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GREEN INNOVATION STRATEGIES AND INDUSTRY 5.0'S MULTIFUNCTIONAL ROLES FOR TRANSFORMING HEALTHCARE ORGANIZATIONS' PERFORMANCE MANAGEMENT

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Abstract
In recent years, the automotive industry has been focusing on green innovation for sustainable development. Researchers have been paying more attention to the relationship between green innovation strategy and Healthcare Organizational performance. To assess the effectiveness of green performance, a set of tools and techniques have been developed to measure the strategic purpose of green performance in the appropriate Healthcare Organizational environment based on their innovation characteristics. This study aims to systematically analyze green innovation strategies and determine the impact of green innovation strategy on green path innovation by updating digital frameworks in the context of Industry 5.0. We employed a Structural Equation Model (SEM) and Prototyped to obtain the outcomes and data. Our results show that a green innovation strategy positively affects the green innovation of Healthcare Organizations. We also found that green innovation strategies in the framework of Industry 5.0 can have a positive impact on Healthcare Organizational performance and environmental issues. The statistical values acquired by analysis for factors and variables under control conditions are related, which helps verify the hypotheses. This study also investigated the strengths of internal and external environmental challenges to the Green Innovation Strategy (GIS). By identifying reputable articles on green innovation, assessing the co-occurrence of terms, and suggesting future research objectives, this research contributes significantly to the published literature. Our findings provide a path for policymakers to formulate environmental and Healthcare Organizational regulations that can effectively manage performance through pressure and incentive regulations.

Keywords: Green innovation strategies, Managerial performance, increasing attention, Environmental regulations.

Introduction

Ecological disasters have now become one of the high-rated real-time challenges that seem to be unprecedented. Likewise, the duration of seasons is over patches with each other due to global warming, which ultimately turns in long-term drastic effects such as famine (less food production), and catastrophic floods (Gorman & Dzombak, 2018). These climate changes can be stopped by reducing the level of greenhouse gasses in the environment at all costs(Tahir et al., 2019). This is the only quick and effective way to save our environment from drastic effects. Enterprises have their chief role in social and commercial activities for the betterment of the standards of living. But, the dual aspects of enterprises tagged them as whited sepulchers because of their role in drastic climate changes. The orientation of environmental glitches to dragging them for rectification is a complete example of enterprise social activities (Fernández et al., 2003). Despite the debate about whether enterprises should manage their strategies to be green or non-green (Farrugia et al., 2010b), they must recognize the need to take action to prevent environmental degradation. But their economic position must be stable along these strategies. Despite all this, the enterprises must make a green path strategy whether there are many enterprises under one Industry or different industries with many enterprises. The strategies for implementing green innovation are thought to be costly in terms of resources and raw materials with future ambiguity. That's why many enterprises have denied incorporating environmental issues into their planning or implementation of the green path. (Farrugia et al., 2010a). Former theories reveal, through comparison, that there are only slight differences in these four basic terms (green innovation strategy, strategies along bearable revolution, eco-friendly revolution, and conservational revolution), so these terms fit in the same context verbally, that's why we can use them in a Broadway (Mendola, 2007; Katakojwala & Mohan, 2021). There are some real-time examples of enterprises that made their strategy along with green path innovation and not only turned into profit but also improved their efficiency. But the question is, do all the green path strategies result in profit with low input? So, the experience says that it could be yes in most cases, and others can avoid or mould the technologies according to their SOPs (Hung et al., 2018). Because of this, most of the entries try to achieve environmental protection and corporate income simultaneously through a green innovation strategy. Here we will build an industry that works under the green path innovation and study their input, cost, efficiency, and output. An industry named 5.0 will be built with the mutual interaction of humans and self-directed machines, commonly called robots. So, there will be an excellent cushion for human workers so their co-workers (robots) can manage or detect the hazard more efficiently and secure them from any disaster (Ellingsen et al., 2016). These robots will be highly advanced in artificial intelligence, so they will not only feel the existence of humans around them but also make a friendly environment for their co-workers (Humans). These robots are named cobots due to their highly advanced performance as individuals or as a team. That will be an excellent feeling for humans while teaming up with cobots.

But there are many controversies regarding applying this type of Industry named 5.0. Scientists have proposed various suggestions to launch industry 5.0 in the real market. For example, (Yumurtacı, 2014) defined Industry 5.0 as an upgrading firm of industry 4.0 or the evolution of a new era of humans with robots that can offer symmetrical strategies to identify and cover the limitations of industry 4.0 in our ecosystem. On the other hand, professors like Nahevandi (2019) and Kumaar et al. (2020) seem to favour industry 5.0 due to the endorsement of the mutual interaction of human robots while improving working capabilities, employment, and production of goods. Technological ambiguity is always a permanent factor when advanced technology enters the industrial world. It takes all the hype and makes the working technologies obsolete(Haws et al., 2014b). The Green path innovation also has ambiguity along with external ecological factors, hesitation, and impulsiveness response of the market against it (István & Károly, 2003). All the problems which are mentioned here need to be solved with the proper method (proposed in the hypothesis)

- How competitive pressure influences green innovation approaches and benefits environmental regulations and performance management.
- How the impact of customer and government influences on green innovation strategy

- How can Industry 5.0 engage people with green innovation strategies for environmental performance and management?
- How innovation orientation and digital frameworks positively moderate employee behaviour toward green innovation strategies.

The major objectives of this study are the importance of green innovation strategies via updating digital frameworks (industry 5.0) in the context of environmental regulations and performance management for Healthcare Organizations and understanding how green innovation strategies help to introduce the industrial revolution in society. It also develops an understanding of the relation of green innovation techniques with environmental regulations to understand the impact of these innovations on Healthcare Organizations ' performance management. The sections follow the detailed associated literature review, technique, findings and conclusions, and future recommendations.

2. Literature review

2.1 Green innovation behaviour and theoretical interpretations

The eco-friendly conditions bound the enterprises to build their strategies according to green path innovation while neglecting their benefits. The theory of the natural resource-based view has illustrated the proportional link between the green path and enterprise strategies (Gorman & Dzombak, 2018). An enterprise must keep its strategies up to date to compete with changes occurring in the environment so a sudden climate change will not affect them drastically (Chaudhary et al., 2016).

2.2 Green innovation and organization performance

Green innovation incorporates environmental issues with strategies and provides guidelines to enterprises, making them capable of dealing with the uncertainty in business operations depending upon ecological matters (Chaudhary et al., 2016; Jungmeier, 2017). Activities for the implementation of green innovation boost enterprises to gain more profit by commercializing innovative products and processes (IAASTD, 2009). But a few scientists thought that it might harm the performance of the short-term project; they stated that when an enterprise chooses green path innovation, it usually comes with more expenses and long-term results (Laub, 1999a).

2.3 Green innovation strategy

Mainly green path innovation is comprised of three categories: first, to minimize pollution and global warming from the environment, second to manage the balance between raw material and final product, and last but not least, sustainable development by improving the process with minimum cost and innovating the products, that ultimately improve enterprise performance (Laub, 1999b).

2.4 Agricultural Revolution

The agricultural revolution in the 19^{th} century, named the 2^{nd} revolution marked the beginning of the economic progression. In the middle of the 19th century, agricultural production and farm technology proliferated. These changes had both positive and harmful consequences for society. Farmers developed more practical and efficient agricultural techniques, such as crop alternation and the usage of fertilizer, which led to an ever-increasing surplus of food. (Tahir et al., 2019).

2.5 Industrial Revolution

Industrial Revolution started as the transformation of handicrafts into the mechanical Industry. The Industrial Revolution brought rapid and significant economic change due to the innovations of power-driven machinery and other energy sources. The move was swift. This revolution (agriculture to industrialization) was swift and enabled the Industry to fast and large production of goods to satisfy the community. But it also had negative consequences, such as overpopulation, excessive use of energy resources, pollution, global warming, etc. (István & Károly, 2003).

2.6 Healthcare Organizational Performance management

Healthcare Organizational performance management is a vital part of any organization or enterprise that keeps an eye on the balance of input (as a raw material) and output (in the form of a final product) efficiently**.** Effective performance management ensures that all aspects of a company, including its personnel resources and techniques, are aligned with its goals. It accelerates the detection and settlement of problems, specifically with labour, leading to their satisfaction and motivation for Healthcare Organizational goals (Hajós, 2001).

2.7 Environmental Regulations

Environmental regulation is illustrated as making environmental protection guidelines and grooming the economics and Industry. It is highlighted because economic activities are linked with environmental issues that interrelate with industrial competitiveness (IC). Environmental regulations mainly comprise "the Clean Air Act, the Clean Water Act, the Toxic Substances Control, Comprehensive Environmental Response and many others (Fao, 2008).

3. Hypothesis developments

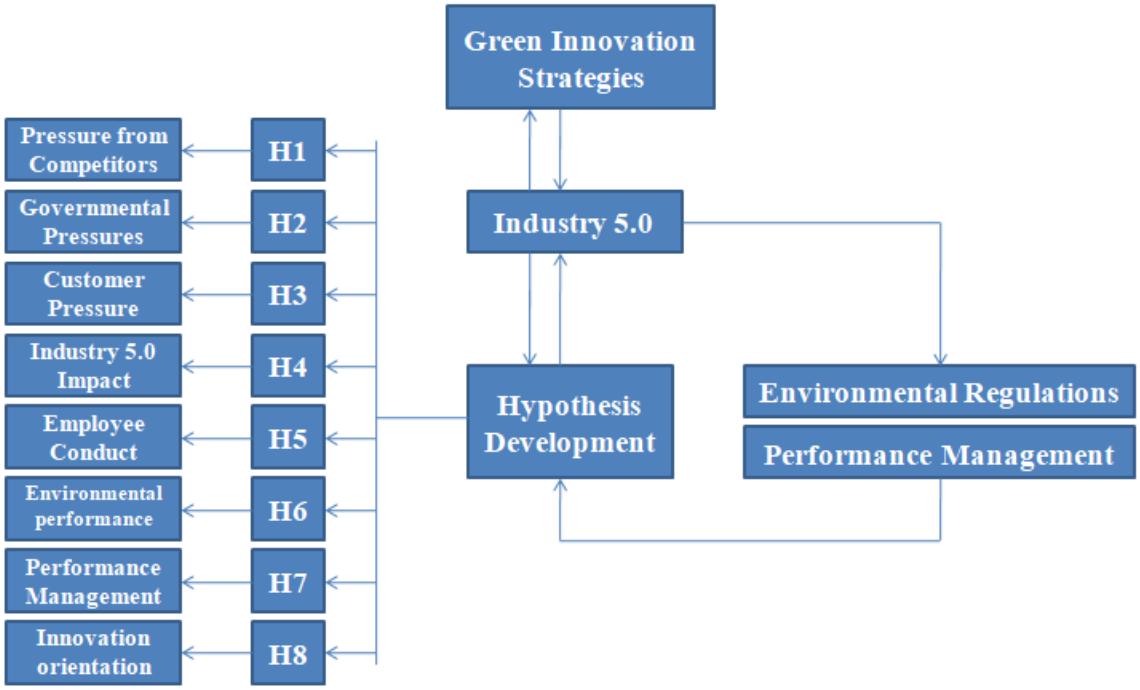

Figure 1: Research Prototype

3.1 Green Innovation Performance

Green innovation performance mainly suggests to the enterprises the improvement of their products in terms of environmental protection. Green technology plays a vital role in intermediating the links of green path strategies with their performance for the production of green products. Despite all, some enterprises lean towards the former technologies to gain more benefits (with minimum risk ratio) and commercialize them as their achievement (Haws et al., 2014b).

H1: *Pressure from competitors has a positive impact on green innovation practices.*

3.2 Stakeholders and Green Innovation Practices

The pressure from competitors, stakeholders, government, and employees is an essential factor during the practice of green path innovation. Enterprises must hold this pressure with an optimistic view and emphasize the manufacturing of green products or services (Toppo, 2012). They should carefully

follow existing regulations about environmental management and must be up to date with new trends or possible changes in governmental regulations.

H2: *Governmental pressures have a positive impact on green innovation practices.*

3.3 Customer pressure and green innovations practices

In this digital world where environmental issues are increasing, awareness about these changes is also spreading. Communities (customers, government, clients) are more concerned about these issues. Enterprises must encounter external pressures (consumer pressure) and regulate environmental issues by implementing friendly techniques to achieve sustainable development, such as green innovation (Islami et al., 2018).

H3*: Customer pressure has a positive impact on green innovation practices.*

3.4 Revolution of 5.0 Green Innovation Practices

Industry 5.0 is a modern world revolution transforming mechanical working into the factories of artificial intelligence by cloud servers ("REVIEWS," 1931). Industry 5.0 tends to turn back to human hands with the assistance of artificial intelligence to take the difficult decision on the spot without any uncertainty. Technological developments by this revolution are automated driving technology for vehicles, object detectors (through multi-camera systems), and radar technology, which have already reduced the cost of developing self-directed agricultural techniques (Triguero et al., 2013).

H4: *Industry* 5.0 *has a positive impact on green innovation practices.*

3.5 Employee conduct and green innovation

Each Individual who works in the enterprise has their thoughts and ideas to resolve the issues during working (Wong and Aspinwall, 2004); So, the green path innovation can be implemented in any firm with the assistance of their workers; thus, the workers stay attentive and more efficient with their work. (Jong, 2007; Epezagne Assamala et al., 2022). It has been surveyed that an enthusiastic and positive attitude of labour toward green innovation marks more success in any organization (Fu et al., 2017).

H5: *Employee conduct has a positive impact on green innovation practices*

3.6 Green Innovation practices and industry 5.0 for environmental performance.

Green innovation practice is more significant to enhance any industry's Healthcare Organizational performance (whether 4.0 or modern world industry 5.0). Industry 5.0 is considered eco-friendlier and more efficient for green innovation because of its mutual relationship with humans and robots. Green innovation process and acceptance of the combination of green products under industry 5.0 will involve recycling waste products, utilizing sustainable resources, reducing energy consumption, and global warming despite internal and external pressure (Barroga, 2020).

H6: *reen innovation practices and industry* 5.0 *have a positive impact on environmental performance.*

3.7 Green Innovation Practices and Environmental Regulations for Healthcare Organizational Performance

Healthcare Organizational performance not only focuses on the outcomes but is also concerned with employee morale, product quality, and customer satisfaction. It acts as a scale for innovative products in terms of the speediness of green strategies in an organization (Haws et al., 2014a). Environmental concerns can influence society's perspective on harmful activities. To reduce their negative influence, enterprises must develop plans for implementing innovations.

H7: *Green innovation practices have a positive impact on environmental regulations and performance management*

3.8 Innovation orientation and digital frameworks (industry 5.0) for green innovation practices

Industries 5.0 can actively help the community seek ways to address problems, including socioeconomic cohesiveness, environmental sustainability, and resource depletion. The Industry of the Future approach benefits society, business, and the workforce. It motivates people and meets the employees' evolving competency & retraining needs. It increases competition in the company and helps recruit top talent. This is great for the environment since it favours circular manufacturing techniques and strategies that maximize the use of environmental resources. The earlier researcher's interest in Industry 5.0 brought together industry participants from key Pakistani businesses and delegations from the trade union movement and other Healthcare Organizations . The participants discussed the best strategies for achieving Industry 5.0 acceptance and the regulatory framework that would support it. Industry 5.0 provides wide-ranging flexibility in the context of money, responsibility, measurement, and inclusivity, which is the primary representative of Healthcare Organizational benefits.

H8: *Innovation orientation and digital frameworks* (*industry* 5.0) *positively moderates employee conduct on green innovation practices.*

4. Material and Methods

The main focus of this study is on the systematic analysis of green innovation strategies using new digital framework 5.0 inside the framework of environmental standards and performance management in Pakistan. Data were obtained directly from employees at different Healthcare Organizations physically and digitally using a non-probability convenience sampling strategy. The profile was limited to companies possessing an SECP licence for Pakistani enterprises. Only people in administrative positions can divulge information since only they are sufficiently and currently aware of the organization's policies and procedures. Administrators also communicate and enforce corporate strategy throughout businesses. A literature review revealed a framework with several key concepts, including internal stakeholders, environmental practices, employee retention, and green process innovation (customers, suppliers, and employees). Two more processes were carried out to ensure the values were correct. In the main context, it is guaranteed that the interpretation remained appropriate; the materials converted into Urdu were first transcribed back into English and compared with the original English-language version. Any differences were corrected to take into consideration all values. Multiple conversations with executives and administrators were conducted to ensure survey accuracy and an authentic outcome.. There were 200 total questionnaires distributed. Twenty responses were from small businesses, 80 from medium-sized enterprises, and 100 from large-sized businesses, out of a total of 200 responses. Additionally, 135 men and 70 women agreed to participate in the study; 5 declined to reveal their gender. The detailed demographics of the survey participants are shown in **Table 1**.

F**acts**	**Explanation**	**Values**	**%**
Respondent response	Large-Sized Organization	100	42.45%
	Average-Sized Organization	80	34.47%
	Small-Sized Organization	20	23.07%
Gender Details	Male	135	62.39%
	Female	70	37.61%
Type of Organization	Manufacturing	125	56.70%
	Amenities	75	43.30%
Employee Place	Lower-Administration	85	35.61%
	Middle-Administration	90	43.30%
	Upper-Administration	25	21.08%

4.1 Data sets for secondary research

This research is based on the secondary search-based method. Secondary search is desktop research, which analyses all information obtained from former theories. For better investigation results, all the

data from these theories is piled up and summarized (Altieri A., 2002). Moreover, two hypotheses and many research perspectives were formulated in the context of this research**.**

4.2 Content Analysis Attributes

4.2.1 Operationalization of Constructs (OC).

Constructs with variable item scales were measured through statistical analysis. Mainly ten constructs were used to cover all variables discussed in the Prototype, excluding the items about the company demographics.

4.2.2 Governmental and Competitors' Pressure for reinforcement of industry 5.0 (GP and CP).

Governmental and Competitor pressure was summed up in five variables proposed from former studies. These variables accounted for the strict conditions of government acts, the grading of future parameters, and their effects.

4.2.3 Customer and Suppliers' Pressure for green environments (CP and SP).

Customer and Supplier pressure was integrated into five variables proposed in former studies. These constructs were questioned about clint's concerns and their importance in environmental issues. Whether the customer prefers eco-friendly products and is interested in energy savings was also surveyed.

4.2.4 Employee Conduct for management strategies of the organization (ECMS).

Five queries regarding employee conduction were surveyed for environmental issues in the community and the agreement of the management team about green innovation. Many former kinds of research refer to the organization's support for an eco-friendly environment and agreements with innovative ideas for the firm's regulation.

4.2.5 Green Innovation Practices and Environmental Performance (EIP and EP).

Eight elements comprise the green innovation strategy's plan. Items were chosen and changed by earlier investigations. Healthcare Organizational performance measures for environmental challenges were constructed using eight factors from previous research.

4.2.6 Firm Performance and Innovation Orientation (FP and IO).

Healthcare Organizational or firm performance was surveyed to examine the company's economic and non-financial factor-based performance. A total of ten items were constructed (Altieri A., 2002). For the moderating construct, innovation orientation was chosen. Based on former scholars' reviews, these variables are purposed and selected under the control conditions. These constructs summed up an enterprise's learning viewpoint, tactical route, and trans-functional acclimatization.

4.3 Statistical analysis and Control Variables

For the statistical analysis, two constructs (area and the firm's age) were selected under the control condition. Multinational firms tend to adopt green path innovation moreue to their greater capacity and resources (Haws et al., 2014a). Frequently, phases of any firm are measured by the number of years that the enterprise had been established.

5. Results

The statistical values acquired by the mean and standard deviation for operationalization of constructs (OC), governmental and competitors' pressure (GP and CP), customer and suppliers' pressure (CSP), gender diversity (GD) and control variables are listed in Table 1. Pearson correlation test is also done and listed in **Table 1**. Pearson coefficient correlation test shows the mutual correlation between the employee conduct for management strategies (ECMS), green innovation practices (GIP) and environmental performance (EP), green innovation practices and environmental performance (GPEP),

firm performance (FP) and innovation orientation (IO) and organization innovation performance orientation (OIPO) acting as moderators. Almost all the factors show a positive relationship with each other under the control variables. There are three levels of significance in **Table 1**: two per cent, four per cent, and eight per cent.

Sr. #	Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11
1	**OC**	**0.294**	**0.299**	**1**										
2	**GP**	**0.892**	**0.892**	**0.899 *****	**1**									
3	**CP**	**0.989**	**0.679**	**0.196 *****	**0.197 *****	**1**								
4	**CSP**	**0.268**	**0.578**	**0.002**	**−0.039 ** **	**−0.496 *****	**1**							
5	**ECMS**	**0.019**	**0.039**	**0.698 *****	**0.598 *****	**0.259 *****	**−0.098 *****	**1**						
6	**GIP**	**0.019**	**0.099**	**0.301 *****	**0.197 *****	**−0.102 *****	**0.103 *****	**0.324 *****	**1**					
7	**EP**	**0.398**	**0.504**	**−0.096 *****	**−0.092 *****	**0.399 *****	**0.069 *****	**−0.010 *****	**−0.039 *****	**1**				
8	**FP**	**7.980**	**6.084**	**0.094 *****	**0.995 *****	**0.916 *****	**−0.012 *****	**0.904 *****	**−0.055 *****	**0.395 *****	**1**			
9	**IO**	**7.002**	**4.998**	**0.311 *****	**0.199 *****	**0.095 *****	**-0.193 *****	**0.206 *****	**0.167 *****	**−0.193 *****	**−0.039 *****	**1**		
10	**GPEP**	**0.498**	**0.530**	**0.699 *****	**0.771 *****	**0.199 *****	**0.021 *****	**0.701 *****	**0.232 *****	**0.099 *****	**0.113 *****	**0.098 *****	**1**	
11	**OIPO**	**0.333**	**0.393**	**0.632 *****	**0.576 *****	**0.201 *****	**0.075 *****	**0.511 *****	**0.143 *****	**0.199 *****	**0.477 *****	**0.002 *****	**0.591 *****	**1**

Significance levels: ** $p < 0.5$, *** $p < 0.1$. OC is abbreviated as the operationalization of constructs; (GP and CP) governmental and competitors' pressure; (CSP) customer and suppliers' pressure; (GD) gender diversity; (ECMS)employee conduct for management strategies; (GIP) green innovation practices; (EP) environmental performance; (GPEP) green innovation practices and environmental performance, (FP) firm performance; (IO) innovation orientation and (OIPO) organization innovation performance orientation.

Table 2: Using statistical Prototypes on variables and their effects; Results of the link between GP * OC, CP * CSP, and GIS * CSP.

Sr. #		**Prototype# 1**		**Prototype# 2**		**Prototype# 3**	
	Variables	**Corporate Funding**					
		Fixed effect	**GM Prototype**	**Fixed effect**	**GM Prototype**	**Fixed effect**	**GM Prototype**
1	GP	1.348 ***	1.330 ***				
2	CP			1.026 **	1.055 ***		
3	CSP					1.065 ***	1.082 ***
4	EP	−1.102 ***	−1.120 ***	−1.479 ***	−1.627 ***	−1.476 ***	−1.625 ***
5	FP	1.105 ***	−1.129 ***	1.092	1.353 ***	1.136	1.457 ***
6	IO	1.002 ***	1.003 ***	1.006 ***	1.003 ***	1.007 ***	1.005 ***
7	GPEP	1.117 ***	1.116 ***	1.547 ***	1.569 ***	1.567 ***	1.568 ***
8	OIPO	−1.015***	−1.013 ***	1.022	−1.007***	1.018 ***	−1.013
9	Constant	1.022 ***	1.024 ***	1.132 ***	1.115 ***	1.153 ***	1.153 ***
10	R^2	0.9721		0.6543		0.6573	
11	F	20.70 ***		12.03 ***		12.36	
12	N	3007	2303	3007	2303	3007	2303
13	Hausman Test	764.84 **		62.67 ***		97.18 ***	
14	Wald Chi^2		89,576.40 ***		4178.49 ***		4177.28 ***

Table 2 illustrates the results of the fixed effect and GMM values for the correlation between GP * OC, CP * CSP, and GIS * CSP. At the very first value, GIS has a significant and beneficial impact on OC in Prototype 1, with constant values (β = 0.348, p = 0.1) and GMM values (β = 0.350, p = 0.1). These values indicate that green innovation is a valuable strategy for improving corporate funding. According to constant values (β=0.035, p = 0.1) and GMM values (β = 0.055, p = 0.1), the second approach, which focuses on CP and OC, demonstrates the substantial influence of CP on the OCR. Thus, the second hypothesis—that corporate social responsibility aids in boosting corporate funding—was supported by these principles. Prototype 3 illustrates the relationship between the CSP and OC using Prototype parameters (β = 0.065, p = 0.1) and values from the GMM Prototype (β = 0.082, p = 0.1). These results validated the fourth theory, which proposed that CSP might help the OC. The results of the Hausman test for all of these Prototypes (1,2 and 3) with the values (β = 764.82, p = 0.1; β = 60.67, p = 0.1; and β = 98.27, p = 0.1) confirming the constant effect approaches rather than the random effect.

Table 3: The values of GIS with different variables

Sr.#		**4th Prototype**		**5th Prototype**	
	Variables	**Corporative Funding**			
		Fix affect	**GM Prototype**	**Fix affect**	**GM Prototype**
1	GP	1.337 ***	1.340 ***	1.341 ***	1.330 ***
2	CP	-1.001	1.007		
3	ECMS	1.570 ***	1.435 ***		
4	CSP			1.019 ***	1.023 ***
5	GIP			1.034 ***	1.027 ***
6	EP	−1.092 ***	−1.131 ***	−1.102 ***	−1.138 ***
7	FP	1.112 ***	−1.103 ***	1.108 ***	1.117 ***
8	IO	1.003 ***	1.002 ***	1.006 ***	1.001 ***
9	GPEP	1.107 ***	1.107 ***	1.115 ***	1.114 ***
10	IOPO	−1.014 ***	−1.012 ***	−1.015 ***	−1.013 ***
11	Constant	1.025***	1.013 ***	1.016 ***	1.018 **
12	R^2	0.9753		0.9715	
13	F	15.69 ***		19.93 ***	
14	N	3007	2405	3004	2405
15	Hausman Test	567.03 ***		434.66 ***	
16	Wald Chi^2		98,076.04 ***		90,945.28 ***

The values of green innovation strategy and cooperate financing are listed in Table 3, with the supporting values of CP and CSP. Two Prototypes are built for these values. Prototype 4 shows the correlation of GP and CP along with constant values of GMM Prototypes (β = 0.590, p = 0.1; β = 0.435, p = 0.1). This Prototype satisfies the fourth hypothesis that CP can support the interaction of GP and OC. Prototype 5 illustrates the relation of GP with CSP with the constant values of GMM Prototypes, respectively (β = 0.017, p = 0.1; β = 0.021, p = 0.1). This Prototype verifies the final hypothesis that CSP can act as a potent mediator for the correlation of GP and OC.

4.1 Secondary Research Analysis:

Secondary analysis has also been done to verify and authenticate results gained from Prototypes. The feasible generalized least squares (FGLS) method is used for the robustness analysis. The standard error of variables did not remain constant during the analysis; that's why heteroskedasticity emerges in a dataset.

Sr. #		1st Prototype	2nd Prototype	3rd Prototype	4th Prototype	5th Prototype
	Variables	**Corporative Funding**				
		FGLS				
1	GP	0.317***			0.282 ***	0.314 ***
2	CP		0.018 ***		−0.012 ***	
3	ECMS				2.289 ***	
4	CSP			0.019 ***		0.015 ***
5	GIP					0.066 ***
6	EP	−0.038 ***	−0.259 ***	−0.238 ***	−0.025 ***	−0.045 ***
7	FP	0.020	0.623 ***	0.679 ***	0.080 ***	0.028 **
8	IO	−0.01 ***	0.02 ***	0.04 ***	−0.05 ***	0.01 **
9	GPEP	0.158 ***	0.576 ***	0.581***	0.108 ***	0.157 ***
10	IOPO	0.026 ***	0.027 **	0.024 ***	−0.007 **	0.022 ***
11	Constant	0.004 ***	0.015 ***	0.014 ***	0.016 ***	−0.01 ***
12	N	3007	3007	3007	3007	3007
13	Wld Chi^2	147,243.45 ***	22,324.66 ***	29,497.17 ***	248,769.99 ***	131,969.86 ***

The commutative correlation of OC with GP, CP, and CSP is listed in **Table 4** with the supporting values. There are three Prototypes (GP*OC, CP*OC, CSP*CP) built with the values of ($\beta = 0.216$, $p = 0.1$) ($\beta = 0.018$, $p = 0.1$), ($\beta = 0.017$, $p = 0.1$) respectively. FGLS analysis also supports these results.

5. Discussion

For the structured analysis, 200 well-developed Pakistani businesses and entrepreneurs were chosen because they performed exceptionally well both internally and externally in terms of the environment. This study highlighted the following components for improving the green innovation strategy: Demand from outside stakeholders significantly impacts whether a corporation successfully implements a green innovation strategy (such as the authorities and customers). Concerns about the environment and the organization significantly impact general practice. These results also demonstrate that companies need to adopt cutting-edge green business strategies to thrive in the competitive market. These findings validated the notion that was the subject of the literature review. Table 1 lists the statistical values for the application of constructs, legislative and market pressure, consumer and provider pressure, gender diversity, and control variables determined by the mean and standard deviation. Table 1 also displays the Pearson correlation coefficient findings. According to the Multiple Regression Correlation Regression Analysis, there is a positive correlation between employee initiative for management strategies, green innovation practices and environmental performance, implementation of sustainable practices and environmental performance, firm performance, innovation orientation, and organization innovation performance orientation, acting as moderators. Nearly all components are positively connected when the dependent variables are present. The first hypothesis was about green innovation strategies and corporate financing. Here it is proved that financial support from the stakeholders credited enterprises to adopt modern world techniques like GP to keep their environment green (Klewitz et al., 2012). The output values further supported our hypothesis in Table 1. The second theory demonstrated how corporate social responsibility might significantly improve business funding. Former researchers concur with this theory and have verified the relationship between CP and GIP (Islami et al., 2018). These output data and their corresponding Prototypes illustrate the favorable impact of CP on corporate finances. Strong involvement with both internal and external stakeholders results in an improvement in any enterprise's CP, which boosts its reputation. Additionally, the earlier hypotheses support this relationship regarding the choices made to maximize their interests (Fao, 2008). The association between GP * OC, CP * CSP, and GIS * CSP is shown in Table 2, along with the fixed effect and GMM values. Prototype 1's OC is significantly and favorably impacted by GIS at the first value, with constant values ($\beta = 0.348$, $p = 0.1$) and GMM values ($\beta = 0.350$, $p = 0.1$). These metrics show that adopting a green innovation approach can help increase corporate funding.

According to constant values (β = 0.035, p = 0.1) and GMM values (= 0.055, p = 0.1), respectively, the second Prototype, which is about CP and OC, demonstrates the substantial influence of CP on the OCR. Thus, the second hypothesis—that corporate social responsibility aids in boosting corporate funding—was supported by these principles. Prototype 3 illustrates the relationship between the CSP and OC using constant values (β = 0.065, p = 0.1) and values from the GMM Prototype (= 0.082, p = 0.1). These output values validated the fourth hypothesis, which claimed that CSP may also help the OC. The Hausman test findings show that the constant effect methods are preferable to the random effect for all of these Prototypes (1, 2, and 3), with the values (β = 764.82, p = 0.1; = 60.67, p = 0.1; and = 98.27, p = 0.1). Secondary analysis has also been conducted for the conformations of outcomes of Prototype-based research. The feasible generalized least squares (FGLS) approach is employed for the robustness study. Heteroskedasticity emerges in a dataset as a result of the fact that the standard error of the variables did not remain constant during the investigation. Table 4 lists the commutative association between OC and GP, CP, and CSP, along with the supporting data. With values of (= 0.216, p = 0.1), (= 0.018, p = 0.1), and (= 0.017, p = 0.1), respectively, three Prototypes (GP*OC, CP*OC, and CSP*CP) were constructed. These findings are also supported by FGLS analysis.

The output Prototype also supports our third hypothesis, exemplified by green creative strategy and corporate investment. The moderating values of CP are positively and reciprocally correlated with these two parameters. Former researchers also asserted that companies work correctly when they adhere to their CP values and sell their CP reports. These reports also provide stockholders more assurance to expand their financial investments in the company (Gorman & Dzombak, 2018). The following hypothesis reported that corporate financing is directly related to gender diversity. The output values with its Prototype also verify that gender diversity, especially the dominant character of females, enhances the proportion of corporate funding. Former theories and records also prove the universal effect of females in marketing, as 70% of listed companies in China hire females as their board executives (Farrugia et al., 2010b). This ratio can't be ignored due to the solid financial position of China among other countries.

5.1 Practical implications: green innovations and practices

This research contributes to a greater comprehension of how a green innovation strategy supports green path innovation through green Healthcare Organizational identity Healthcare Organizational legitimacy. This study covers both theories about the identity and legitimacy of an enterprise. This study also assesses the environmental motivations and responses of corporations. It states that managers must try to enhance their performance for green innovation by developing and implementing a green innovation strategy (Farrugia et al., 2010a)**.**

Environmental deterioration can endanger organisms and the ecosystem if the environment and natural resources are not protected(Katakojwala & Mohan, 2021)**.** As a result of the effects of rapid climate change, worldwide governments, corporations, and civil society have become more aware of the necessity of environmental preservation. Environmental concerns will eventually influence society's perspective on activities that have the potential to destroy ecosystems. To reduce their negative influence on the environment, enterprises must develop plans for implementing innovations. The term "green innovations" refers to several technologies that reduce negative environmental impacts, providing businesses with a significant chance to satisfy environmental performance objectives and reap environmental benefits. A strategy is an organization's long-term course and opportunity to fulfill market demands and shareholders' expectations. In contrast, green innovation suggests prioritizing the mitigation of environmental impacts (Hung et al., 2018), **A** System for minimizing waste, preventing pollution, and managing the environment. Consequently, a green innovation strategy is a form of technology that a corporation uses to apply green innovation to gain a competitive advantage, satisfy market demands, and meet stakeholder expectations, encouraging companies to build green innovation strategies to promote green innovation (Ellingsen et al., 2016).

5.2 Industry 5.0 and its influence

Using energy-efficient technology can reduce the ratio of pollution and waste produced by the Industry. When environmental concerns become an organization's primary goal, members will be inspired to make additional environmental contributions (Evenson & Gollin, 2003). The earlier researcher (Mendola, 2007) defines the identity of green Healthcare Organizations as an emerging framework for eco-friendly management and preservation of the environment that members develop to pile up the values of their operations (Katakojwala & Mohan, 2021).

6. Future Directions

This survey-based research work has revealed many significant factors and results for the green path innovation, but some factors are limited here, so further study is compelled here for this research work. First of all, this research work is based on sample analysis provided by the managers of enterprises in Taiwan. Because they know very well about their field and exhibit proficiency in their work, they are appropriate for this research work. However, to generalize the research, we invite researchers to review the study but in diverse regions along variable constructs.

7. Conclusion

Keeping the environment green has become a worldwide slogan for enterprises and companies. Enterprises must be up to date with their strategies not only for the improvement of business but also for environmental issues. This research provides many implications at the managerial level in the enterprise. The study of the literature reveals that a Healthcare Organizational structure stands on some basic and primary paradigms: like its competitors and shareholders from government or clients, the labor of enterprise, and suppliers of raw materials. Enterprises should set and adopt green innovation strategies while making administrative regulations with the proper guidelines, workshops, and training. Second, companies were examined in our Prototype regarding their products. There is no significant variance (in the values) of the industries, including the manufacturing and service industries. Last but not least, this research also reveals that employees always have a supporting role in implementing any new strategy; in our case, it is "green path innovation."

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