




“The impact of green organizational identity on green innovation at Jordanian food and beverage companies”

AUTHORS	Hasan Al-Zu'bi  Ahmad Albloush 
ARTICLE INFO	Hasan Al-Zu'bi and Ahmad Albloush (2022). The impact of green organizational identity on green innovation at Jordanian food and beverage companies. <i>Problems and Perspectives in Management</i> , 20(2), 302-310. doi: 10.21511/ppm.20(2).2022.25
DOI	http://dx.doi.org/10.21511/ppm.20(2).2022.25
RELEASED ON	Monday, 23 May 2022
RECEIVED ON	Monday, 20 December 2021
ACCEPTED ON	Wednesday, 23 March 2022
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Problems and Perspectives in Management"
ISSN PRINT	1727-7051
ISSN ONLINE	1810-5467
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

27



NUMBER OF FIGURES

1



NUMBER OF TABLES

3

© The author(s) 2022. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 20th of December, 2021

Accepted on: 23rd of March, 2022

Published on: 23rd of May, 2022

© Hasan Al-Zu'bi, Ahmad Albloush,
2022

Hasan Al-Zu'bi, Dr., Professor, Faculty
of Business, Amman Arab University,
Jordan.

Ahmad Albloush, Ph.D., Assistant
Professor, Faculty of Business,
Amman Arab University, Jordan.
(Corresponding author)



This is an Open Access article,
distributed under the terms of the
[Creative Commons Attribution 4.0
International license](https://creativecommons.org/licenses/by/4.0/), which permits
unrestricted re-use, distribution, and
reproduction in any medium, provided
the original work is properly cited.

Conflict of interest statement:

Author(s) reported no conflict of interest

Hasan Al-Zu'bi (Jordan), Ahmad Albloush (Jordan)

THE IMPACT OF GREEN ORGANIZATIONAL IDENTITY ON GREEN INNOVATION AT JORDANIAN FOOD AND BEVERAGE COMPANIES

Abstract

Integrating environmental objectives into an organization's mission and strategies improves the organization's image as a socially responsible organization and helps it take a leading position of advantage. Due to the increasing pressures towards sustainability and environmental policies, organizations are making efforts in this direction. This study is aimed at identifying the impact of green organizational identity (GOI) on green innovation (GI). Data were collected from 168 employees working in food and beverage industry companies listed on the Amman Stock Exchange. SPSS was employed to analyze the data and test the hypothesis. The study finds a significant positive effect of GOI on GI product and GI process. The study recommends that companies show interest in GOI for their role in raising GI levels. Due to cultural differences between countries that limit the generalizability of the study results, it is recommended to conduct another study in Western culture to determine their applicability.

Keywords

green organizational identity, green innovation, food and beverage, Jordan

JEL Classification

M10, L10

INTRODUCTION

Modern organizations face many environmental challenges and pressures that require them to maintain their sustainable development in order to achieve competitive advantages, this requirement come from GI. Moreover, organizations enhance their capability for sustainable development by taking care of organizational identity (OI). OI is "...a shared interpretative scheme, through which members collectively create and provide meaning for their actions, choices, and behaviors" (Chen, 2011, p. 385). A sense of OI can affect the way individuals behave in the organization. Indeed, when greater concern for the environment suits an internal element of OI, it is progressively hard to overlook environmental issues. According to the theory of OI, GOI is "an interpretative scheme about environmental management and protection that members collectively build to provide meaning for their behavior" (Chang & Chen, 2013, p. 1057).

Many organizations have established several environmentally approachable programs (e.g. green technologies, green products and others that can increase their ability to innovate green) (Hoffmann, 2007; Zhu et al., 2008). External pressure on organizations to be more environmentally responsible, as well as the resulting increase in market request for green products, has led many organizations to pursue GI (Chang, 2011; Lin et al., 2013). When a firm with a strong sense of GOI faces external pressure to speech environmental problems, inspired

reactions to this pressure could produce new and beneficial concepts, which additionally stimulates the organization's ability to GI. Moreover, by reviewing prior studies attempted to provide a framework describing the relationship between GI with some other organizational variables (Soewarno et al., 2019; Song & Yu, 2018), Mushtaq et al. (2019) recommend to explore other variables that affect business and environmental sustainability.

1. LITERATURE REVIEW

1.1. Green organizational identity (GOI)

Organizational identity (OI) indicates a set of data that members of an organization see as central, distinct and permanent to their organization (Mushtaq et al., 2019). Also, OI is an overview of how an organization assesses its management and how they want stakeholders to see them, internally or externally. Chen has developed a new perception called GOI, which is an interpretative outline about environmental management and security that individuals cooperatively build to offer sense for their behavior (Chen, 2011). It is required from organizations to transform and improve green products in allocating with the environment and matters facing stakeholders (Tseng et al., 2013). Organizations with a GOI will certainly generate environmentally approachable improvements while implementing their operational actions, such as applying an environmental management system and exhausting energy-saving devices or programs that decrease waste resulting from the organizations' operational actions. Furthermore, environmentally conscious organizations recognize the importance of environmental protection. Hence, they imitate their anxiety through actions. When environmental matters come to be the primary goal of OI, they will urge members of the organization to contribute to the environment (Sharma, 2000).

According to Chen (2011), a GOI is "an interpretative scheme about environmental management and protection that members collectively make in order to provide meaning for their behavior". Organizations that reflect GOI will simply gain lawfulness. lawfulness has been defined as the condition in which the value of an organization matches the greater social worth system. Consequently, if the value of an organization matches the expectations of the community regarding environmental problems, it can be said that the organization has acquired environmen-

tal regulatory lawfulness. The association between the stakeholders and the organization is essential, not for the company's persistence, but also for the lawfulness of the company (Massey, 2001). Consequently, organizations that replicate green regulatory identity and apply environmental management in every feature of action could simply gain environmental regulatory lawfulness (Soewarno et al., 2019).

GOI contributes to this process by bringing together an organization's several skills and fields of expertise and added smooth innovation that focuses on waste reduction, pollution prevention and the application of a management system (Chang & Chen, 2013). The GOI inspires managers of organizations to implement new technologies that the market needs.

Management at all stages wants to assimilate full organizational resources and coordinate employee behavior to emphasize environmental matters. Thus, behavior will enhance GOI (Song & Yu, 2017). When an organization has a strong GOI, it easily gains the trust and lawfulness of the community. Therefore, the organization with legitimacy will be capable to gain additional support and resources from external and internal stakeholders. Lastly, with these strong community support and resources, the organization will simply be able to achieve GIs.

1.2. Green innovation (GI)

It is necessary to clarify the concept of "GI" in order to understand the literature that should be involved in the analysis. This study rapidly realized that other concepts (sustainable innovation and environmental innovation) are being used by other researchers on parallel topics.

According to Church et al. (2008), the term "sustainable development" was first used in 1980 by the International Union for Conservation of

Nature and Natural Resources in their report on the global conservation strategy. The report indicates that sustainable development is “the integrity of conservation and development to ensure that adjustments on the planet truly guarantee the survival and well-being of all people”.

The concept of “sustainable development” was articulated primarily by the Brundtland Report, commissioned by the United Nations where it was defined as “the needs of the present without compromising the ability of future generations to meet their own needs”. The concept of sustainable development has limits, but restrictions imposed by the current state of technology and social regulation on environmental resources and the capability of the biosphere to engross the impacts of human activities (Schiederig et al., 2011).

Fussler and James (1996) define environmental innovation as “new products and processes that provide value to customers and businesses but significantly reduce environmental impacts” (cited from Bartlett & Trifilova, 2010, p. 2). Likewise, Kemp and Pearson (2007, p. 3) define ecological innovation as “...the production, assimilation, or exploitation of a product, production process, service, management, or new way of working for an organization (developing or adopting it) which, throughout its life cycle, reduces environmental risks, pollution and other negative impacts of resource use compared to related alternatives”.

GI refers to “creating devices or software related to green products or processes, including innovation in technologies that participate in saving energy, preventing pollution, recycling waste, designing green products or environmental management for the company that promotes sustainability” (Schiederig et al., 2011). GI includes originality in creating green processes or products that improve regulatory environmental performance or meet environmental protection necessities. GI focuses on dropping waste, and adopting environmental management systems. To achieve the GI goal, a company must take full advantage of its human and technical capabilities and resources (Song & Yu, 2018). GI is an important way for an organization to win rivalry in a time of environmental anxiety. Several aspects have been recognized by scientists as the driving

force behind GIs. The latest studies revealing the motives for GIs include societal expectations, export and capacity density, and women’s leadership (Soewarno et al., 2019).

1.3. Green Innovation Product

The term “green product” is commonly used to refer to a wide range of products, there are no complete green products, what we call “green products” are the greenest products among others. Here there are some definitions about the green product. The product is environmentally friendly, “When the environmental and societal performance in production, use and disposal improves dramatically and improves compared to traditional or competitive product offerings” (Peattie, 1995, p. 181). Although any consumer product has no influence on the business and environment, the terms “green products” or “environmental product” are regularly used to define those that struggle to enhance the natural environment through energy conservation or resources and reduce or eliminate the use of toxic agents.

The significant practice of judgement in defining the “green product” indicates its animated nature: What is a green product may be a brown product within a few years if other products exceed that. The relative nature of the definition of a green product means that a measure of the “greenness” of a particular product is necessary. However, the environmental impact of a product life cycle ranges from global warming to freshwater pollution. In practice, comparing products can be difficult and not one-dimensional as different effects on the environment cannot be easily “compacted” only by a single value (Gesiot, 2012).

It is generally recognized that green product innovation is that a new product aims to reduce environmental impact. It includes the introduction and improvement of the product through the use of environmentally friendly materials or recovery, since this approach can reduce the environmental pressure in input measures; it also includes product modification that aims to reduce energy conservation and prevent pollution while using products. Some researchers believe that the major problem affecting the environment is emissions from the products used (Ma et al., 2018).

1.4. Green Innovation Process

The GI process focuses purposefully on the production process, which may be subjugated or useful to decrease environmental risks, pollution emissions, and other negative influences. Prior studies outline some technology of green process such as pollution prevention, clean production, recycling and environmental efficiency. Even though performance, containing economic and environmental performance, is generally used by many studies to assess business outcomes derived from GOI, environmental performance may not directly achieve economic performance. As economic objects, corporate shareholders and managers could pay more attention to their value when they devote GI (Cainelli et al., 2015).

To arrest various features of the interest resulting from green process innovation, a time frame must be considered. Therefore, the benefits linked to innovation in the green process are divided into two dimensions: short-term benefits and long-term benefits. Short-term interest is mainly a market success, and can be directly reflected in an organization's financial performance, such as an increase in market share and a lower cost of the product. It is similar to the term "financial performance" that is regularly used in management studies. Long-term benefit refers to the continued existence of an organization, long-term potential and sustainable competitiveness. It is similar to the term "survival performance" (Ma et al., 2017).

1.5. Link between GOI and GI

According to OI theory, firms have an important role to play in making employees more conscious of organizational actions, and with increased attention to green management practices at the global level, organizations have begun to emphasize more green identity principles (Albert Xing et al., 2019).

Mushtaq et al. (2019) found that GOI and GI performances are positively related to each other, also they indicate that environmental commitment mediates the relationship between GOI and GI performance. They also conclude that in order to gain enhanced innovation performance, an organization also tends to work on enhancing GOI and environmental commitment.

Furthermore, Soewarno et al. (2018) explore the influence of the green innovation strategy on green innovation; they also investigate if green organizational identity mediates the mentioned relationship. The results show that the green innovation strategy positively affects green innovation. The study has found that green innovation strategy has a positive impact on green innovation through green organizational identity in manufacturing companies in Indonesia. They suggested that organizations should develop a green innovation strategy and this should be reflected in green organizational identity in order to achieve higher green innovation performance.

Sung and Yu (2017) indicate that there is a positive relationship between GOI and green creativity, and between green creativity and GI. They also find that GOI fully mediates between GI strategy and GI. These results by Sung and Yu (2017) suggest that decision makers should improve their firms' sense of green identity and enhance green creativity, since this will improve their organizations' capability of sustainable development. On the other hand, Liu and Zhao (2019) argue that there is a positive relationship between ethical leadership and employees' GI behavior, and GOI plays an intermediary role between ethical leadership and employees' GI behavior.

Chang and Chen (2013) found that GOI positively affects GI performance, and GOI could positively influence GI performance through environmental commitment. Organizations should raise their GOI and environmental commitment to improve their GI performance. They find out that GOI and environmental commitment, as well as GI performance of small and medium-sized enterprises, are lower than those of large enterprises in Taiwan.

2. AIMS AND HYPOTHESES

Following the literature review, this study aims to explore the influence of GOI on GI in Jordanian food and beverage industry companies. The proposed conceptual framework is portrayed in Figure 1.

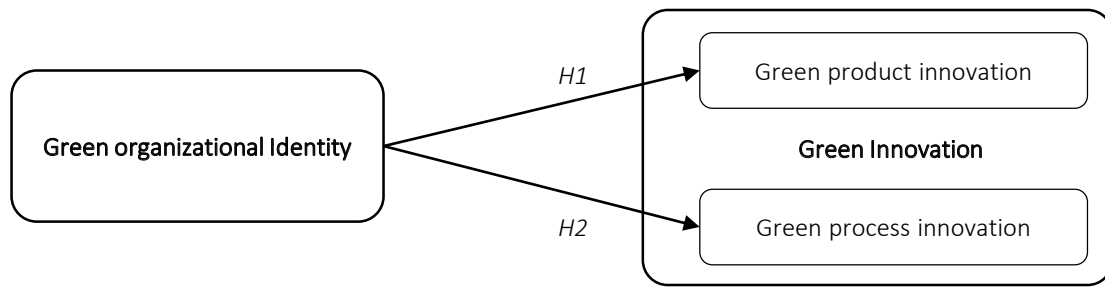


Figure 1. Study model

The study thus proposes the following hypotheses:

H1: GOI positively influences green product innovation.

H2: GOI positively influences green process innovation.

GI items from Khazal and Dhiab (2019) and Soewarno et al. (2019).

To determine the degree of reliability, Cronbach’s Alpha was used, which determines the level of acceptance of the measuring instrument at a level of 60% or more (Sekaran & Bougie, 2010). The reliability test results ranged between 76% and 87%.

3. METHODOLOGY

A survey research design was employed to collect data from the upper and middle departments from eight food and beverage industry companies listed on the Amman Stock Exchange. They include the Jordanian Poultry Processing and Marketing, Jordanian Dairy, Public Investments, Modern World for Vegetable Oils, National Poultry, Food House, Jordanian Vegetable Oil Factories, and Siniora Food Industries, with 327 employees working in upper and middle departments (Amman Stock Exchange, 2021). The researchers contacted HR heads of each company and sent a e-questionnaire link to them; in turn, HR heads distributed the link for the study sample. Out of 179 questionnaire retrieved, 168 questionnaires were valid for analysis. The current study used a 5-point Likert scale questionnaire. Data analysis involved the use of descriptive statistics carried out in the form of measures of central tendency and dispersion. SPSS v23 software was used to test the hypotheses using the multiple regression analysis.

3.1. Measures

The instruments used in this study have been adopted from previous literature. A 5-point Likert scale was used, varying from 1 “Strongly disagree” to 5 “Strongly agree”. GOI items were adopted from Gioia and Thomas (1996) and Chen (2011),

4. RESULTS

Table 1 provides demographic characteristics of the study sample. It is clear from the descriptive analysis that the majority of respondents were male (89.9%), and the rest were female. As for the age groups, the rate was the highest for those within the category (40 – Less than 50) at a rate of 40.5%. In terms of the education level, those who have a bachelor degree amount to the highest percentage (86.3%). Finally, with respect to the years of experience (42.3%)? their years of experience are 11–15.

Table 1. Respondents’ profile (n = 168)

Characteristics	Frequency	Percentage
Gender		
Male	151	89.9%
Female	17	10.1%
Age		
Less than 30 years	16	9.5%
31 – Less than 40	57	34%
40 – Less than 50	68	40.5%
50 years and more	27	16%
Educational Level		
Diploma or less	11	6.5%
Bachelors	145	86.3%
Postgraduate	12	7.2%
Experience Years		
5 years or Less	15	8.9%
6 – 10	62	36.9%
11 – 15	71	42.3%
16 years and more	20	11.9%

Table 2. Multiple regression analysis to guarantee the impact of GOI on green product innovation

Dependent Variable	(R)	(R ²)	F	DF	Sig*	β	T	Sig*	
Green Product Innovation	0.639	0.486	45.404	1	0.000	First Dimension	0.270	2.452	0.016
						Second Dimension	0.471	4.274	0.000
						Third Dimension	0.237	2.200	0.030
				166		Fourth Dimension	0.208	2.137	0.035
						Fifth Dimension	0.306	3.017	0.003
				167		Sixth Dimension	0.318	2.682	0.009

Note: * significant at $\alpha \leq 0.05$.

In order to verify the impact of the GOI in each dimension of GI (green product innovation and green process innovation), the study tests the following hypothesis:

H1: GOI positively influences green product innovation.

To test this hypothesis, the study uses the multiple regression analysis to guarantee the influence of GOI dimensions (A deep feeling of a company's history about environmental management and procedures; Sympathy for the company's procedures regarding the environment; Pride in the company's environmental goals and a sense of responsibility for the improvement plan; Feeling of important place in the management and protection of the environment; Familiar with the company's environmental traditions and culture; and Feeling in formulating clearly defined environmental objectives) on the green product innovation (Table 2).

Table 2 shows the effect of GOI on green product innovation. The regression model provides a good degree of fit, as evidenced by *R* and *R*² values, 0.639 and 0.486, respectively. This indicates that 48.6% of the explained variation in GI can be explained by GOI dimensions. On the other hand, Table 2 indicates the slope value of 0.270, 0.471, 0.237,

0.208, 0.306 and 0.318 for the regression line. This suggested that a one-unit increase in GOI dimensions can significantly predict a 27%, 47.1%, 23.7%, 20.8%, 30.6% and 31.8% increase in green product innovation. Table 2 also shows that the analysis of variance of the fitted regression equation is significant with the *F* value of 45.404. This is shows that the model is good. Since the *p*-value is $0.000 \leq 0.05$, there is a statistically significant relationship between GOI and GI. Thus, *H1* is supported.

H2: GOI positively influences green process innovation.

To test this hypotheses, a multiple regression analysis was used to ensure the impact of GOI dimensions (A deep feeling of a company's history about environmental management and procedures; Sympathy for the company's procedures regarding the environment; Pride in the company's environmental goals and a sense of responsibility for the improvement plan; Feeling of the important place in the management and protection of the environment; Familiar with the company's environmental traditions and culture; and Feeling in formulating clearly defined environmental objectives) on green product innovation (Table 3).

Table 3 shows multiple regression analysis to guarantee the impact of GOI on green process innovation.

Table 3. Multiple regression analysis to guarantee the impact of GOI in green process innovation

Dependent Variable	(R)	(R ²)	F	DF	Sig*	β	T	Sig*	
Green Process Innovation	0.509	0.259	11.081	1	0.000	First Dimension	0.251	2.247	0.027
						Second Dimension	0.313	2.915	0.004
						Third Dimension	0.238	2.265	0.026
				166		Fourth Dimension	0.330	3.013	0.003
						Fifth Dimension	0.281	3.421	0.001
				167		Sixth Dimension	0.229	2.407	0.018

Note: * significant at $\alpha \leq 0.05$.

Table 3 shows the impact of GOI dimensions on green process innovation. The regression model realizes a good degree of fit, as evidenced by R and R^2 values – 0.509 and 0.259, respectively, which shows that 25.9% of the explained variation in GI can be accounted for GOI dimensions. Moreover, Table 3 indicates the slope value of 0.251, 0.313, 0.238, 0.330, 0.281 and 0.229 for the regression line. This suggests that a one-unit increase in GOI dimensions can significantly predict a 25.1%, 31.3%, 23.8%, 33%, 28.1% and 22.9% increase in green process innovation. Table 3 also shows that the analysis of variance of the fitted regression equation is significant with the F value of 11.081. This shows that the model is good. Since the p -value is $0.000 \leq 0.05$, there is a statistically significant relationship between GOI and GI. As a result, $H2$ is supported.

5. DISCUSSION

Discussing $H1$, the result shows that GOI has a positive effect on green product innovation as

shown in Table 2. The result indicates that food and beverage companies in Jordan improve green products in relation to the environment and matters facing stakeholders. Also, the finding states that food and beverage companies in Jordan generate environmentally approachable improvements while implementing their operational actions, which decreases waste resulting from the operational actions. The results of this study are in line with the results of previous research (e.g., Sung & Yu, 2017; Mushtaq et al., 2019). Discussing $H2$, the result shows that GOI has a positive effect on green process innovation as shown in Table 3. The result indicates that the growth in market share and the lower cost of products of food and beverage companies in Jordan are directly reflected in these companies' performance, continued existence of these companies and sustainable competitiveness. The results of this study are in line with the results of previous research (e.g., Chang & Chen, 2013; Liu & Zhao, 2019).

CONCLUSION

This study aimed to test the relationship between GOI and GI (green product innovation and green process innovation) in food and beverage companies. It was concluded that there is a positive influence of GOI on GI. This means that the increase in GOI leads to an increase in customer loyalty and positive perception of an organization as a result of achieving GI, which, in turn, improves the image and motivation of the members of the organization to cooperate with an organization committed to protecting the environment. Furthermore, this study highlights the importance of integrating green operational actions into industries, and it is useful for decision makers, marketers and customers to understand how industrial activities affect the environment. Food and beverage companies in Jordan adhere to and apply the Jordanian government regulations and laws regarding maintaining and saving environment, which, in turn, leads these companies to adapt to the environmental and technological change through the operational process. Food and beverage companies need to develop organizational identity procedures in order to increase green innovation products and process in the form of reducing the pollution and maintaining environment.

This study has some limitations like many other studies. First, it depends on a cross-sectional survey, which makes it difficult to establish a causal relationship between the variables under study. The study recommends that future studies use a longitudinal research design to show how GOI and GI affect each other at different phases of their development in different industries. Second, the empirical evidence is from several food and beverage companies in Jordan. If the survey results can be generalized to GI, each survey of several industries has a specific look. Thus, additional research can usefully focus on specific industries, such as manufacturing. In addition, cultural appearances of the sample may limit the generalizability of the study results. It is recommended to conduct a similar study in a Western culture to determine the applicability of the study findings. This study shows how GOI affects GI. This study does not explore other variables such as leadership and so on. Thus, further research could explore how leadership affects GI at different phases, which could lead to different results.

AUTHOR CONTRIBUTIONS

Conceptualization: Ahmad Albloush.

Data curation: Hasan Al-Zu'bi.

Formal analysis: Hasan Al-Zu'bi.

Funding acquisition: Hasan Al-Zu'bi, Ahmad Albloush.

Methodology: Hasan Al-Zu'bi, Ahmad Albloush.

Resources: Hasan Al-Zu'bi, Ahmad Albloush.

Writing – original draft: Hasan Al-Zu'bi.

Writing – review & editing: Ahmad Albloush.

REFERENCES

- Amman Stock Exchange. (2021). *Products-services*. Retrieved from <https://www.ase.com.jo/ar/products-services/securities-types/shares>
- Albert, S., & Whetten, D. (1985). Organizational identity. *Research in Organizational Behavior*, 7(1), 263-295.
- Bartlett, D., & Trifilova, A. (2010). Green technology and eco-innovation: Seven casestudies from a Russian manufacturing context. *Journal of Manufacturing Technology Management*, 21(8), 910-929. <https://doi.org/10.1108/17410381011086757>
- Cainelli, G., Maichi, V., & Grandinetti, R. (2015). Does the development of environmental innovation require different resources? Evidence from Spanish manufacturing firms. *Journal of Cleaner Production*, 94, 211-220. <https://doi.org/10.1016/j.jclepro.2015.02.008>
- Chang, C., & Chen, Y. (2013). GOI and GI. *Management Decision*, 51(5), 1056-1070.
- Chang, C. (2011). The influence of corporate environmental ethics on competitive advantage: the mediation role of GI. *Journal of Business Ethics*, 104(3), 361-370. <http://dx.doi.org/10.1007/s10551-011-0914-x>
- Chen, Y. S. (2011). Green organizational identity: sources and consequence. *Management Decision*, 49(3), 384-404. <https://doi.org/10.1108/00251741111120761>
- Church, R., Hecox, W., Dresner's, S., & Edwards, A. (2008). Sustainable Development: Oxymoron? Or Opposed by Morons? *Sustainable Development – EV*, 141. Colorado College.
- Dangelico, R., & Pontrandolfo, P. (2010). From Green Product Definition and Classifications to the Green Option Matrix. *Journal of Cleaner Production*, 18, 1608-1628. <https://doi.org/10.1016/j.jclepro.2010.07.007>
- Fussler, C., & James, P. (1996). *Driving eco-innovation: A breakthrough discipline for innovation and sustainability*. London: Pitman.
- Gesiot, M. (2012). *Explaining adoption and market success of "green products"* (Master Thesis). Tecnico Lisboa, Germany.
- Hoffmann, E. (2007). Consumer integration in sustainable product development. *Journal of Production Innovation Management*, 16(5), 332-338. <http://dx.doi.org/10.1002/bse.577>
- Kemp, R., & Pearson, P. (2007). *Final report of the MEI project measuring eco innovation*. Brussels, DG Research of the European Commission, Eurostat, the European Environment Agency (EEA) and the Joint Research Center (JRC) of the European Commission.
- Lin, R., Tan, K., & Geng, Y. (2013). Market demand, green product innovation, and firm performance: evidence from Vietnam motorcycle industry. *Journal of Cleaner Production*, 40, 101-107. <https://doi.org/10.1016/j.jclepro.2012.01.001>
- Liu, L., & Zhao, L. (2019, February). The Influence of Ethical Leadership and GOI on Employees' GI Behavior: The Moderating Effect of Strategic Flexibility. In *IOP conference series: Earth and environmental science*, 237(5), 052012. IOP Publishing.
- Ma, Y., Hou, G., & Xin, B. (2017). Green Process Innovation and Innovation Benefit: The Mediating Effect of Firm Image. *Sustainability, MDPI*, 9(10), 1-15.
- Ma, Y., Yin, Q., Pan, Y., Cui, W., Baogui, X., & Rao, Z. (2018). Green Product Innovation and Firm Performance: Assessing the Moderating Effect of Novelty-Centered and Efficiency-Centered Business Model Design. *Sustainability, MDPI*, 10, 1-13. Retrieved from <https://ideas.repec.org/a/gam/jsusta/v10y-2018i6p1843-d150263.html>
- Marin, L., Martín, P., & Rubio, A. (2017). Doing good and different! The mediation effect of innovation and investment on the influence of CSR on competitiveness. *Corporate Social Responsibility and Environmental Management*, 24(2), 159-171. <http://dx.doi.org/10.1002/csr.1412>
- Massey, J. E. (2001). Managing organizational legitimacy: communication strategies for organizations in crisis. *The Journal of Business Communication*, 38(2), 153-183.

20. Mushtaq, S., Zubair, S., Khan, M., & Khurram, S. (2019). Mediating Role of Environmental Commitment between GOI and GI Performance. *Pakistan Journal of Commerce and Social Sciences*, 13(2), 385-408. Retrieved from <http://jespk.net/publications/4342.pdf>
21. Schiederig, T., Tietze, F., & Herstatt, C. (2011). What is GI? – A quantitative literature review. *The XXII ISPIM Conference*.
22. Sharma, S. (2000). Managerial interpretations and organizational context as predictors of corporate choice of environmental strategy. *Academy of Management Journal*, 43(4), 681-697. <http://dx.doi.org/10.5465/1556361>
23. Soewarno, N., Tjahjadi, B., & Fithrianti, F. (2019). GI strategy and GI: The roles of GOI and environmental organizational legitimacy. *Management Decision*.
24. Song, W., & Yu, H. (2018). GI Strategy and GI: The Roles of Green Creativity and GOI. *Corporate Social Responsibility and Environmental Management*, 25, 135-150. <http://dx.doi.org/10.1002/csr.1445>
25. Tseng, M., Tan, R., & Siriban-Manalang, A. (2013). Sustainable consumption and production for Asia: sustainability through green design and practice. *Journal of Cleaner Production*, 40, 1-5. <http://dx.doi.org/10.1016/j.jclepro.2012.07.015>
26. Xing, X., Wang, J., & Tou, L. (2019). The Relationship between Green Organization Identity and Corporate Environmental Performance: The Mediating Role of Sustainability Exploration and Exploitation Innovation. *International Journal of Environmental Research and Public Health*, 16(6), 921-936. <https://dx.doi.org/10.3390%2Fijerph16060921>
27. Zhu, Q., Sarkis, J., & Lai, K. H. (2008). Green supply chain management implications for “closing the loop”. *Transportation Research Part E: Logistics and Transportation Review*, 44(1), 1-18. <https://doi.org/10.1016/j.tre.2006.06.003>