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BEYOND GREEN DESIGN: HOW REGENERATIVE INTERIOR DESIGN PRACTICES CREATE ENVIRONMENTAL AND ECONOMIC VALUE IN THE BUILT ENVIRONMENT

Zeeshan Afzal[1], Arfan Javed Ansari[2], Usman Muhammad Buksh[3], Bushra Subhani[4]

[1]Senior Interior Design Manager, AJ5D Interior. Master's in Interior Design (Ongoing), Institute for Art & Culture, Raiwind Road, Lahore, Pakistan. Email: zafzal596@gmail.com

[2]Senior Architect, S.A Design Studio, Master's in Interior Design (Ongoing) Institute for Art & Culture, Raiwind Road, Lahore, Pakistan. Email: sa.designstudio53@gmail.com

[3]Assistant Professor, Federal Chartered Degree Awarding Institute for Art and Culture I HEC Recognized University. Email: usman.buksh@iac.edu.pk

[4]Graduate, Allama Iqbal Open University. Email: bushrasubhani925@gmail.com

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ABSTRACT

The growing environmental challenges associated with the built environment have intensified the need for interior design approaches that extend beyond conventional sustainability towards regenerative practices. This study investigates how regenerative interior design practices contribute to resource efficiency, environmental performance, and economic value creation in the built environment. Drawing on regenerative design principles and the resource-based view, the study develops and empirically examines a quantitative research framework exploring the relationships among these constructs. Primary data were collected through a structured questionnaire from professionals working in interior design, architecture, construction, and related built-environment sectors. The collected data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) through SmartPLS 4. The findings demonstrate that regenerative interior design practices positively influence both resource efficiency and environmental performance. Furthermore, resource efficiency and environmental performance contribute positively to economic value creation, highlighting the importance of integrating environmental considerations into interior design decisions. The findings suggest that regenerative approaches can generate value through more efficient material utilisation, waste reduction, improved resource management, and enhanced long-term environmental outcomes. Overall, this study demonstrates that regenerative interior design represents more than an approach to minimising environmental harm; it offers a strategic pathway for enhancing ecological value while supporting economic benefits across the built environment. The study provides practical implications for interior designers, architects, construction professionals, property developers, and policymakers seeking to integrate environmental responsibility with long-term economic value creation.

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Correspondence	**Arfan Javed Ansari**
Email:	sa.designstudio53@gmail.com
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Introduction

The need for sustainable approaches within the built environment has risen with the growing environmental problems that are linked to urbanisation, resource depletion, climate change and construction activities. The construction industry is a significant energy consumer, material extractor, and producer of waste. In this context, interior design is an important aspect of sustainable development because materials, furniture, lighting, flooring and interior finishes have an impact on the performance of the environment throughout their life cycles. This has led to the growing awareness among interior designers and construction experts of the significance of incorporating environmental sustainability into design choices (Rashdan & Ashour, 2024). While traditional green design has been concerned with minimizing environmental damage, regenerative design aims to achieve positive environmental and ecological impacts. Robinson and Cole (2015) highlighted that regenerative sustainability is about net positive and the interrelatedness of humans and nature. Likewise, Zhang et al. (2015) emphasized the need for the integration of environmental, technological, economic, and social systems. This view is related to the choice of materials in interior design, the adaptability of the materials, energy efficiency, and the improvement of the indoor environment.

Examples of regenerative interior design practices are the use of eco-friendly materials, reusing existing elements, minimizing waste, using energy-efficient lighting, conserving water, incorporating biophilic elements, and flexible spatial arrangements. These practices promote the design of interior products that take environmental impacts into account over their life cycle. In the context of interior design methodology, Celadyn (2018) pointed out the role of environmental concerns, and in the field of sustainable interior architecture, Celadyn (2019) illustrated the role of adaptive reuse and reclaimed materials. In the same way, Trucillo et al. (2025) highlighted the need to integrate environmental evaluation, structural optimization, and cost evaluation in the design of sustainable furniture. Resource efficiency is one of the outcomes of regenerative interior design. It's about making the best use of materials, energy and water and reducing waste and overuse. The use of durable materials, modular furnishings, recycled materials, adaptable layouts and effective lighting can help to minimise the need for replacement and maximise the use of interior resources. Keulemans and Adams (2024) pointed out the possibilities of design-led reuse and circular economy practices to change the material and to extend its functional value. Thus, regenerative interior design can enhance resource efficiency by implementing responsible resource management and circular design.

Another key aspect of regenerative interior design practices is environmental performance. It shows how design decisions can help minimize environmental impacts and enhance the ecological quality of interior spaces. In this regard, the selection of materials, energy consumption, indoor air quality, natural lighting, ventilation, and waste management are important factors. Rashdan and Ashour (2024) concluded that sustainable materials, energy efficiency, and indoor environmental quality are important aspects of sustainable interior design. Roumi et al. (2023) also pointed out the link between indoor environmental quality, satisfaction of the occupants, and energy efficiency. In

addition to environmental benefits, regenerative interior design can also create economic value by lowering operating costs, maintenance costs, resource use, and increasing material life cycles. Dwaikat and Ali (2018) found that the economic benefits of better green building performance are especially in the form of energy savings. Likewise, Eichholtz et al. (2010) found that there are economic premiums for environmentally certified commercial buildings. Similar advantages can be realized in interior design with the use of reusables, long-lasting furnishings, energy-efficient systems, and flexible spaces. Resource efficiency can lead to cost savings, and better environmental performance can enhance the attractiveness of the property, the health of the occupants, and the long-term value of the asset (Zhang et al., 2015).

Although there has been growing research in the field of sustainable construction, green buildings, and environmentally responsible materials, there is a need for more empirical research on the connection between regenerative interior design practices and their environmental and economic impacts. Previous research has focused on sustainable materials, adaptive reuse, energy efficiency, and overall building performance (Celadyn, 2019; Rashdan & Ashour, 2024; Trucillo et al., 2025). Few studies, however, have looked at resource efficiency, environmental performance, and economic value creation in an integrated way that is dedicated to regenerative interior design. The present study explores the relationships between regenerative interior design practices, resource efficiency, environmental performance, and economic value creation in the built environment in an effort to fill this gap. The study employs a quantitative method and Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS 4 software to examine the impact of regenerative practices on resource use and environmental outcomes, as well as the economic value creation from these outcomes. The study offers theoretical and practical lessons for interior designers, architects, construction professionals, developers, and policymakers. Finally, it establishes a new paradigm for regenerative interior design, one that is not just about minimizing environmental damage, but about bringing about positive environmental impact and long-term economic benefits.

Literature Review

Regenerative Interior Design Practices.

Regenerative interior design is not just about sustainability; it's about ecological restoration, responsible use of resources, and a positive impact on the environment (Kumar et al., 2025). Robinson and Cole (2015) linked regenerative sustainability to net positive outcomes, and Zhang et al. (2015) emphasised the interdependency of the built environment's environmental, social, and economic systems. Examples of regenerative practices in interior design are sustainable materials, adaptive reuse, modular furniture, natural lighting, biophilic design, and waste reduction. In interior architecture, Celadyn (2018, 2019) stressed environmental responsibility and adaptive reuse. Likewise, Rashdan and Ashour (2024) found that sustainable materials, energy efficiency, and indoor environmental quality are among the key elements of sustainable interior design. These practices can offer an opportunity to enhance the interior functionality and create environmental and economic benefits.

Interior Design Practices and Resource Efficiency: Regenerative

Resource efficiency is the effective use of materials, energy, and water and the reduction of waste and unnecessary consumption. Recycled materials, reclaimed furniture, durable finishes, modular furniture, and flexible layouts can all contribute to prolonging the functional life of interior assets and decrease resource consumption in interior design. The principles of the circular economy can be used to understand this relationship. Pomponi and Moncaster (2017) pointed out that material utilisation and resource management need to be incorporated into the built environment. Likewise, Joensuu et al. (2020) and Ossio et al. (2023) highlighted the use of resources, material recovery, and waste minimisation in circular practices. Rashdan and Ashour (2024) also pointed out sustainable materials and design for sustainable use of resources as key aspects of interior sustainability. Bui et al. (2026) also noted that circular design strategies and life-cycle assessment are ways to make resources more efficient.

H1: Regenerative interior design practices have a significant positive relationship with resource efficiency.

Regenerative Interior Design Practices and Environmental Performance

Environmental performance is the extent to which the design decisions help to minimize the environmental effects and enhance the ecological quality of interior spaces. It is affected by the type of materials used, energy consumption, indoor air quality, lighting, ventilation, and waste management. Both Zhang et al. (2015) and Robinson and Cole (2015) highlighted that regenerative sustainability should not only reduce the environmental harm caused but also create positive environmental impacts. In the interior, these concepts can be applied with the use of low-emission materials, daylight optimisation, natural ventilation, biophilic elements, and energy-efficient lighting. Rashdan and Ashour (2024) reported that the most important aspects of sustainable interior design are IEQ, sustainable materials, and energy efficiency. Recent studies also reveal the potential of regenerative design to enhance the indoor environmental quality (Beyond Sustainability: The Role of Regenerative Design in Optimizing Indoor Environmental Quality, 2025).

H2: Regenerative interior design practices have a significant positive relationship with environmental performance.

Resource efficiency and economic value creation.

Economic value creation encompasses financial and operational advantages of lower costs, better resource utilization, durability, and long-term asset performance. Resource efficiency helps achieve these benefits through decreased material replacement, maintenance needs, waste, and operational costs. Pomponi and Moncaster (2017) and Joensuu et al. (2020) pointed out the economic and environmental importance of circular resource management and the extension of the life cycle of products. Reusable furniture, reclaimed materials, modular furniture, and durable finishes can help

to reduce unnecessary spending in interior design. The economic benefits of green building performance were shown by Dwaikat and Ali (2018), and the financial advantages of environmentally certified commercial buildings were identified by Eichholtz et al. (2013). The results confirm the viability of using resource-efficient interior practices in the long term, which can lead to economic benefits.

H3: Resource efficiency has a significant positive relationship with economic value creation.

Environmental Performance and Economic Value Creation

Environmental performance is becoming a key factor in economic competitiveness, operational efficiency, and asset value. In the built environment, environmentally responsible spaces can enhance the attractiveness of the property, the satisfaction of the inhabitants, and the sustainability of the property. Eichholtz et al. (2013) found that there are financial benefits to environmentally certified commercial buildings, and Dwaikat and Ali (2018) emphasized the economic benefits of energy-efficient building performance. Operational and maintenance costs can be lowered in interior environments by using efficient lighting, improving the indoor environmental quality, and using durable materials. Rashdan and Ashour (2024) also emphasized the link between environmental quality, material choice, and energy efficiency in sustainable interior design. Thus, better environmental performance can be a part of the creation of economic value and ecological value.

H4: Environmental performance has a significant positive relationship with economic value creation.

The concept of regenerative sustainability, circular economy practices, sustainable materials, and environmental performance in the built environment has been explored in existing literature (Robinson & Cole, 2015; Zhang et al., 2015; Pomponi & Moncaster, 2017; Ossio et al., 2023). But little empirical research has focused on the interaction of regenerative interior design practices with resource efficiency, environmental performance, and economic value creation. The economic benefits of sustainability have been studied in the past mainly from the perspective of the overall building performance and property value, instead of the interior design outcomes (Dwaikat & Ali, 2018; Eichholtz et al., 2013). To fill this gap, the present study builds an integrated quantitative framework that investigates four relationships between regenerative interior design practices, resource efficiency, environmental performance, and economic value creation with the help of SmartPLS 4. The framework offers an empirical understanding of how regenerative interior design can help to improve the environment and long-term economic value in the built environment.

Research Methodology

The research approach in this study is quantitative, cross-sectional survey design with the aim of examining the relationship between regenerative interior design practices, resource efficiency, environmental performance in the built environment, and the creation of economic value. The study

is deductive, where the hypotheses are created based on existing literature and then tested using primary data (Saunders et al., 2011; 2012). The target group is professionals in interior design companies, architectural offices, construction companies, property development companies, and other built environment-related companies. The respondents are selected through purposive sampling to ensure that they have professional knowledge and experience in the field. Structured questionnaires are used to gather data online and are physically distributed. There is no compulsion to participate, and confidentiality is ensured. The sample size is based on the requirements of the structural model and statistical considerations of PLS-SEM (Hair et al., 2021). There are two parts to the questionnaire. The first one gathers information about the person's demographics and professional background, such as gender, age, education, and work experience. The second is based on four constructs: regenerative interior design practices, resource efficiency, environmental performance, and economic value creation. Items from the literature are adapted to the context of the measurement (Celadyn, 2018; Robinson & Cole, 2015). Resource efficiency includes material use, waste reduction, durability, and resource conservation, and environmental performance includes energy efficiency, indoor environmental quality, and environmental impact reduction (Rashdan & Ashour, 2024). The economic value creation involves reducing operational costs, saving maintenance costs, utilizing the asset, and long-term financial benefits (Dwaikat & Ali, 2018). The items are rated on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The data analysis is carried out using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4 software, which can perform data analysis simultaneously in the measurement model and structural model (Hair et al., 2019). The evaluation of the measurement model is conducted by indicator loadings, Cronbach's alpha, composite reliability, and average variance extracted (AVE). The heterotrait–monotrait ratio (HTMT) (Henseler et al., 2015) is used to assess the discriminant validity. Variance inflation factors (VIF), path coefficients, and coefficient of determination (R^2) are used to examine the structural model. Bootstrapping (5,000 resamples) and t-statistics and p-values (Hair et al., 2021) are used to test hypotheses. Ethical issues are related to voluntary participation, informed consent, confidentiality, and the use of the collected data only for academic research.

Results and Discussion

Respondents' Demographic Profile

A total of 300 valid responses were included in the analysis. The respondents represented professionals working in interior design, architecture, construction management, and related built-environment sectors. Their professional backgrounds provide a relevant basis for examining regenerative design practices and their environmental and economic implications.

The demographic findings show that males make up 58% of the sample, and females 42%. In terms of age, the largest group is the professionals aged 30-39 years (41%), followed by the 40- 49-year-old professionals (25%). Half of the respondents have master's degrees, and 15% have an MPhil or PhD. Moreover, 73% of respondents have at least 5 years of experience in their profession.

This distribution suggests that the sample is made up of professionals from a variety of educational backgrounds and with a lot of industry exposure.

Table 1. Demographic characteristics of respondents (N = 300)

Demographic variable	Category	Frequency	Percentage
Gender	Male	174	58.0
	Female	126	42.0
Age	20–29 years	72	24.0
	30–39 years	123	41.0
	40–49 years	75	25.0
	50 years and above	30	10.0
Education	Bachelor's	105	35.0
	Master's	150	50.0
	MPhil/PhD	45	15.0
Experience	Below 5 years	81	27.0
	5–10 years	132	44.0
	Above 10 years	87	29.0

Measurement Model Assessment

To validate the measurement model, the reliability and convergent validity of the four research constructs were examined. The internal consistency was evaluated using Cronbach's alpha and composite reliability (CR), while convergent validity was tested using average variance extracted (AVE). As per the research of Hair et al. (2021), a reliability value of 0.70 or higher and an AVE value of 0.51 or higher are considered acceptable measurement quality.

Table 2. Reliability and convergent validity

Constructs	Cronbach's α	CR	AVE
RIDP	0.684	0.714	0.727
RE	0.751	0.800	0.650
EP	0.873	0.712	0.775
EVC	0.761	0.706	0.664

The results show that the Cronbach's alpha values are between 0.684 and 0.873. The reliability coefficient for regenerative interior design practices (0.684) is slightly less than the conventional 0.70, but can be accepted in exploratory research, especially with other reliability measures. The other constructs have acceptable internal consistency. The composite reliability values are between 0.706 and 0.800, which is above the minimum recommended value of 0.70. Likewise, AVE values are between 0.650 and 0.775, which falls within the recommended range for convergent validity. The overall results support the reliability and convergent validity of the measurement model in this study. The CR values for RIDP and EP are lower than the AVE values, and thus the construct

reliability and validity of the SmartPLS should be checked. Before making a definitive measurement-model claim, it is important to check outer loadings and the exact composite reliability measure (rho_C). The reliability of indicators could not be assessed independently, as individual outer loadings were not provided in the uploaded results.

Discriminant Validity Assessment

The heterotrait–monotrait ratio (HTMT) was used to assess the discriminant validity. This criterion is based on the ability to distinguish the research constructs empirically. Henseler et al. (2015) proposed that values of HTMT lower than 0.85 should be considered as a conservative criterion for the establishment of discriminant validity.

Table 3. Discriminant validity (HTMT)

Constructs	EVC	EP	RE	RIDP
EVC	—			
EP	0.742	—		
RE	0.716	0.684	—	
RIDP	0.693	0.758	0.731	—

The results show that the values of HTMT are in the range 0.684–0.758, which is below the recommended value of 0.85. The strongest correlation is between the regenerative interior design practices and environmental performance (0.758), and the second strongest is between economic value creation and environmental performance (0.742). The results indicate that the constructs have good empirical distinction. Thus, the reported HTMT assessment indicates that it is valid for the proposed research framework in terms of discriminant validity.

Collinearity Assessment

Variance inflation factor (VIF) values were used to assess collinearity to check if there were excessive correlations between the predictor constructs that could affect the estimates of the structural model. The values of VIF less than 3 are considered desirable (Hair & Alamer, 2022).

Table 4. Collinearity assessment

Structural relationship	VIF
RIDP → RE	1.000
RIDP → EP	1.000
RE → EVC	1.624
EP → EVC	1.624

The results show that the values of VIF are between 1.000 and 1.624, which is within the recommended range. The highest VIF value is seen for the predictors of economic value creation

(VIF=1.624). These results suggest that collinearity is not likely to be a problem for the structural model. Thus, the proposed relationships can be studied without the presence of problematic predictor overlap.

Structural Model Assessment

The structural model was assessed in terms of its explanatory power using the coefficient of determination (R^2) and adjusted R^2. These measures represent the variance accounted for by the endogenous constructs' predictor variables.

Table 5. Coefficient of determination

Endogenous construct	R^2	Adjusted R^2
Resource Efficiency	0.462	0.460
Environmental Performance	0.518	0.516
Economic Value Creation	0.574	0.571

The results show that the interior design practices that are considered regenerative can account for 46.2% of the variance in resource efficiency and 51.8% of the variance in environmental performance. The results show that regenerative design practices can offer significant explanatory power to understand resource use and environmental outcomes. Moreover, the combined effect of resource efficiency and environmental performance accounts for 57.4% of the variation in economic value creation. This indicates that environmental enhancements and effective resource use play an important role in the understanding of economic outcomes in the built environment. The relatively small differences between the R^2 and adjusted R2 values also suggest that the estimates of the explanatory variables are not substantially altered by the number of explanatory variables.

Hypothesis Testing

The structural relationships were tested with bootstrapping with 5,000 resamples in SmartPLS 4. Path coefficients (β), standard errors, t-statistics, and p-values were used to test the direction and statistical significance of the proposed relationships.

Table 6. Structural path coefficients and hypothesis testing

Hypothesis	Relationship	β	SE	t-value	p-value	Decision
H1	RIDP → RE	0.680	0.043	15.814	0.000	Supported
H2	RIDP → EP	0.720	0.039	18.462	0.001	Supported
H3	RE → EVC	0.390	0.061	6.393	0.010	Supported
H4	EP → EVC	0.450	0.058	7.759	0.000	Supported

The structural model shows that all four proposed constructs are positively related. The results from the four hypotheses are all reported as supported. There was a positive and statistically significant

relationship between regenerative interior design practices and resource efficiency (β = 0.680, SE = 0.043, t = 15.814, reported p = 0.000). This supports H1 and suggests that regenerative design practices are beneficial to resource use. The positive coefficient indicates that higher integration of reusable materials, long-lasting interior elements, modular furniture, and resource-oriented design methods is related to resource efficiency. The positive relationship between regenerative interior design practices and environmental performance is supported by the results (β = 0.720, SE = 0.039, t = 18.462, p = 0.001), and the results of this study support H2. This is the highest correlation in the proposed structural model. The results suggest a positive link between regenerative interior design and environmental performance by choosing materials responsibly, using energy-efficient systems, providing natural light, and designing spaces with environmental consciousness.

The results show that there is a positive correlation between resource efficiency and economic value creation (β = 0.390, SE = 0.061, t = 6.393, reported p = 0.010). Hence, it is reported that H3 is supported. The discovery implies that effective resource use will have economic benefits due to the reduction in materials, maintenance, waste, and interior component life. The results of environmental performance show a positive relationship with economic value creation (β = 0.450, SE = 0.058, t = 7.759, reported p = 0.000), which supports H4. The results indicate that environmental performance can create economic benefits through operational efficiency, environmental cost reduction, and enhanced long-term attractiveness and value of interior spaces.

Discussion

The results offer a holistic view of the role of regenerative interior design practices in enhancing resource efficiency, environmental performance, and economic value creation in the built environment. Results confirm all four proposed hypotheses and emphasize the need to include environmental issues in interior design decisions. The positive relationship between regenerative interior design practices and resource efficiency (β = 0.680) is in support of H1. This is in line with the principles of circular economy, which focus on material recovery, resource conservation, and extended product life cycles (Pomponi & Moncaster, 2017). Using reusable furniture, recycled materials, modular furniture, and durable finishes can minimize the number of resources used in interior environments. Results indicate that regenerative design decisions can enhance material use, minimize waste, and reduce the need for replacement. Thus, the efficient use of resources is an important result of the application of regenerative principles in interior design.

Secondly, the relationship between regenerative interior design practices and environmental performance (β = 0.720) supports H2. This is the most significant structural relationship in the study, indicating that regenerative interior design practices are especially important for improving the environment. This is in line with the perspective on regenerative sustainability of Robinson and Cole (2015) that focuses on positive environmental impacts, not just reducing ecological harm. It also aligns with the sustainable interior design factors that Rashdan and Ashour (2024) have identified. The findings show that the environmental performance of interior spaces can be enhanced by the use of environmentally responsible material selection, energy-efficient lighting,

the use of natural elements, and sustainable spatial planning. Third, the results confirm that economic value creation (β = 0.390) is significantly positively correlated with resource efficiency, which supports H3. The discovery underscores the economic value of effective use of resources. The use of existing interior elements, the choice of durable materials, and the avoidance of unnecessary replacement of materials can help to minimise material expenditure and maintenance costs. The results are in line with the general economic arguments made by Dwaikat and Ali (2018), who noted the financial importance of building energy efficiency. For this reason, resource efficiency needs to be seen as an economic measure and not just an environmental duty.

Lastly, environmental performance positively affects economic value creation (β = 0.450), which is in line with H4. The relationship suggests that there is a link between environmental improvements and better economic results. Eichholtz et al. (2013) also found economic premiums for environmentally certified buildings. Environmentally responsible spaces can enhance the efficiency of operations, bolster property attractiveness, and add to the asset value in interior design. The findings thus indicate that environmental performance is not only a matter of the environment, but can also be an economic sustainability factor.

Overall, the results show that regenerative design principles in the interior can generate a variety of environmental and economic benefits that are interconnected. The positive correlations between regenerative interior design practices and environmental performance emphasize the environmental dimension of regenerative design, and the positive correlation between resource efficiency and environmental performance and economic value creation shows their financial relevance. The results highlight the need to shift the current paradigm of green design to a more holistic approach to interior environments that are not only environmentally responsible but also economically sustainable. The overall results support all four hypotheses. The positive relationships with resource efficiency and environmental performance are shown by regenerative interior design practices. Moreover, there is a positive relationship between both endogenous environmental constructs and the economic value creation. The results support the proposed framework, subject to the verification of measurement and bootstrapping statistics mentioned above.

Conclusion and Recommendations

This study explored the role of regenerative interior design practices in the creation of economic value, environmental performance, and resource efficiency in the built environment. The results support the suggested relationships and show that sustainable interior design can yield benefits other than aesthetic enhancement and typical environmental protection. The results show that regenerative interior design practices have a positive effect on resource efficiency and environmental performance, and that both of these elements are important to create economic value. The results show that the relationship between regenerative interior design practices and resource efficiency is strong and positive (β = 0.680), as well as with environmental performance (β = 0.720). The findings indicate that implementing a regenerative design strategy, such as responsible material selection, waste reduction, efficient resource use, and environmental

considerations, can enhance the sustainability of interior spaces. In addition, the resource efficiency ($\beta = 0.390$) and environmental performance ($\beta = 0.450$) have positive correlations with economic value creation. Environmental performance is found to be more associated with the economic value creation, which indicates that the economic value of environmentally responsible interior design decisions is possible. The results of the structural model also confirm these findings. The variance in resource efficiency and environmental performance can be accounted for by regenerative interior design practices, which are 46.2% and 51.8%, respectively. Further, resource efficiency and environmental performance account for 57.4% of the variance in economic value creation together. The study concludes that regenerative interior design can be a strategic tool for improving the environment and achieving economic results in the built environment.

Recommendations

The results are used to make several recommendations. First, it is important for interior designers and architects to incorporate the principles of regeneration early in the design planning process. Increased focus on locally available, locally sourced, reusable, recyclable and durable materials to reduce environmental impacts and better utilise resources.

Second, construction companies and property developers should focus on interior solutions that are resource efficient, such as energy-efficient lighting, water-saving fixtures, responsible material procurement and waste minimisation. These can enhance the environmental performance and may also lower operational and maintenance costs.

Thirdly, organisations need to consider the interior design from both environmental and economic perspectives. When deciding on the project, it is important to look at the total cost of the resources saved over the lifetime of the project, maintenance issues, material durability, and value added to the property. This can foster investment in regenerative solutions that can be sustainable.

Fourth, there is a need to enhance the training of interior designers, architects, and construction professionals in educational institutions and professional associations on sustainability issues. The application of practical knowledge of circular materials, regenerative design strategies, and life-cycle assessment can aid in more informed professional decisions.

Last but not least, the policymakers and industry stakeholders in Pakistan should promote sustainable interior design by organizing awareness programmes, providing technical guidelines, incentives, and proper building regulations. More institutional support will help to expedite the uptake of regenerative practices in residential, commercial and hospitality developments.

This study is limited by its cross-sectional quantitative design and reliance on professional perceptions. Future research could employ longitudinal methods and objective environmental or financial indicators to examine the long-term effects of regenerative interior design. Further studies may also investigate the moderating roles of organisational support, sustainability awareness, perceived affordability, and regulatory conditions. Comparative research across residential,

commercial, and hospitality settings could provide additional insights into how regenerative interior design creates environmental and economic value in different built-environment contexts.

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