



Article

# Constructing an Adoption Model of Proactive Environmental Strategy: A Novel Quantitative Method of the Multi-Level Growth Curve Model

Stanley Y. B. Huang <sup>1</sup>, Shih-Chin Lee <sup>2</sup>,\* and Yue-Shi Lee <sup>3</sup>

- Master Program of Financial Technology, School of Financial Technology, Ming Chuan University, Taipei 111, Taiwan; yanbin@mail.mcu.edu.tw
- <sup>2</sup> Department of Finance, Chihlee University of Technology, New Taipei 220, Taiwan
- Department of Computer Science and Information Engineering, Ming Chuan University, Taoyuan City 333, Taiwan; leeys@mail.mcu.edu.tw
- \* Correspondence: icestorm@mail.chihlee.edu.tw

Abstract: To fill in the literature flaws that have not been detected in previous studies, this research, therefore, examines the driving factors of proactive environmental strategy (PES). First, this research proposes how corporate social responsibility (CSR) predicts the agricultural company's PES through the intermediary mechanism of green organization identification (GOI) of the top management team (TMT) according to symbolic context and theory of high-level echelon, to solve the first gap in exploring what factors can drive the PES. Second, this research proposes a multi-level growth curve model (MGCM) to solve how individuals adjust their behavioral intentions over time according to their translation and understanding of their use environment, because past studies consist of almost cross-sectional properties. Third, past research has also neglected the multi-level framework, leading to hierarchical reasoning bias. Therefore, this research believes that the MGCM can fill in the multi-level gap. Finally, this research collected 400 TMT employees from 100 different agricultural companies in Taiwan in three-stage time for six months. The results show that CSR will significantly lead to more growth in GOI, and more growth in GOI will lead to more growth in PES adoption. The research results can not only advance the agricultural sustainability literature but also serve as a guide for agricultural companies to implement PES.

**Keywords:** corporate social responsibility; green organizational identity; proactive environmental strategy; agricultural company



Citation: Huang, S.Y.B.; Lee, S.-C.; Lee, Y.-S. Constructing an Adoption Model of Proactive Environmental Strategy: A Novel Quantitative Method of the Multi-Level Growth Curve Model. *Mathematics* **2021**, *9*, 1962. https://doi.org/10.3390/ math9161962

Academic Editor: David Carfi

Received: 5 July 2021 Accepted: 7 August 2021 Published: 17 August 2021

**Publisher's Note:** MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

## 1. Introduction

## 1.1. Background

Previous studies have examined the environmental strategy as a driving factor to competitive advantage [1,2] because of external pressure [3]. Although companies can improve their financial performance through earnings management and other profitable strategies [4], they may suffer huge fines for violating environmental regulations and lead to company bankruptcy [5,6]. In addition, agricultural production will cause a lot of environmental pollution, and the food demand will continue to grow [7]. It is important to explore the driving factors of the proactive environmental strategy (PES) because it can achieve pollution reduction and sustainable production of agricultural products. Indeed, although previous studies have used environmental engineering technology to recycle and reuse the elements in agricultural fertilizers to reduce environmental pollution [8,9], this may still be less effective than the direct use of a PES in agricultural production.

# 1.2. Research Gaps

Past studies have shown that it is important to explore the driving factors of a PES [10], which is a certain strategy used by companies to deal with environmental pollution in

Mathematics **2021**, 9, 1962 2 of 9

production activities. However, past research almost used the institutional perspective to predict the PES [11] to yield a literature gap. This research proposes a new perspective that is based on the symbolic context theory [12] and the upper echelon theory [13], using corporate social responsibility (CSR) to predict the PES through the intermediary mechanism of a TMT's green organizational identity (GOI). CSR refers to the practical policy of a company that is responsible for the environment and society, which focuses on the welfare of various stakeholders [14]. GOI represents the integration of environmental concerns into the organization's theory of identification with environmental issues [15]. The theory of symbolic context shows that the symbol is the main source of identity formation because a symbol can guide the self-worth of individuals in the group to form a collective identity [12]. Similarly, CSR is an important symbol, because CSR guides company members on how to manage the natural environment and self-worth, implying the driving effect of CSR on GOI. In addition, the high-level echelon theory believes that the self-value of senior executives will affect the company's strategic adoption [13], and GOI is the self-identification value of environmental issues, indicating the relationship between the GOI of a TMT and the adoption of the company's PES. This research proposes a multi-level growth curve model (MGCM) to examine how multi-level CSR results in more growth of multi-level GOI, which in turn leads to more growth in PES adoption at the individual level. Indeed, past studies have begun to investigate environmental performance through the implementation of a PES [16], but few studies have focused on the driving factors of adopting a PES for company-level variables (e.g., CSR at the work unit level), which has caused a gap in the literature.

## 1.3. Summary

In summary, this research pays attention to the "growth" of CSR, GOI, and the PES to fill in the literature gap, because the past research is almost a cross-sectional design [17]. This research fills in this concern by investigating 100 CEOs from 100 different agricultural companies in Taiwan and 400 TMT members at a three-stage time for six months.

## 2. Literature and Hypothesis

# 2.1. CSR and GOI

Symbol (e.g., organizational systems) is a driver for shaping employees' self-value because the symbolic context theory believes that a symbol is a source of guidance for employees in a workgroup [12]. CSR is like a symbol because CSR can guide company employees on how to act and create to be in line with the content of CSR, thereby showing the relationship between CSR and GOI. For example, the TMT of an agricultural company may assess its company's environmental responsibility to adapt to the self-value of environmental concerns, while a high level of CSR is a reputation that is attractive to both internal and external parties to increase a TMT's positive evaluation of its company, which in turn allows the TMT to agree with the company's view of environmental responsibility (GOI). Thus, we had our first hypothesis:

**Hypothesis 1.** *CSR* at the first-stage time would cause more growth of GOI over time.

## 2.2. GOI and PES

Past studies have suggested that companies will choose the optimal strategy to maximize corporate interests [18], and few companies may invest in non-profit environmental management [19]. However, companies can transform these non-profit investment experiences into the status of a senior management team (TMT) to influence the company's adoption of environmental management [20], and environmental strategy has been identified as a key source of competitive advantage [21,22].

The high-level echelon theory believes that the self-value of senior executives will affect the company's strategy adoption [13] because the preferences of senior executives have the legitimacy and power to influence the company's strategy adoption. For example,

Mathematics 2021, 9, 1962 3 of 9

an older executive with conservative thinking may influence his or her company to adopt a conservative and stable strategy to ensure a smooth retirement. On the contrary, a young executive with risky self-worth may influence his or her company to choose high-profit risk strategies to establish his future position in the company. Since the TMT's GOI is an identity value for environmental concerns, a TMT with a high GOI level should influence the company's preferred strategy for adopting a PES, thus showing the relationship between GOI and PES adoption. This yielded our second hypothesis:

**Hypothesis 2.** *More growth of the GOI will cause more growth of the company's PES adoption.* 

# 2.3. CSR and GOI at the Work-Unit Level

Although CSR and GOI have the attributes of individual analysis, these variables may form work-unit-level attributes. Indeed, previous studies [23–25] used organizational multi-level methods [26] to summarize the employee perspective at the individual level and studied the concepts of CSR and organizational identity at a multi-level. In addition, social information processing [27] believes that individuals collect information from other individuals in their social environment (e.g., workgroups) to make decisions about the value of the organization, which may yield a similar CSR and GOI atmosphere [28].

# 2.4. Cross-Level Effect of CSR and GOI for PES

This research proposes the MGCM and uses two theories to connect cross-level CSR, GOI, and the PES. The context model [29] shows that individual-level and organizational-level systems can be explained by contextual variables (organizational-level variables). In other words, CSR at a multi-level can simultaneously influence the company's PES through GOI at a multi-level. Work-unit-level CSR and GOI are defined by this research as an atmosphere in the work environment, and it is an environmental stimulus shared by members of the working group [30]. Additionally, the theory of social cognition [31] believes that human behavior is regarded as the interaction of personal factors and environmental background factors. In other words, whether a company chooses to implement a PES may be affected by the GOI (personal perception factor) of the TMTs and the GOI (environmental background factor) at the work unit level. Thus, our third and fourth hypotheses were as follows:

**Hypothesis 3.** Work unit level CSR at the first time point causes more growth of the work unit level GOI.

**Hypothesis 4.** More growth of the work unit level GOI will cause more growth of the company's PES adoption.

## 3. Results

The theoretical model is from the CSR to PES by GOI. Figure 1 is an important framework in the agricultural field because past research not only ignored the driving factors of PES adoption but also ignored the impact of the multi-level framework.

# 3.1. Sampling and Procedures

Several agricultural associations in Taiwan were queried to provide sample lists, and this research contacted these agricultural companies to join the survey. As a result, 100 CEOs and TMTs are willing to join the investigation of this research, and we asked these companies to provide 4 TMT members of their TMTs to fill out the questionnaire. In this research, emails were used to collect questionnaires to prevent the CEO from knowing about the TMTs questionnaires. The sampling design used in this research was a 3-month lag structure in three waves because the attitude changes should have been detected during this time lag [32–34]. In other words, we collected data at the first-stage, second-stage, and third-stage time, and each stage time was 3 months apart for the Taiwan agricultural

Mathematics 2021, 9, 1962 4 of 9

companies for six months. In addition, sample collection at different time points could also reduce the problem of common method bias [35].

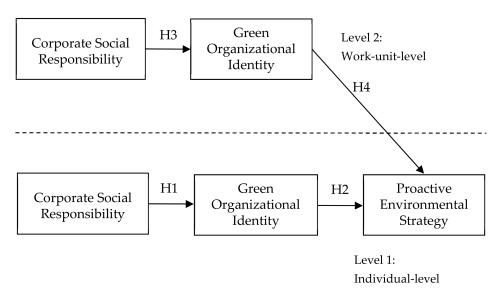


Figure 1. Research model of this study.

## 3.2. Measures

Backward translation was used to maintain consistency [36], and the items of the CSR, GOI, and PES were evaluated by 7-point Likert. In addition, the within-group agreement  $(r_{wg(j)})$  of James et al. [37] and within-group consensus  $(r_{wg(j)})$  were employed to test the feasibility of variable aggregation, because  $r_{wg(j)}$  was used to evaluate the consistency within the group, which had a threshold of 0.6 [37]. For example, individual-level CSR data were collected by employees answering questionnaires, while work unit level CSR, which represents the CSR atmosphere pervading the workgroup, came from the average aggregation of the data answered by these employees. It was necessary to determine whether the data provided by these employees within each company had a high degree of consensus (high correlation) before it could be aggregated into higher-level variables. If the CSR data provided by these employees in each company were lower than 0.6 as calculated by the  $r_{wg(j)}$ , it meant that there was no collective consensus on the CSR atmosphere, which also showed that the CSR at the work-unit level could not be derived from the average aggregation of the data provided by the employees in each company. The  $r_{wg(j)}$  average variance is shown in Table 1.

We evaluated CSR through a comprehensive scale developed by Marin and his colleagues [38], and the  $_{\mathrm{rwg(j)}}$ , validity(AVE), and reliability (CR) of CSR were 0.83, 0.70, and 0.78, respectively. In this research, the GOI scale was developed by referring to Chen's [15] scale. The GOI's  $r_{\mathrm{wg(j)}}$ , AVE, and CR of GOI were 0.81, 0.69, and 0.76, respectively. We evaluated PES through the scale of Dai and his colleagues [10], and the  $r_{\mathrm{wg(j)}}$ , AVE, and CR of the PES were 0.83, 0.71, and 0.77, respectively. The items of CSR, GOI, and PES are shown as Appendix A.

## 3.3. Validation of Multi-Level Data Structure

The minimum  $r_{wg(j)}$  of CSR, GOI, and the PES was 0.81, which supports the aggregation of individual-level CSR and GOI into work unit level CSR and GOI. Multi-level confirmatory factor analyses were executed to confirm the fit indices and discriminant validity. The minimum AVE and CR were 0.69 and 0.76, respectively, which denotes the empirical data having high quality. The fit indices of the research model meet the recommendations through past researchers [39] (please see Table 1).

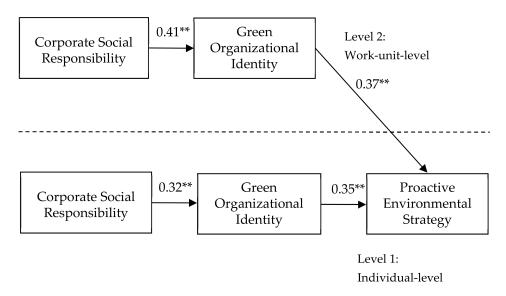
Mathematics 2021, 9, 1962 5 of 9

** • • • •		4775	CP.
Variables	$\mathbf{r}_{\mathbf{wg}(\mathbf{j})}$	AVE	CR
CSR	0.83	0.70	0.78
GOI	0.81	0.69	0.76
PES	0.83	0.71	0.77

**Table 1.** The  $r_{wg(j)}$ , average variance extracted, and composite reliability.

# 3.4. Analysis Results

The data of this research were collected from multiple samples and multiple times nested in a single workgroup, so this research employed the MGCM to analyze the data from different companies and cross-level frameworks [40]. First, the individual-level CSR at the first time point significantly influenced more growth of the individual-level GOI ( $\gamma = 0.32$ , p < 0.01), and more growth of the individual-level GOI significantly influenced more growth of the individual-level PES ( $\gamma = 0.35$ , p < 0.01) (please see Figure 2). Therefore, hypotheses 1 and 2 were both supported. These two hypotheses indicate that a TMT with higher CSR perception would result in more growth of its GOI, which in turn will lead to more growth in its company's PES adoption over time.



**Figure 2.** Analysis results of this research. Note: \*\* = p < 0.01.

Second, the work-unit-level CSR at the first time point significantly influenced the growth of work-unit-level GOI ( $\gamma = 0.41$ , p < 0.01), and more growth of the work-unit-level GOI significantly influenced more growth of the individual-level PES ( $\gamma = 0.37$ , p < 0.01) to support these two hypotheses. These two hypotheses indicate that a TMT that perceived higher work unit level CSR (atmosphere) at the first time point would cause more growth of their work unit level GOI (atmosphere) which, in turn, would also cause more growth of their company's PES adoption over time.

## 4. Discussion

The purpose of this research is to fill in the literature flaws that have not been studied in previous studies. Therefore, this research proposes the novel MGCM (that is, how to implement CSR in an organization's multi-level framework to predict the adoption of a PES at the individual level through the mediation effect of GOI). This novel MGCM is of great significance in the CSR and PES literature and continues to provide incremental contributions to predicting environmental issues and green behavior.

Mathematics 2021, 9, 1962 6 of 9

#### 4.1. Academic Contribution

A new research stream is introduced through the MGCM of this research because the model shows how the interaction between humans (individual-level perceptions) and the environment (work unit level atmosphere (i.e., work unit level GOI)) can influence individual-level strategic choice (PES adoption), which also responds to the call of Dai and his colleagues [10]. Surprisingly, in the past, little research has studied the relationship between CSR to PES, especially since CSR is a common variable. This research contributes to emerging research for CSR and examines how TMTs' perceived CSR motivates their CSR-specific behaviors (GOI). In other words, there are many black boxes in the CSR field. In particular, the GOI of TMTs plays an important role in stimulating this mechanism. Therefore, the MGCM of this research addresses what factors can drive the PES.

Few studies have explored the antecedents of a PES, so it is important to open the black box through which variables can promote the adoption of a PES in specific environments. This research contributes to the PES literature by investigating how CSR influences a PES through dual paths (paths at individual work-unit level). Indeed, the results showed how higher CSR at the first time point would cause a TMT to show more GOI, which in turn would influence the company's PES adoption. Similarly, the higher work unit level CSR at the first time point would also influence the work unit level GOI, which consequently also influenced the company's PES adoption. In summary, this research promotes the academic and practice development of a PES by examining how both work unit and individual-level variables influence PES adoption, which resolves the cross-sectional and multi-level gaps of previous research.

## 4.2. Practice Contribution

According to previous studies on how environmental sustainability can improve financial performance [21,22], studying how companies use their PESs to improve environmental performance is of great benefit to sustainable development. The results of this research provide some guidance for agricultural companies to develop PESs. For example, these companies should not only truly devote resources to CSR activities but also communicate with employees through CSR briefings, CSR mission statements, CSR training, etc. to effectively enhance the CSR awareness and CSR atmosphere within the company to cultivate GOI and a PES.

In addition, human resource managers usually invest a lot of resources to improve various attitudes and practices of employees to improve organizational performance. However, they may seldom pay attention to the important variables (e.g., GOI) in influencing PES adoption. Human resource managers should learn to maximize these green variables and create a good green working atmosphere through education training. In particular, human resource managers can also hold employee meetings to show the company's green vision and values to increase GOI.

### 4.3. Further Research and Limitations

First, this research proposes the GOI of TMTs as a key intermediary variable between CSR and the PES. However, in a different context, there should be another key green intermediary variable, and further research should explore these green variables. Second, the data in this research are 105 different agricultural companies in Taiwan. There is no evidence to support that the Taiwan sample can be extended to Asia or other countries. However, Calder et al. [41] proposed that if the goal is only to test the theoretical framework, then a special sample is allowed. Third, although this research tested the longitudinal data with three-time points and nested frames over 6 months, more longitudinal data are needed to support causal inference. Fourth, to verify the causal relationship between CSR, GOI, and the PES, further studies should employ more technical methods to retest the proposed model of this study again, such as experimental design [42,43] and numerical simulation [44]. Finally, although this study adopted the novel MGCM to open the black

Mathematics 2021, 9, 1962 7 of 9

box between CSR, GOI, and the PES, further studies should adopt case studies to verify the generalization of the proposed model in this research.

**Author Contributions:** Conceptualization, S.Y.B.H.; methodology, S.-C.L.; software, S.-C.L.; validation, S.Y.B.H.; formal analysis, S.-C.L.; investigation, S.-C.L.; resources, Y.-S.L.; data curation, Y.-S.L.; writing—original draft preparation, S.Y.B.H.; writing—review and editing, S.Y.B.H.; visualization, S.-C.L.; supervision, S.Y.B.H.; project administration, S.Y.B.H.; funding acquisition, Y.-S.L. All authors have read and agreed to the published version of the manuscript.

Funding: There is no funding in this research.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable. **Data Availability Statement:** Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

# Appendix A

The evaluation items of corporate social responsibility, green organizational identity, and proactive environmental strategy (7-point of Likert scale).

Variable	Evaluation Items			
	I feel that my company is highly concerned for			
Corporate Social Responsibility	<ol> <li> well-being.</li> <li> communities.</li> <li> environment management.</li> <li> worthy causes.</li> </ol>			
Green Organizational Identity	<ol> <li>I feel that our top management team</li> <li> company's history of environmental management.</li> <li> company's environmental goals.</li> <li> carved out a significant position for environmental</li> <li> well-defined set of environmental goals.</li> <li> company's environmental traditions and cultures.</li> <li> company's actions for environmental management.</li> </ol>			
	el that			
Proactive Environmental Strategy	<ol> <li> compliance with laws and regulations on environmental issues.</li> <li>my company gives a high priority</li> <li>the top management team high priority.</li> <li> manages the environmental risks that affect our business.</li> </ol>			

## References

- 1. Calle, F.; González-Moreno, Á.; Carrasco, I.; Vargas-Vargas, M. Social Economy, Environmental Proactivity, Eco-Innovation and Performance in the Spanish Wine Sector. *Sustainability* **2020**, *12*, 5908. [CrossRef]
- 2. Huang, S.Y.B.; Ting, C.-W.; Li, M.-W. The Effects of Green Transformational Leadership on Adoption of Environmentally Proactive Strategies: The Mediating Role of Green Engagement. *Sustainability* **2021**, *13*, 3366. [CrossRef]
- 3. Lehtonen, H.; Palosuo, T.; Korhonen, P.; Liu, X. Higher Crop Yield Levels in the North Savo Region—Means and Challenges Indicated by Farmers and Their Close Stakeholders. *Agriculture* **2018**, *8*, 93. [CrossRef]
- 4. Kliestik, T.; Valaskova, K.; Nica, E.; Kovacova, M.; Lăzăroiu, G. Advanced methods of earnings management: Monotonic trends and change-points under spotlight in the Visegrad countries. *Oeconomia Copernic*. **2020**, *11*, 371–400. [CrossRef]
- 5. Kliestik, T.; Misankova, M.; Valaskova, K.; Svabova, L. Bankruptcy Prevention: New Effort to Reflect on Legal and Social Changes. *Sci. Eng. Ethics* **2018**, 24, 791–808. [CrossRef]
- 6. Kubálek, J.; Cámská, D.; Strouhal, J. Personal Bankruptcies from Macroeconomic Perspective. *Int. J. Entrep. Knowl.* **2018**, *5*, 78–88. [CrossRef]

Mathematics 2021, 9, 1962 8 of 9

7. Searchinger, T.; Waite, R.; Hanson, C.; Ranganathan, J. Creating a Sustainable Food Future. 2018. Available online: https://www.wri.org/insights/how-sustainably-feed-10-billion-people-2050-21-charts (accessed on 5 June 2021).

- 8. Maroušek, J.; Maroušková, A. Economic Considerations on Nutrient Utilization in Wastewater Management. *Energies* **2021**, 14, 3468. [CrossRef]
- 9. Stávková, J.; Maroušek, J. Novel sorbent shows promising financial results on P recovery from sludge water. *Chemosphere* **2021**, 276, 130097. [CrossRef]
- 10. Dai, J.; Chan, H.K.; Yee, R.W.Y. Examining moderating effect of organizational culture on the relationship between market pressure and corporate environmental strategy. *Ind. Mark. Manag.* **2018**, 74, 227–236. [CrossRef]
- 11. Peng, B.H.; Tu, Y.; Elahi, E.; Wei, G. Extended producer responsibility and corporate performance: Effects of environmental regulation and environmental strategy. *J. Environ. Manag.* **2018**, *218*, 181–189. [CrossRef] [PubMed]
- 12. Hatch, M.J. The dynamics of organizational culture. Acad. Manag. Rev. 1993, 18, 657–693. [CrossRef]
- 13. Hambrick, D.C. Upper echelons theory: An update. Acad. Manag. Rev. 2007, 32, 334–343. [CrossRef]
- 14. Turker, D. Measuring corporate social responsibility: A scale development study. J. Bus. Ethics 2009, 85, 411–427. [CrossRef]
- 15. Chen, Y.S. Green organizational identity: Sources and consequence. Manag. Decis. 2011, 49, 384–404. [CrossRef]
- 16. Do, B.; Nguyen, N. The Links between Proactive Environmental Strategy, Competitive Advantages and Firm Performance: An Empirical Study in Vietnam. *Sustainability* **2020**, *12*, 4962. [CrossRef]
- 17. López-Bonilla, L.M.; Sanz-Altamira, B.; López-Bonilla, J.M. Self-Consciousness in Online Shopping Behavior. *Mathematics* **2021**, 9, 729. [CrossRef]
- 18. Tonnoir, A.; Ciotir, I.; Scutariu, A.-L.; Dospinescu, O. A Model for the Optimal Investment Strategy in the Context of Pandemic Regional Lockdown. *Mathematics* **2021**, *9*, 1058. [CrossRef]
- 19. Janik, B.; Maruszewska, K. Valuation of the Environmental Effects of Socially Responsible Investments in Europe. *Sustainability* **2020**, *12*, 9855. [CrossRef]
- Molina-Azorin, J.F.; López-Gamero, M.D.; Tarí, J.J.; Pereira-Moliner, J.; Pertusa-Ortega, E.M. Environmental Management, Human Resource Management and Green Human Resource Management: A Literature Review. Adm. Sci. 2021, 11, 48. [CrossRef]
- 21. Forés, B. Beyond Gathering the 'Low-Hanging Fruit' of Green Technology for Improved Environmental Performance: An Empirical Examination of the Moderating Effects of Proactive Environmental Management and Business Strategies. *Sustainability* **2019**, 11, 6299. [CrossRef]
- 22. Martos-Pedrero, A.; Cortés-García, F.J.; Jiménez-Castillo, D. The Relationship between Social Responsibility and Business Performance: An Analysis of the Agri-Food Sector of Southeast Spain. *Sustainability* **2019**, *11*, 6390. [CrossRef]
- Chang, T.-W.; Hung, C.-Z. How to Shape the Employees' Organization Sustainable Green Knowledge Sharing: Cross-Level Effect
  of Green Organizational Identity Effect on Green Management Behavior and Performance of Members. Sustainability 2021, 13, 626.
   [CrossRef]
- Mahmood, F.; Qadeer, F.; Abbas, Z.; Hussain, I.; Saleem, M.; Hussain, A.; Aman, J. Corporate Social Responsibility and Employees' Negative Behaviors under Abusive Supervision: A Multilevel Insight. Sustainability 2020, 12, 2647. [CrossRef]
- 25. Tsalis, G.; Jensen, B.B.; Wakeman, S.W.; Aschemann-Witzel, J. Promoting Food for the Trash Bin? A Review of the Literature on Retail Price Promotions and Household-Level Food Waste. *Sustainability* **2021**, *13*, 4018. [CrossRef]
- 26. Kozlowski, S.W.J.; Klein, K.J. A multilevel approach to theory and research in organizations: Contextual, temporal, and emergent processes. In *Multilevel Theory, Research, and Methods in Organizations: Foundations, Extensions, and New Directions*; Klein, K.J., Kozlowski, S.W.J., Eds.; Jossey-Bass: San Francisco, CA, USA, 2000; pp. 3–90.
- 27. Salancik, G.J.; Pfeffer, J.A. Social information processing approach to job attitudes and task design. *Adm. Sci. Q.* **1978**, 23, 224–253. [CrossRef]
- 28. Naumann, S.E.; Bennett, N. A case for procedural justice climate: Development and test of a multilevel model. *Acad. Manag. J.* **2000**, *43*, 881–889.
- 29. Firebaugh, G. Groups as Contexts and Frog Ponds. In *Issues in Aggregation*; Roberts, K.H., Burstein, L., Eds.; Jossey-Bass: San Francisco, CA, USA, 1980; pp. 43–52.
- 30. Huang, S.Y.B.; Ting, C.-W.; Fei, Y.-M. A Multilevel Model of Environmentally Specific Social Identity in Predicting Environmental Strategies: Evidence from Technology Manufacturing Businesses. *Sustainability* **2021**, *13*, 4567. [CrossRef]
- 31. Bandura, A. Social Foundations of Thought and Action: A Social Cognitive Theory; Prentice Hall: Upper Saddle River, NJ, USA, 1986.
- 32. Huang, S.Y.B.; Fei, Y.-M.; Lee, Y.-S. Predicting Job Burnout and Its Antecedents: Evidence from Financial Information Technology Firms. *Sustainability* **2021**, *13*, 4680. [CrossRef]
- 33. Huang, S.Y.B.; Li, M.-W.; Chang, T.-W. Transformational Leadership, Ethical Leadership, and Participative Leadership in Predicting Counterproductive Work Behaviors: Evidence From Financial Technology Firms. *Front. Psychol.* **2021**, *12*, 658727. [CrossRef]
- 34. Lee, C.-J.; Huang, S.Y.B. Double-edged effects of ethical leadership in the development of Greater China salespeople's emotional exhaustion and long-term customer relationships. *Chin. Manag. Stud.* **2020**, *14*, 29–49. [CrossRef]
- 35. Podsakoff, P.M.; MacKenzie, S.B.; Lee, J.; Podsakoff, N.P. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *J. Appl. Psychol.* **2003**, *88*, 879–903. [CrossRef]
- 36. Brislin, R.W. Translation and content analysis of oral and written materials. In *Handbook of Cross-Cultural Psychology;* Triandis, H.C., Berry, J.W., Eds.; Allyn and Bacon: Boston, MA, USA, 1980; Volume 2, pp. 389–444.

Mathematics 2021, 9, 1962 9 of 9

37. James, L.R.; Demaree, R.G.; Wolf, G. Estimating within group interrater reliability with and without response bias. *J. Appl. Psychol.* **1984**, *69*, 85–89. [CrossRef]

- 38. Marin, L.; Martín, P.J.; Rubio, A. Doing Good and Different! The Mediation Effect of Innovation and Investment on the Influence of CSR on Competitiveness. *Corp. Soc. Responsib. Environ. Manag.* **2017**, 24, 159–171. [CrossRef]
- 39. Fornell, C.; Lacker, D.F. Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **1981**, *18*, 39–50. [CrossRef]
- 40. Hoffman, L. Longitudinal Analysis: Modeling Within-Person Fluctuation and Change; Routledge: New York, NY, USA, 2015.
- 41. Calder, B.J.; Phillips, L.W.; Tybout, A.M. Designing research for application. *J. Consum. Psychol.* **1981**, *8*, 197–201. Available online: https://www.jstor.org/stable/2488831 (accessed on 5 June 2021). [CrossRef]
- 42. Hadzima, B.; Janecek, M.; Estrin, Y.; Kim, H.S. Microstructure and corrosion properties of ultrafine-grained interstitial free steel. *Mater. Sci. Eng. A* **2007**, *462*, 243–247. [CrossRef]
- 43. Jandacka, J.; Micieta, J.; Holubcik, M.; Nosek, R. Experimental Determination of Bed Temperatures during Wood Pellet Combustion. *Energy Fuels* **2017**, *31*, 2919–2926. [CrossRef]
- Lenhard, R.; Malcho, M.; Jandacka, J. Modelling of heat transfer in the evaporator and condenser of the working fluid in the heat pipe. Heat Transf. Eng. 2019, 40, 215–226. [CrossRef]