC is the endogenous latent variable. This step helps to understand the underlying relationships and associations between the measurement and latent variables, thus providing insights into the factors that contribute to a company's green competitiveness. According to Chin W. [63], the load and direction of connection are determined by: $\mu_{jk} > 0.6$ —factors that have a significant impact; $\mu_{jk} < 0.6$ —factors that have no significant influence. These values have the appropriate limit values for the subsequent interpretation of the calculation results and the study of the importance of the studied parameters. The validation and construct reliability of the model are based on evaluating the convergent validity, which includes the composite reliability to evaluate internal consistency, individual indicator reliability, and average variance extracted (AVE) [64]. Additionally, the Fornell-Larcker criterion and cross-loadings [65] are used to assess the discriminant validity of the model.

4. Results

The assessment of the loading values of the measurement items is presented in Table 2, which indicates that the values are significant and above 0.60. Furthermore, the variance inflation factor values of the latent variables are below 5.0, indicating the absence of collinearity issues. The Cronbach's alpha coefficient values of the latent variables are all above 0.7, suggesting that the independent variable in the model is significant. Table 2 shows that all constructs were reliable, with composite reliability (CR) coefficients above 0.70 [66]. Convergent validity was assessed using the average variance extracted (AVE). An AVE value above 0.50 is required to ensure that the variance in the construct is not dominated by measurement error and that at least 50% of the measurement variance is explained [64]. The results indicated that the AVEs were above 0.50, providing evidence of convergent validity [64].

Table 2. Reliability and convergent validity.

Indicator	Description	Factor Loading	VIF	Cronbach's α	CR	AVE
Cutt-Off Level		>0.6	<5.0	>0.7	>0.7	>0.5
Green competitiveness				0.814	0.871	0.574
GC _{Ekon}	Economic determinant of green competitiveness	0.754 *	1.675	–	–	–
GC _{Env}	Environment determinant of green competitiveness	0.722 *	1.545	–	–	–
GC _{Soc}	Social determinant of green competitiveness	0.838 *	2.257	–	–	–
GC _{Corp}	Corporate determinant of green competitiveness	0.726 *	1.502	–	–	–
GC _{Mark}	Marketing determinant of green competitiveness	0.744 *	1.753	–	–	–
Stakeholder engagement in the company's management				0.807	0.863	0.560
N1	Targeted stakeholders' communications	0.692 *	1.420	–	–	–
N2	Knowledge and awareness of stakeholders' interests and values	0.711 *	1.581	–	–	–
N3	Experience in communication with stakeholders	0.802 *	1.871	–	–	–
N4	Incorporating stakeholders' suggestions and recommendations in promoting the company's green competitiveness	0.721 *	1.562	–	–	–
N5	Managing stakeholders' conflicts	0.806 *	1.516	–	–	–

Note: *—statistical significance at 1%; CR—composite reliability; AVE—average variance extracted.

The study applies a discriminant validity test to ensure the validity and reliability of its findings [67]. As per the algorithm of the discriminant validity test, the square roots of the average variance extracted (AVE) are compared with the correlation between latent variables [67]. If the square root of the AVE of a construct is greater than the correlation between that construct and another construct, it will indicate discriminant validity. The empirical results (Table 3) demonstrate that the criteria for discriminant validity are confirmed.

Table 3. The output of the discriminant validity test: Fornell-Larcker criterion.

Latent Variables	GC	LSI
GC	0.758	–
LSI	0.632	0.748

The loading values (bolded) of each item in the latent variables exceeded the cross-loading values (Table 4), indicating that the measurement model satisfies the reliability and validity criteria.

Table 4. Cross loadings.

Variables	GC _{Ekon}	GC _{Env}	GC _{Soc}	GC _{Corp}	GC _{Mark}	N1	N2	N3	N4	N5
GC	0.754	0.722	0.838	0.726	0.744	0.399	0.339	0.482	0.370	0.656
LSI	0.467	0.478	0.440	0.529	0.461	0.692	0.711	0.802	0.721	0.806

Note: bold means that loading values satisfy the reliability and validity criteria.

The results of the assessment of the measurement variables' impact on the latent variables of stakeholders' engagement in the company's management and the green competitiveness of the company are presented in Figure 1.

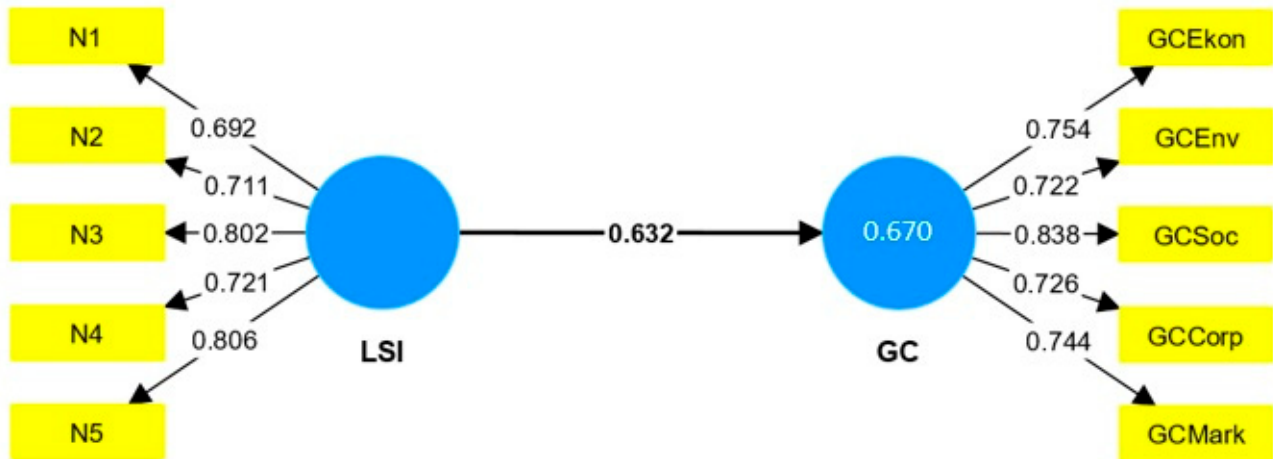


Figure 1. Structural equation model for the assessment of stakeholders' engagement impact on companies' green competitiveness.

The empirical results confirm the study's assumption about the positive statistically significant effect of stakeholders' engagement on the green competitiveness of the company. Thus, latent variables (*LSI*), which reveal stakeholders' engagement, promote the green competitiveness of the company. The R^2 value ($R^2 = 0.469$) indicates that 46.9% of the variance in purchasing intention can be explained by the causal relationships with the other constructs in the model; hence, this supports construct validity. The findings (Figure 1) show that all coefficients of measurement variables are higher than 0.6. Experience in communication with stakeholders and managing stakeholders' conflicts has the highest impact on the latent variable *LSI*. The loads of N3 and N5 are 0.802 and 0.806, respectively. The targeted stakeholders' communications have the lowest value of the leading factor (0.692) on the latent variable *LSI*. Knowledge and awareness of stakeholders' interests and values ($N2 = 0.711$) and incorporating their suggestions and recommendations in promoting a company's green competitiveness ($N4 = 0.721$) have approximately equal effects on the latent variable *LSI*. Among the dimensions of *GC*, the highest load is defined for the social determinant—0.838. In addition, all environmental and corporate dimensions have approximately equal impacts on green competitiveness.

5. Discussion

The study's assumption regarding the positive and statistically significant impact of stakeholder engagement on the company's green competitiveness is confirmed by the empirical results. Considering the findings, the latent variable *LSI*, which reflects stakeholder engagement, promotes the company's green competitiveness. The *LSI* improvement of one point provokes a growth in *GC* of 0.632. Such conclusions are consistent with past studies [68,69]. In addition, experience in communication with stakeholders is the most significant indicator that is conducive to stakeholder engagement. Past studies [3,70] also outline the necessity of encouraging communication with stakeholders, which contributes to companies' competitiveness and image. Effective communication with stakeholders and managing conflicts can help develop stronger relationships with them, which was also confirmed by the results of this and past studies [18,26]. It can lead to increased stakeholder trust and support for the company's sustainability initiatives, which can positively impact the company's green competitiveness. Continuous communication with stakeholders allows the development of more effective sustainability strategies, which can positively impact a company's green competitiveness [71,72]. It should be noted that Kong R. et al. [25]

outline the necessity to communicate with both stakeholders' groups (internal and external) for promoting a company's green competitiveness. External stakeholders (customers, investors, local communities, etc.) could influence a company's green reputation, green brand image, and environmental performance. Effective communication with these stakeholders allows it to ensure trust, build relationships, and demonstrate its commitment to sustainability. Consequently, it provokes increased sales, loyalty, and positive word-of-mouth, which can ultimately enhance the company's green competitiveness. Internal stakeholders (employees, management, shareholders, etc.) are directly involved in a company's day-to-day operations, which is the basis for green competitiveness. Effective communication with these stakeholders promotes a culture of sustainability within the organization, encourages employee engagement, and improves supply chain sustainability. This can lead to increased efficiency, reduced costs, and improved environmental performance, which can in turn enhance the company's green competitiveness.

At the same time, personalized, individual, and targeted communication with stakeholders allows companies to better understand the needs, preferences, and expectations of their stakeholders, which in turn helps them tailor their green initiatives and messages accordingly [10,18,26]. Furthermore, the results of this study also confirm the assumption of a positive impact of targeted communications on green competitiveness. Moreover, by developing a personalized approach to communication, companies can establish trust, build relationships, and engage stakeholders in a meaningful way. Personalized communication allows companies to identify areas where they could improve their sustainability practices by receiving feedback from their stakeholders. This can lead to more effective and targeted sustainability initiatives that address the specific concerns and needs of their stakeholders [10,18,26].

However, scholars [33,73] confirm that stakeholders' incorporation into the company's management could restrict the acceptance of relevant policies over time due to increasing the communication chain. At the same time, by engaging with stakeholders, companies can identify potential issues before they become major problems and collaborate with stakeholders to develop solutions that are mutually beneficial [74]. Sebhatu et al. [75] prove that multistakeholder dialog provides sustainable, targeted values and advantages for companies. Similar to the study [76], the empirical results of this study also confirm the positive statistically significant impact of knowledge and awareness on stakeholders' green interests and values on companies' capabilities to develop green competitiveness.

In addition, stakeholders' decisions, suggestions, and ideas should be incorporated into the company's development policy. From the other point of view, stakeholders should have good knowledge of companies' green values and policies that allow them to be active and suggest prolific decisions on promoting companies' green competitiveness.

The specific challenges and opportunities of green competitiveness in emerging markets are different from those in developed markets due to the unique economic, social, and environmental context of these markets. A lot of companies in emerging markets face limited access to finance, making it difficult to invest in green technologies and practices. This can be a major barrier to achieving green competitiveness, as many green initiatives require significant capital investments. At the same time, many emerging markets are focusing on building green infrastructure and investing in green technologies to improve their environmental sustainability. They also prioritize local solutions that address local challenges. In this case, the core role in emerging markets is played by the following groups of stakeholders: local communities, regulators, and suppliers. However, for the developed market, the following groups of stakeholders have a crucial role: investors, customers, NGOs, and advocacy groups.

6. Conclusions

Developing companies' green competitive advantages requires coherent cooperation and communication between all groups of stakeholders. Applying structural modeling tools and the PLS-SEM technique, the findings prove that stakeholders' engagement in

the company's management has a statistically significant positive effect on their green competitiveness, with a loading factor value of 0.632. Among all indicators that explained stakeholders' engagement in the company's management, the experience in communication with stakeholders (0.802) and managing their conflicts (0.806) had the most significant effect on the results indicator. The impact of other dimensions is approximately equal. It should be noted that the social dimension plays a core role in promoting the green competitiveness of the company. The environment, corporate, and marketing dimensions positively affect a company's green competitiveness with approximately similar loading factors. The improvement of a company's green competitiveness by extending stakeholders' engagement provides positioning in world markets in the framework of attracting green investments and intellectual capital [3,9,77]. At the same time, stakeholders' engagement allows the company to increase transparency and trust, which are core requirements of sustainable development [74,75]. It could consequently boost the company's market capitalization and open new windows for listing on global green stock exchanges.

Thus, considering the study's results, the following suggestions could be developed to promote a company's green competitiveness within stakeholder engagement:

- Engage with stakeholders to understand their green concerns and expectations within digital (online surveys, feedback systems, etc.) or traditional communication channels (official meetings, focus groups, etc.). In addition, management should consider stakeholders' feedback on companies' green initiatives to ensure that they are aligned with stakeholder expectations [13,31,75].
- Strengthen partnerships with suppliers and consumers to increase green awareness and consciousness. It consequently allows for responsible production and consumption, which reduces the company's negative effect on the environment [14,46].
- Publishing sustainability reports as obligatory requirements on the official company's website and promoting them among all stakeholders within social media [26,74].
- Companies should improve their conflict management processes to address any disagreements that may arise with stakeholders. This process should be transparent and inclusive and seek to find mutually beneficial solutions [73,77].
- Companies should invest in green technologies and innovations to reduce their environmental impact. This can include investing in renewable energy, reducing waste, and reducing greenhouse gas emissions [5,21,22].

It should be noted that the obtained results could be the basis for empirical justification of stakeholders' green attitudes and advocacy impact on achieving green competitiveness by the companies. There are several limitations to this research that should be acknowledged.

First, the study heavily relied on the survey method, which has certain weaknesses, such as limited items in the questionnaire, the potential for human bias in completing the questionnaire, and the ability of respondents to provide the required information accurately. To overcome these limitations, future studies are recommended to consider using secondary data.

Second, this study only focused on companies in Ukraine, with a relatively small sample size due to the challenges posed by the COVID-19 pandemic and the ongoing war. As a result, data collection relied heavily on online questionnaires, making it difficult to meet with owners/managers of enterprises in person.

Third, not all owners/managers of companies in Ukraine have the same level of expertise in stakeholder engagement and achieving green competitiveness, which may have impacted the accuracy of the data collected. Therefore, the researchers were unable to conduct in-depth interviews to gain a more comprehensive understanding of the real situation faced by companies in Ukraine.

Past studies [2,10,35,37] underlined that green values and awareness impact stakeholder engagement. Furthermore, green values and awareness are shaped by a complex interplay of exogenous and endogenous factors (greenwashing, green awareness, green loyalty, green marketing, etc.), which can influence their perspectives, actions, and at-

titudes towards a company's green competitiveness. Thus, it should be considered in future investigations.

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