



Impact of Green Life Style on Green Innovation in The Banking Sector: Mediated by Manager's Training and Moderation of Green Innovation Strategies

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ABSTRACT

Green lifestyle is the hot cake in the research world but unfortunately is not being given much importance in our society. The concept of green lifestyle has been evaluated in different perspectives, which includes activities related to health and environment. Moreover, the growth of public concern regarding environment is rapidly altering the competing world and is creating an urge in the society to adopt greening of the environment. With the passing time organizations are being considerate regarding the concept of green innovation, though still it needs to be highlighted on a larger scale to make maximum people familiar with it. Thus, the results shows that green lifestyle was having a positive impact on green innovation and the employees who have oriented their mind mapping on the basis of green lifestyle are highly satisfied with their job performance and successive growth in their career. In the recent studies the impacts of green life style on green innovation of 110 employees of different banks of Pakistan have been observed. Data was collected via questionnaires sent online and manually from 110 employees working in different banks of Punjab, Pakistan. SEM has been used to analyze data. The findings of the research study indicate that the effect of green life style on Green Innovation is essential. The results also revealed that in the relationship within Green Lifestyle and Green Innovation, Green Innovation strategies operate as a moderator and this framework was mediated by Manager's Training. Different Banks of southern Punjab have been used for data collecting purposes. However teeny tiny bit of stress is laid and reported in Pakistan about green lifestyle and its deep impact on green innovation, so it is hoped that the current work may help and guide the policy makers of specifically banking industry of Pakistan to admit the importance of green lifestyle before they think of flourishing their industry. So, everyone in the society could relish their life under a safe and sound environment.



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1. Introduction

Going green is an increasingly important area in research now days. The whole concept of going green is taken as a pathway that allows organizations to achieve their mottos related to greening of the environment (Tzschentke et al., 2008). In the literary world, green practices also refers to inheriting practices related to environment that are attached with the practices directed at insignificance detrimental forceful consequence on the environment, taking it on the both resource depletion and pollution (Tzschentke et al., 2008).

However Implementation of green practices in the organizations related to business activities which have the support of their users of the products that have the values same as if they were green (McGuire & Germain, 2015). Innovation is an important part of any organization's ability to prolong its capitalistic vantage in the industrial enterprise environment (Ven, 1991). The ability to bring something new to an environment is evolving. This is merely correct in the context of activities related to green innovation (Shu et al., 2014). The

prosperous concept of green innovation assists the organizations to accomplish greater efficiency and to make their nub competencies(Chen et al., 2006; Chen & Chen, 2008; Shu et al., 2014). Similarly, green innovation can also be referred as being innovative in the technology field, in the field of production and service, the organizational structure and management modes that are being used by the companies to achieve sustainable development(Rennings, 2000).

Moreover, to accomplish an advantage that is sustained in the worldwide market, organizations need to make it prominent both their technological innovation and administrative innovation. (Teece, 2000). Hence, we can divide green innovation into two equal major categories: green technology innovation and green management innovation(Qi et al., 2010; Rennings, 2000). In the daily routine, people are practicing green behaviors that are being applied by green life style. The people are absorbing green behaviors in their daily life patterns which eventually becomes part of their life style (EEA,2010, stern,1997,as cited in Muster & Schrader,2011). The natural resource operation and generate a support for production of eco-friendly products (Shaikh, 2010) Reasserted that Green Human Resource management has helped a lot of the employees to get awareness in this regards. The outcome of green work life balance on to green HRM has superiority to go beyond the concept of greening employees at their working places(Özbilgin et al., 2011). On the context of this particular study, it is assumed that the relatively permanent change has absorbed due to environmentally friendly behaviors in single range that might have an mark on the same featured activities in the other ranges (Muster & Schrader, 2011).

Within the literature, the existing financial industry around the globe has become complex due to the increased competition and variety of the financial offerings along with globalization of the transactions. The change in the minds and behaviors of the customers is to be synchronized with the innovative financial solutions to its customers. However, at the same time, the financial industry is facing the difficulty of managing the human resource due to long working hours and work stress in the industry. Theoretically The research studies have confirmed that the innovative solutions are considered to be the competitive advantages and keep the bank synchronized with its customers behavioral preferences of financial solutions (Hanafizadeh et al., 2014; Nath et al., 2014). The existing research studies have been conducted on examining the green-life-style on green-innovation; however, it is also important that the green-innovation strategies are the sources of green-innovation. The scholars have argued that the green-innovation in the banking industry can be cultivated by maintaining the green-life-style among the workers. Furthermore, the green-innovation-strategies plays a significant role to strengthen the relationship between the green-life-style and green-innovation (Bhatt, 2016; van Strien&Koenders, 2012). This has also been argued and suggested by the scholars that the role of the manager's training in maintaining the green culture and environment in the organization is critical to facilitate the green-innovation (Nordhaus& Tobin, 2019; Wallace et al., 2013).

The existing studies in Pakistan have negligibly worked on examining the impact of the green-life-style on the green-innovation with moderation and mediation of green-innovation-strategies and manager's training. Thus, this research study has been undertaken to meet the research gap within the scope of the green human resource management in the banking industry of Pakistan. Thus, the research problem of this study is "*Impact of the Green-Life-Style on Green Innovation in the Banking Industry of Pakistan: Mediated by Manager's Training and Moderating impact of Green-Innovation Strategies*". This research gap is meant to increase the existing body of the literature for the green human resource management and hence has a significant contribution of the beginning of the green human resource management practices in the banking industry of Pakistan. In-addition, the future research on the employees in the banking sector while working to ensure their green life style is also imperative since this industry is highly occupied due to the over work tasks, high employee turnover and work anxiety. The research question that arouse when greening is interrelated with banking industry is that to check the impact of green lifestyle on green innovation in the context of banking industry of Pakistan.

Furthermore, if we look at the research problem, the main direction of the study is to answer what is the impact of the green-life-style on the green innovation in the Banking sector, whereas, the mediator and moderator contribute to either carry the effect to the green innovation in the banking sector or strengthen the innovation. However, the following questions arouse that if the manager's training is mediating the relationship between green life style and

green innovation in the same industry that is of banking sector. Secondly this question also arouse that if the green innovation strategy strengthen the relationship between green lifestyle and green innovation in the banking sector of Pakistan. The objectives of this research studies are firstly to examine the mediating effect of the Manager's Training between the Green-Life-Style and Green Innovation in the Banking Sector of Pakistan. Secondly to look for the moderating effect of Green-Innovation-Strategies between the Green-Life-Style and Green Innovation in the Banking Sector of Pakistan. Thirdly, to analyze the relationship of green-lifestyle, manager's training, green-innovation strategies and green-life-style using the primary data from the Banking Sector of Pakistan. Last but not the least to suggest policy recommendations, managerial implications and future research within the Scope of the research

2. Theoretical Background and Hypotheses

2.1. Green innovation

Hardware and software innovation can be referred as to the term green innovation, which is related to green processing and green product creation. It also includes the technological innovation that involve the saving of energy and the pollutants creator factors, waste recycling and the corporate environment management (Chen, etbal., 2006). All those organizations which are able to use green innovation in order to improve the performance in the betterment of the environment use environmental protection throughout the globe (Chen et al., 2006).

Generally, random terminologies are being used to elaborate such specific type of innovation that is aimed at lowering the bad effect that any organization could have on the surrounding environment i.e. eco, sustainable, environmental and greening with many pros and cons between them. Likewise, we briefly go through some definitions in this aspect.(Fabrizio, 2009)Although several authors, including (Chen et al., 2006) in their research have already elaborated the concept of green innovation very clearly. The concept of green innovation (GI) is defined with the objective to mitigate or neglect environmental harm with the aim to protect the environment and making sure that the organizations are satisfied with the demands of the consumer, creating the value of the product and also increasing the productivity. The facilities provided by green innovation are subordinated in the general innovation and explained as the investment in the environmental quality or maximum utilization of the environmental resources.(Küçükoğlu& Pınar, 2015).

However, the main focus of this research work lies on the term green innovation which is not yet been developed to a large scale because of the scarcity of a much clear and focused definitions in the available literature. Thus there should be a detailed work done on the term.(Wendler, 2019) The concept of green innovation can be further categorized in three types which are the following: (Ramus, 2002)

- Environmental effect of the company is demolished by green innovation (re-usage and recycling)
- The environmental problems of the company that are resolved by Green Innovation (lessen the consumption of hazardous ingredients)
- The development of the products that is good for the environment by usage of Green Innovation (decreasing the use of energy and resources)

While going through the literature of previous researchers. There are some resources found regarding the concept of green innovation. Few sources quote (Hart et al., 2008) green innovation may increase firms' productivity and maximize their use of resources. Chen et al., (2006) elaborates green innovation as hardware or software innovation that is relatable to green product, it also include the technological innovations that helps in consumption of energy saving, prevents the causes of pollution, recycling the waste material, designing green products and corporate environmental management. While indulged in the activates related to environmental actions, organizations adopt new tactics to produce innovative products, processes that are designed to enhance the efficiency of companies and make them effective enough (Gluch et al., 2009).

Moreover, development of environmentally friendly products is referred as Green innovation. Albort-morant et al., (2017) by the adoption of some practices implemented in

firms(i.e. green raw material, while designing the products raw material should be used carefully using eco design principles, the usage of water should be less, consumption of electricity (Chithambaranathan et al., 2015). Many of the previous studies shows that those firms who are practicing green innovation are generating high revenues(Albort-morant et al., 2017) which effect their overall performance and also generates a good word of mouth in the market. Chen et al., (2006) states that the performance of environmental management is due to green innovation for the protection of environment. Those organizations that are devoted to develop green innovation not necessary will meet environmental regulations but at the same time can build up hurdles to their other competitors. Lenders and Chandra Ben et al., (2017)have made an argument that green innovation is a product that includes the originating of new technologies must be focused on prevention from the polluted atmosphere , recycling of the waste , saving the energy and also eco- efficient design.

Furthermore, the fabrication firms need to practice green innovation in order to lessen the impacts of manufacturing processes on the environment. We also refer green innovation as an innovation that puts stress on the reduction of waste material, prevention of pollution and environmental management system (Eiadat et al., 2008a). The basic strategy of uninterrupted innovation is not easy to overcome the external pressures, such as the customers of that organization, all the competitors and regulators. Thus in order to gratify the stakeholders the secondary industry need to acquire green innovation(Huang et al., 2014). Chen et al., (2006) find out the positive relationship of green innovation in the premises of Taiwan. There were are some external factors that were affecting the green innovation directly or indirectly with the green suppliers (Chiou et al., 2011).Green innovation is very essential part of any firm in the victory situation while in completion with other environmental retrains. Also, if the businesses change their few techniques and captures the customers through giving them more options which can eventually lead them towards a more sustainable environment(Soewarno et al., 2019). When any business adopt the activities or performs actions that suits its economic entities and those who are taking benefits from it denotes its sustainability(Küçükoğlu& Pınar, 2015). While some organizations deal with the issues related to environment becomes the main challenge for them as a community, organizational unsustainability leads to reduction of the natural resources(Asadi et al., 2020). So, a positive thought is required in implementing environmental safeguards this will protect them from waste reduction.(Asadi et al., 2020). The completion of the concept of green innovation needs to generate some unique processes that leads towards the consumption of resources who may not be replicated by the revivals(Asadi et al., 2020). The organizations have firm believe that following green programs will lead them towards a better financial advantage and operational competency(Chiou et al., 2011). The overall environmental performance of the organizations can be improved through green innovation(Chithambaranathan et al., 2015)(Weng et al., 2015).

Green innovation is still in its initial phases of research. The existing literature available on green innovation and environmental issues has less empirical evidences. It has been elaborated that green innovation is a new and unique process which adds value to the business and their customers, it has also lessen the effect of destruction that was to be caused to environment.

2.2. Green Life Style

Green behavior is being applied as green life style by bringing it into the daily practices. If we take green behavior in consideration, it is obvious that it deliberately affects the usage pattern of the employees which later has eventually become part of their life style. EEA, 2010, stern, 1997, as cited in Hrm et al., (2011). The consequence of green work life balance on green HRM have a potential to go forth and back "greening employees" at the place of work(Muster & Schrader et al., 2011).The wellbeing of any organization is dependent on its employees' ecofriendly behavior because there that attitude and behavior makes amendments to improve the firm's environmental performance in the aggregate (Daily et al., 2009). This study also proposes the concept of green life style to supplement the deficiency of Organizational citizenship behavior for the environment since it defines the concept of eco-friendly behavior as only an individual activity for reduction of the harmful influence created by environment(Kollmuss&Agyeman, 2010).Green life style (eco-friendly behavior) concentrates on particular behavior to consume the energy, usage of water and reducing the wastage material, it is usually suitable in the context of hotels or restaurants. However, the researchers are working on to explore the hypothesis that are leading green life style and actually beneficial for

the people(Kasser&Kasser, 2017)because it has allowed them to attain meaning in their lives and behave in altruistic ways. Long story short in the process of adoption of green life style has examined in the currency of subjective eudemonia, which may not be such to sacrifice.

Moreover, when the importance of self-efficacy or identity is considered(Akerlof, 2010) for ill-being and pro-environmental behaviors (Owen et al., 2010; Sexton & Sexton, 2014), they explores to the extent that the self-identification with green life style or the real green behavior that has driven the positive relation that was expected between environmentally responsible way of living a life and the well-being at an subjective level. It was also seen that the consumption of the expenditures that are needed to live a life more sustainably explains into welfare losses so that following a green life style would be seen as an involving surrendering (Brown &Kasser, 2005).The concept of green lifestyle has been evaluated in different perspectives, which includes activities related to health and environment also they discuss the values and perceptions(Divine &Lepisto, 2005; Finisterra do Paço&Raposos, 2010; Fraj& Martinez, 2006). The concept of green life style can also be seen as the daily routine tasks(Divine &Lepisto, 2005). More over the term of green life style can be co related to the attitudes specifically related to products and behavioral intentions(Dembkowski&Hanmer-Lloyd, 1994; Janson, 2011; Laroche et al., 2001).Environment friendly consumption are being involved in green lifestyle for the patterns of its usage(Dembkowski&Hanmer-Lloyd, 1994; Fraj& Martinez, 2007).

The assumptions about the people that they use green consumption and its usage is somehow correct as they also tend to bring it in their practices. Dembkowski&Hanmer-Lloyd, (1994) also keeping it in the mind that the behavior towards green life style is positively influenced by the knowledge that is related to environment of the consumers. The knowledge related to the extent to which individuals are involved in environmental related knowledge are meant to be the contributors to green behaviors related to the environment(Dembkowski&Hanmer-Lloyd, 1994; Janson, 2011; Saltelli et al., 1999), this is hence called to be green lifestyle. Leading towards green lifestyle is explored through green lifestyle might be useful for the people and their individuality(Kasser&Kasser, 2017) as it allows them to get their lives and behave in different ways. In fact the favorable reception of green lifestyle in the context of well-being subjectively might not be such a loss. Systematic individual participation needs sustainable development (United Nations Organisation, 1992),for example in the terms of pro environmental behavior and lifestyle sustainability (i.e. green lifestyle),it not only include green consumption but also saving the waste management and energy with water conservation(Christensen, 1997; Sunitsch et al., 2016).

We now consider to the recent studies, green lifestyle play an vital role for well-being of the organizations in compare to green behavior and green self-image, this is the extent to which people considered themselves to be environment friendly(Binder et al., 2020)There are few demographic factors that are very essential for green lifestyle, one of the factor is income. Having an healthy and balanced diet(i.e. fruits and vegetables) are made in association with income segments (Divine &Lepisto, 2005). Thus green lifestyle associated with income is one of the important factors in contributing to the environment.

2.3. Green Innovation Strategy

It is clear by the literature that green innovation strategy increases the green awareness level and makes it easy to generate novelty for green products and process. These activities increase the potential for creative ideas towards green innovation strategy. Few studies have been done to explore the relationship between green innovation strategy and green innovation(Authors, 2019). It is proposed in the prior research that green innovation has a positive relationship with green innovation strategy. Green Innovation strategy is elaborated as the practices related to manufacturing that involve source reduction, prevention from pollution and inheriting of environmental management system(Eiadat et al., 2008b). In this context the attention of the researchers have increased in which they help out the organizations to achieve sustainable competitive advantage(Ambec et al., 2013; Eiadat et al., 2008b; Lanoie et al., 2011). However, it is also been discussed by the researchers that pressure related to environmental activities and green innovation strategies have been not on a larger scale(Eiadat et al., 2008b).The foremost reason that supports this argument is that green innovation focuses on reducing the waste and other environmental issues(Eiadat et al., 2008a). For this purpose of

achieving green innovation goal, an organization must make the full usage of its all necessary human and technical skills and heterogeneous skills.

However when a firm puts all its focus on green innovation strategy, there is an enhancement in the resources available for the green products and process, which eventually increases the chances of successful implementation of green innovation (Authors, 2019). Green innovation strategy also stifles green innovation as such strategy has chances to reduce the pressure of governmental policies on the organization. During the prices of implanting the green innovation strategy, an organization takes consents for the resources needed for the production and further processing of green products, it helps to generate an efficient end result in the form of green innovation. However, green innovation strategy also helps an organization to avoid the cost of environmental destruction for its social and economic costs but it also helps the organization to develop a new market opportunity and increases the competitive advantages (Henriques&Sadorsky, 1999). For increasing the green product innovation researchers use the green innovation strategy and customers need are full filled. Any environmental strategy that stimulates a firm to apply green environmental ideas to design and packaging of its products, which enhances the level of green innovation (Shrivastava, 1995).

A green innovation strategy can mold a firm's environmental consciousness for the prevention of pollution, the position of steward product with clean technology (Review, 2015). It is very easy for an organization to address such awareness regarding its environmental sustainability challenges (Eiadat et al., 2008a). The development of the product can be enhanced by the strategy of green innovation. In order to achieve the goal of environmental innovation, an organization needs to focus on the tasks of the products and process innovation. It is the utmost duty of the managers to do counseling of their employees to make them realize that their company is ready to invest their time and commitment in green innovation. However, this helps to revolve the awareness regarding greening of the environment. Employees have a realization regarding green innovation strategy when the firm pays a great deal of attention to the problems relating to the environment which ultimately leads to the creation of the main values and beliefs that helps to achieve the concept of organizational behaviors. Some stakeholders demanded and showed their concerns towards environment as a response, stakeholder power and managers thoughts on stakeholders preferences on environmental concerns are the interactive results of green innovation strategy (Christensen, 1997; Henriques&Sadorsky, 1999). The stakeholders that have some level of influences on the decisions related to green innovation results in internal heterogeneity of the people in stake with them and the dynamics of resource dependence (Bansal, 2005; Kassinis&Vafeas, 2006). It is not easy to find out the leading stakeholders and appreciate their stress when they are researching on taking the response on environmental issues of the firms (Hart, 1995; Murillo-Luna et al., 2008).

Moreover, in this research discussion will be done on various stakeholders who have different effects on the ability to take decision regarding green products and innovation in those green process. The descriptive of green innovation strategies can immensely incorporate the practices of environmental management in the world (Buysse&Verbeke, 2003; González-Benito & González-Benito, 2010).

There are some empirical studies to that elaborated that the firm that invest in foreign countries are more into implement the environmental innovation strategies proactively (Albornoz, 2009; K.-J. Kim et al., 2005). While going through the recent researches green innovation strategy is getting hype to its peak as the competitive advantage (Ambec et al., 2013; Eiadat et al., 2008a; Lanoie et al., 2011). A very less work has been done to evaluate the capabilities of organizations specifically that moderated relation between green innovation strategy and environmental pressures. To create a winning situation that also motivates economic and environmental perks, organization have started to pay heed on innovation, on particular environmental innovation strategy (De Marchi et al., 2013; Eiadat et al., 2008a; Martín-de Castro et al., 2016; Ryan & Doran, 2012). Few of the researchers have argued that the factors that are effecting green innovation which have been portrayed as green innovation strategy has an important place for starting the concept of green innovation in the products and places (Eiadat et al., 2008b).

However, one of the most stressed types of environmental strategies includes green innovation strategies. In the way solving and resolving the problems related to the operations of

the business, manufacturing practices such as Lessing the resource consumption, preventing the environment from getting polluted and inheritance of environment management system(Eiadat et al., 2008a). In order to gain competitive advantage green innovation strategies must be followed by the organizations. Sharma &Vredenburg,(1998) has tested the relationship of green innovation with some other variables that how they positively effect to the competitive environment of the firms. On the improvement of green innovation strategy some factors are seen that are the pressure in the stakeholders and the regulations imposed by the government(Eiadat et al., 2008b). Green innovation strategy is considered as a scrabbled point to be discussed in order to achieve the completive edge by the firms. The organization's level of awareness in context of greening which might lead to the novelty in the creation of green products and services(Song & Yu, 2017).

2.4. Manager's Training

Subsequently, managers play a vital role in the success of any organization, one main strategy to promote and originate managerial performance and effectiveness is the training process(Mullins, n.d.). Identifying the qualities that define effective managers for achievement in an occupational field is a critical process in human resource management in the midst of organizational change. Training activity remains a very large part of human resource development (HRD) practice (Nordhaug,1989). The trainings that are given in organizations to its employees results as a competitive advantage(Barney, 1995) which has an impact on the productivity of the employees(Ng et al., 2007) and their contribution to (Dobson & Tosh, 2010). Nevertheless, training of the managers is not the only answer to sustained competitive advantage for the companies. If the training of the mangers is to be merged with one's individuality and organizational performance, assessing must be in the support and a continuous pursuit of betterment by calculating the impact of management could have been a key element in achieving training effectively in the firm(). A theory was driven named as Action learning and evidence-based team manager training course was delivered to the managers in the interposing group (Nielsen et al., 2008).

The managers are expected to provide real life problems so that they would be boosted up to again evaluate their attitudes and to ponder upon the ways about their work practices(Nielsen & Randall, 2010).The training course consisted of six days training spread over a period of six months. Managers were required to develop action plans to be implemented in their own teams to support the transfer of learning (Gollwitzer, 1999). Training is an essential element for retaining the employees and increasing their availability of training (The Commonwealth Fund, 1993). In the context of theories evaluation theory about the managers effectiveness, there are basically two leanings regarding this, the utmost approach has the individuality that has to deal with the calculation of all the skills and personal features of the managers. On the other hand when the managers are given a dead line and asked to complete their task in an defined period of time than they are more active.("Book Review Section," 1980; House et al., 1982; Kreith et al., 1980).

Moreover when the managers are being evaluated for their performance related to their job behaviors in the time of their duty hours. A manager must have an urge towards enhancing its efficiency and effectiveness and must be prepared to not show resistance towards change in attitudes, behaviors, knowledge and skills(Eiadat et al., 2008a).McClelland &Boyatzis, (1982) have elaborated that the performance of an good manager consist of their competency at an individual level, the demand of their job and its nature, if they are suitable to the environment of the job. Some skills are required for the effectiveness in managing the resources of the organization , these skills include planning, all those qualities that may be effectiveness and efficiency in the multitude behaviors and also considering their outcomes (McClelland &Boyatzis, 1982). More over when the literature says that the performance of a manager is to be evaluating, the main problem is to identify the performance elements and their individual skills.

2.5. Hypotheses Development

H1: Green-Life-Style is positively associated with the Green-innovation in Banking Sector of Pakistan

Green life style (eco-friendly behavior) concentrates on particular behavior to consume the energy, usage of water and reducing the wastage material, it is usually suitable in the

context of hotels or restaurants while on the other hand green innovation is developing environment friendly products and processes through adoption of organizational practices. While in the current results of the study of this research shows that value $t=4.359$ and $p= 0.000$ that shows a significant and positive relationship among the variable. it means the coefficient value indicates in green life style can make changes in green innovation. While the more green life style is being performed by the bankers the more productivity that can gain. The banks can enhance the green life style for the elevated level of performance of its employees. The results of the study align with the hypothesis that why it can be said that this hypothesis is accepted. Here it could be said that banking sector could focus on the green lifestyle for gaining green innovation.

H2: Manager’s training mediates between the green-life-style and green-innovation

As a mediator variable helps simply and recognize the nature and the understanding of association among the independent and dependent variable. As the combined effect of green lifestyle and manager’s training in green innovation is measured. The significant value $t=2.908$ and $p=0.000$ as directed indirect relationship. Hence it proves that Manager’s training has a strong role in the relationship of green life style and green innovation. So, it is confirmed that hypothesis is accepted because the mediator is playing its significant role of mediation. Hence, it could be said that in the banking industry manager’s training mediates the relationship between green life style and green innovation.

H3: Green-innovation-strategies strengthens the relationship between the green-life-style and green-innovation

The analysis shows that ($t=2.264, p=0.019$) which indicates that green innovation strategies strengthen the relationship of green life style and green innovation. The banks can increase the green lifestyle effect on green innovation by providing their employees to implement green innovation strategies. The results of this study supports that green innovation strategies moderated the relationship between green life style and green innovation so it can be said that the hypothesis is accepted. Hence it can be assumed that the banking industry can increase implementation on green life style on green innovation by green innovation strategies

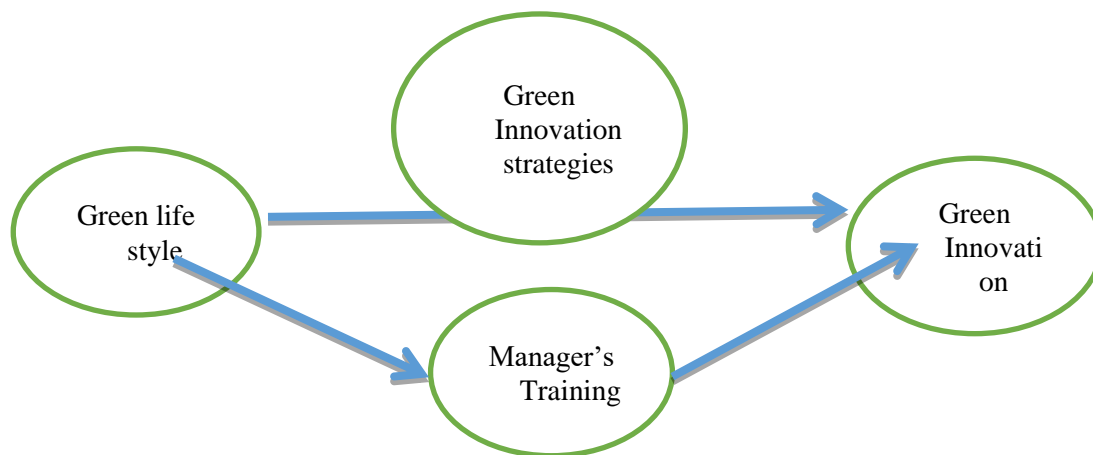


Figure 1: Theoretical Frame Work

3. Research Methodology
3.1. Sampling and Procedure

This research is primarily aimed to examine the effect of the green-life-style on the green-innovation in the banking industry of Pakistan. Thus, the population of this research study is the personnel working in the banking industry. A total of 31 formal banks are operating in Pakistan with an employment rate of 1.3 percent of the total population of about 3 million including all the financial sectors both male and female (Pakistan Bureau of statistics, 2018).but due to pandemic situation figures have varied. The population of the research is the 1st basic concept that serves the base for the research to progress ahead to hold the research analysis. Sampling technique refers to the categorization of the population into sub-groups of

observations to generalize the results (Hoffman, 2019; Rees, 2018). This total population of the research is divided in the entire country and hence it difficult to be accessed by using any specific technique. The prevailing circumstance and access to the target respondents, the researcher has selected the south region of Pakistan where all the 31 banking companies are operating. The convenience random sampling technique has been used to collect data from the target respondents. Cause and effect research (Fabrigar et al., 1999; McNabb, 2015) have been suggested for the studies explanatory in nature. This research is examining the impact of the green-life style pertaining to green innovation which follows the cause and effect research approach of the research. The research model is further moderates and mediates the relationship between the green-life style and green-innovation through green innovation strategy and manager's training respectively. Thus, the best approach for this research study is cause and effect which falls within the explanatory research design.

3.2. Measurements

The respondents filled the questionnaire in English which is official language of Pakistan and also being professionally used in Banks of Pakistan. The items of the questionnaire were administered on a likert scale (1= strongly disagree, 4= strongly agree). The whole questionnaire consisted of 22 items which also include information about the respondent's gender, age, qualification, Green Innovation (GI), Green Life Style (GLS), Green Innovation Strategy (GIS) and Manager's Training (MT). All items are measured on a 5 – point Likert-scale.

3.2.1. Green Innovation

Green Innovation was measured with 4 items of the Green Innovation scale developed by (Wang & Wang, 2019). It comprises of 4 items. Its Composite reliability is ($\alpha = 0.819$)

3.2.2. Green Lifestyle

Green life style was measured with 6 item scale developed by (Florenthal & Arling, 2011; Y. J. Kim et al., 2019). ($\alpha = 0.919$)

3.2.3. Green Innovation Strategy

Green Innovation Strategy was measured through 6 items of a scale developed by (Yu et al., 2016). Its composite reliability is ($\alpha = 0.857$).

3.2.4. Manager's Training

Manager's Training was measured through 6 items of a scale developed by (Galanou & Priporas, 2009). Its composite reliability is ($\alpha = 0.861$).

4. Data Analysis

The data analysis of this research study is correlated with the nature and design of the study to appropriately comprehend the interrelationship of the variables. In-order to process the data analysis, descriptive statistical analysis, and structural equation modeling (SEM) will be used to test the hypothesis. The reliability, validity, and assessment of the measurement model of first-order reflective indicators were inspected in the main stage, while testing of the basic model was built up in the subsequent stage. The statistical examination performed in the investigation incorporates test like (1) Measurement model – testing of reliability analysis and validity analysis and (2) Structural model analysis – examining the path coefficients between observed coefficients.

4.1. Results and Discussions

4.1.1. Measurement Model

The reliability and validity of the constructs has been assessed for the reflective modeling. According to (Hair et al., 2010), the inter-item consistency of the constructs can be used to measure reliability. Moreover, validity can be tested through convergent and

discriminant of constructs. Table no 3 explains the outcome of the quality criteria for the measurement model. Further, Cronbach’s Alpha is used to test the internal consistency for a measure (Cronbach, 1951). Basically, internal consistency measures that how consistently individual responds to the items of the scale. According to the rule of reliability coefficient of 0.7 or above is considered as acceptable. Table no 3 shows the results of Cronbach’s alpha of the entire constructs. All the values show that inter term consistency among the variables. The Cronbach’s alpha of the four variables is GI=0.819, GLS=0.919, GIS=0.857 and MT=0.861 are closer to 1 which shows that the indicators have high level of inter consistency reliability and indicators are appropriate for their concerned constructs.

The process of assessing indicators reliability is to evaluate the extent to which variables or a set of variables are consisting with what is intended to measure (Urbach Frederik, 2010). The significance of indicator loading is recommended to be at least at the 0.05 level, with loading of 0.7 (Chinn, 1998). However the other studies suggest that factor loading should be greater than 0.5 for better results. (Hulland, 1999), while still in other studies assert a 0.5 cutoff is acceptable (Tsai et al., 2007). According to (Joe F. Hair et al., 2011), factor loading estimates should be between 0.5 and 0.7. An indicator should only be eliminated when its reliability is low, and its elimination goes all the way with a substantial increase of composite reliability (Reinartz et al., 2009). The table below shows that almost all the values are above 0.5 and 0.7. Two values GIS3, and MT1 were less than 0.5 so they were deleted from the model.

Table 1
Construct reliability and Validity

	Items	Outer Loading	Cronbach's Alpha	rho_A	Composite Reliability	(AVE)
Green Innovation	GI1	0.805	0.819	0.848	0.882	0.655
	GI2	0.887				
	GI3	0.885				
	GI4	0.634				
Green Innovation strategy	GIS1	0.816	0.857	0.856	0.898	0.640
	GIS2	0.841				
	GIS4	0.660				
	GIS5	0.817				
	GIS6	0.850				
	GLS1	0.827				
Green lifestyle	GLS2	0.714	0.919	0.924	0.670	0.919
	GLS3	0.771				
	GLS4	0.842				
	GLS 5	0.835				
	GLS6	0.910				
	MT2	0.873				
Manager’s training	MT3	0.740	0.861	0.898	0.899	0.642
	MT4	0.760				
	MT5	0.712				
	MT6	0.903				

Discriminant validity is considered to be the last criterion of measurement model and it has been judged through the Fornell-Larcker criterion of cross-loading indicators (Hair et al., 2010). Discriminant validity confirms that the relationships among different reflective constructs as well as their indicators (Hair et al., 2010).

Table 2
Discriminant Validity (HTMT)

	GI	GIS	GLS	MT
Green Innovation				
Green Innovation Strategy	0.672			
Green Life style	0.879	0.422		
Manager’s Training	0.652	0.509	0.504	

The table below shows the Fornell-Larcker criterion and Heterotrait-Monotrait Ratio (HTMT). Basically, the table represents the values of the inter correlations of the various constructs of the model. Hence, the results confirm the discriminant validity as the value of the square root of the latent construct AVE is greater than their inner-constructed correlations.

HTMT is contrasted with a limit and value higher than the edge signifies that discriminant validity did not set up.

- HTMT.85 (Clark & Watson, 1995; Kline, 2011)
- HTMT.90 ((Ab Hamid et al., 2017)

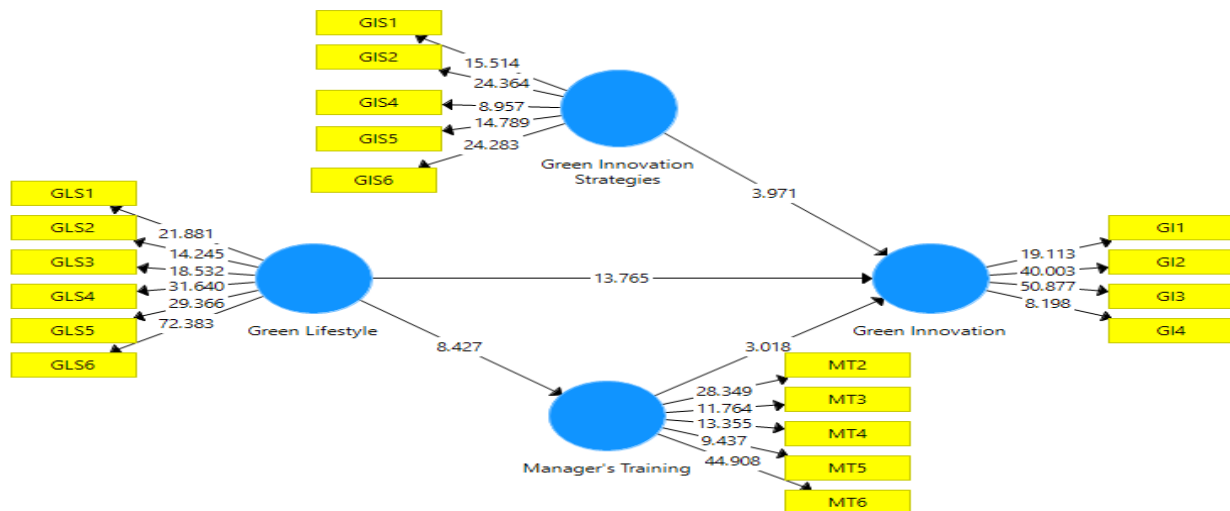


Figure 2: Measurement Model

4.1.2. Structural Model

A structural model bootstrapping process was applied for testing the hypothesis and evaluation. The structural model is used to identify the relation between the variables. Further study which includes mediating and moderating effect, consider the direct effects of the hypothesized path-model. Analysis of SEM shows that there is a positive significant relationship between Green Innovation Strategy to Green Innovation with a beta value of (0.254). The p value was observed of (0.000) which confirmed the relationship between these two variables is significant and supports H1. The second hypothesis which is green life style to Green Innovation has a beta value of (0.628) and the significance level was examined using the bootstrapping routine, which also confirmed the above relationship above i.e., p-value (0.000) which support hypothesis H2. Table 5 shows the result of tested hypothesis.

The relationship between green lifestyle to Manager's Training is significant and positive with a beta value of (0.484). The significance level was examined using the bootstrapping routine, which confirmed the relationship above i.e., p-value (0.000) which support hypothesis H3. The Table below confirms the result of tested hypothesis. The relationship between Manager's training to green innovation is significant and positive with a beta value of (0.147). The significance level was examined using the bootstrapping routine, which confirmed the relationship above i.e., p-value (0.001) which support hypothesis H4. Table 5 shows the result of tested hypothesis.

Table 3
Direct Hypothesis table

Direct effect	Original Sample (O)	Sample Mean	STDEV	T-stat	Prob.
Green Innovation Strategies -> Green Innovation	0.254	0.263	0.064	3.971	0.000
Green Lifestyle -> Green Innovation	0.628	0.629	0.046	13.765	0.000
Green Lifestyle -> Manager's Training	0.484	0.495	0.057	8.427	0.000
Manager's Training -> Green Innovation	0.147	0.139	0.049	3.018	0.001

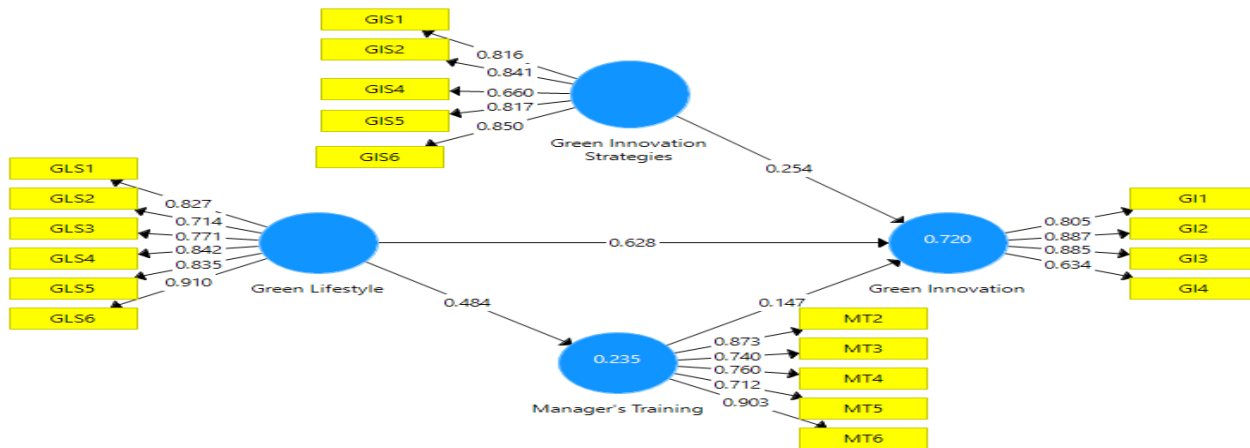


Figure 3: Structural Model

The indirect effect of these variables is tested by bootstrapping. In order to test the mediation effect from research’s point of view (Hayes & Matthes, 2009; Zhao et al., 2010). For the mediation analysis in PLS-SEM, bootstrapping is best suited as it can be implied on a very small sample size too (Hair et al., 2010). According to (Hair et al., 2010) while testing intersection impacts, the specialist must go with (Preacher & Hayes, 2004, 2008) and bootstrapping the sampling distribution of the indirect effect that works simple and multiple models. Presently the research tested the effect of managers training important mediating variable using bootstrapping with resample of 500 and model displayed the t values. The Indirect effect was examined to find the mediation of managers training on green lifestyle and green innovation. Managers training significantly mediates the relation of green life style and green innovation. Table below shows the results of mediation with standard deviation of 0.069 (t=2.812, p=0.003). It can be seen that the relationship is fully mediated by manager’s training. The VAF value is 0.22 that means there is a partial mediation.

**Table 4
Mediation Analysis of Study Variables**

Direct effect	Original Sample (O)	Sample Mean	STDEV	T-stat	Prob.	VAF
Green Lifestyle -> Manager's Training						0.22
Green Lifestyle -> Green Innovation	0.071	0.069	0.025	2.812	0.003	

Following an analysis of direct path relations within the central model, the next step was to examine the moderating impact of green washing behavior. The moderators can be qualitative or quantitative variables, as described by (Baron & Kenny, 1986) that influence the path and/or intensity of a relationship between an indigenous and dependent or parameter differ. In structural models there are different methods of analyzing the moderating effect, but an interaction effect (product term) is the most common approach. This also represents a moderating influence with a new structural relation within the structural path model (Henseler & Fassott, 2010). Hence the above drawn model will be examined with the. In fact, if path c makes a substantial change from zero (that is, the null hypothesis is not supported) as it reflects moderation (Baron & Kenny, 1986).

Green Innovation strategies significantly moderates the relationship between Green life style to Green Innovation with (stdev= 0.074), (t = 1.786, p = 0.037). The following Table 7 below shows the result of moderation.

**Table 5
Moderation Analysis of the Study Variable**

Moderation table	Original Sample (O)	Sample Mean	STDEV	T-stat	Prob.
GIS x GLS -> Green Innovation	0.132	0.164	0.074	1.786	0.037

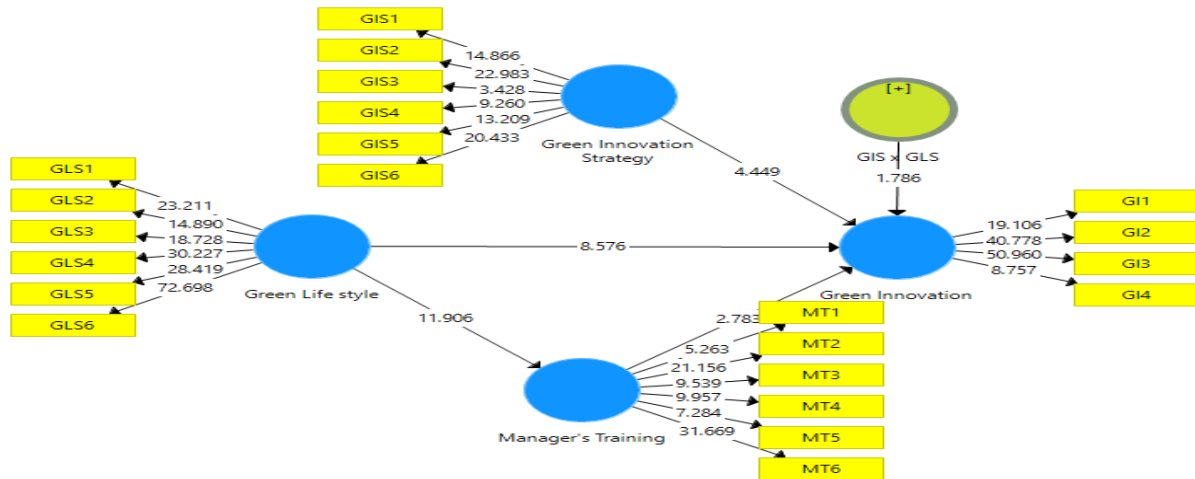


Figure 4: Moderation Diagram

5. Discussion and Conclusion

Green-Life-Style is positively associated with the Green-innovation in Banking Sector of Pakistan

The analysis and result suggested that the first hypothesis of this study is accepted which is green lifestyle to Green Innovation. This study revealed that Green life style is positively related to green innovation. It may be because of the reason that it's not always necessary that if there is an overly positive relationship of results e.g. green life style is adopted by the bankers or the head of the organizations then that organization will show more involvement towards green innovation. When an organization's activities are environmentally friendly then the values directed to their managers to be conscious about the waste produced and energy that they have consumed, thereby it shows that the green lifestyle has positively impacted the green innovation in the banking sector and further the improvements are being made (Wang & Wang, 2019)

Green-innovation-strategies strengthens the relationship between the green-life-style and green-innovation

Second hypothesis assumes that green innovation strategies have a significant relationship with green life style and green innovation's results of H2. From the previous studies it is clearly evident that green innovation strategies has a strong impact on the relationship of green lifestyle and green innovation strategies and adopting green life style encourages the employees to implement green innovation in their organizations. Green innovation is being enabled by the green innovation strategies that allow the organizations to successfully achieve sustainable competitive advantage. Moreover green innovation strategy must not have to directly improved in playing part to effect the performance of green innovation but by or so it stimulates such green innovation (Song & Yu, 2017). This is also evident by a theory of activation norms of the employees by training them about the harmful effects and impacts on the environment (Behavior & Processes, 1998)

Manager's training mediates between the green-life-style and green-innovation

The analysis and results of this study suggested that the fourth hypothesis is accepted but in indirect effect. The direct effect of green lifestyle and green innovation has become significant. This study makes a vital theoretical and practical contribution so that the effect of managers training on green life style and green innovation can be clearly seen

5.1. Theoretical Implication

This study has added value to the literature by investigating the impact of Green life style on Green innovation, by incorporating the role of Green innovation as a moderator solely from the perspective of Pakistan. A time-lagged data has been taken for this research. This study has fulfilled the gap addressed by (Lyon & Humbert, 2012) that there is insufficient number of primary studies which focused on influence of bankers towards green innovation.

Furthermore, some of the empirical studies have been identified as the mechanism by which green innovation strategy effects green innovation. The main aim of this study is to find out the relation of green innovation and green innovation strategy collaborating with organizational identity theory and organizational creativity theory(Song & Yu, 2017). Those firms which are dealing with some problems related to polluting of the environment from the emergence of the industrial firms, these problems can be resolved by implementation of green innovation strategies which will leads to the change in the behaviors of the employees. A theory was driven named as Action learning and evidence based team manager training course was delivered to the managers in the interposing group(Nielsen et al., 2008).

Moreover the gap of this study states the Impact of the Green-Life-Style on Green Innovation in the Banking Industry of Pakistan: Mediated by Manager's Training and Moderating impact of Green-Innovation Strategies. The moderator 'Green Innovation Strategy was used previously as an independent variable, now in this study it has be tested as an Moderator which is a contribution. Secondly, Manager's training is also a Contribution as this topic has not been seen previously tested in the perspective of Manager's training as a mediator. In the context of theories evaluation theory about the managers effectiveness, there are basically two leanings regarding this, the utmost approach has the individuality that has to deal with the calculation of all the skills and personal features of the managers. On the other hand when the managers are given a dead line and asked to complete their task in an defined period of time than they are more active.("Book Review Section," 1980; House et al., 1982; Kreith et al., 1980).

5.2. Managerial Implication

This study specifically has various implications for the practitioners and other authorities who are making the policies in the banks. Foremost, the findings related to this study suggests that Manager's Training mediates between Green Life style and Green Innovation such as complex and require piles of paper work and Energy Star Mortgages (Nath et al., 2014) with environmental and financial performance of the firm. The results calculated shows that it is need if this time that there should be a separate department generated regarding greening of the environment in the banking sectors which have long term missions and visions related to greening of the environment be it be green life style or green innovation. The employees should be provided frequent trainings regarding this aspect so that it would be easy for them to burn the mid night oil in order to accomplish their desired missions. This study suggested that overall the contribution of Banks toward Green Innovation in Pakistan is less as compared to other countries. In light of this finding, it is highly recommended that there should be orientation of such practices in Pakistan that encourage employees to participate in green innovation activities. These polices may include training to the employees regarding producing environment friendly products reducing the wastage of water and saving the environment from the harmful effects that the pollutants having on environment by not following green innovation concepts.

5.3. Limitations and Future research directions

Our study is subject to several limitations, each of which leads to opportunities for future research. The data was collected from the Bankers of different cities of Punjab. In future the data can be taken from other provinces of Pakistan and can be applied on different organizations. The time-lagged research approach has been used in this research. Due to unavailability of sufficient time required for this research only one week lag was used/ taken which is a very short duration to see causal changes or to address temporal changes due to the pandemic situation. In future longitudinal research can be conducted to address temporal changes or a time-lagged study with at least more than one month must be designed to comprehensively see the cause and effect relationship between the variables. In future the same research can be conducted or replicated in other countries. Also other advanced activities related to green innovation can also be taken in future to see their impact on relationship between the variables. In future the same research can be conducted or replicated in other countries.

References

- Ab Hamid, M. R., Sami, W., & Mohmad Sidek, M. H. (2017). Discriminant Validity Assessment: Use of Fornell & Larcker criterion versus HTMT Criterion. *Journal of Physics: Conference Series*. <https://doi.org/10.1088/1742-6596/890/1/012163>
- Akerlof, G. A. (2010). *Identity Economics*. 12–14.
- Albornoz, M. (2009). Indicadores de innovación: las dificultades de un concepto en evolución. *CTS: Revista Iberoamericana de Ciencia, Tecnología y Sociedad*.
- Albort-morant, G., Henseler, J., Leal-mill, A., & Cepeda-carri, G. (2017). *Mapping the Field: A Bibliometric Analysis of Green Innovation*. 1–15. <https://doi.org/10.3390/su9061011>
- Ambec, S., Cohen, M. A., Elgie, S., & Lanoie, P. (2013). The porter hypothesis at 20: Can environmental regulation enhance innovation and competitiveness? *Review of Environmental Economics and Policy*. <https://doi.org/10.1093/reep/res016>
- Anna Clark, L., & Watson, D. (1995). *Constructing Validity: Basic Issues in Objective Scale Development* (Vol. 7, Issue 3).
- Asadi, S., OmSalameh Pourhashemi, S., Nilashi, M., Abdullah, R., Samad, S., Yadegaridehkordi, E., Aljojo, N., & Razali, N. S. (2020). Investigating influence of green innovation on sustainability performance: A case on Malaysian hotel industry. *Journal of Cleaner Production*, 258, 120860. <https://doi.org/10.1016/j.jclepro.2020.120860>
- Authors, F. (2019). *Green innovation strategy and green innovation The roles of green organizational identity and*. <https://doi.org/10.1108/MD-05-2018-0563>
- Bansal, A. K. (2005). Bioinformatics in microbial biotechnology - A mini review. In *Microbial Cell Factories*. <https://doi.org/10.1186/1475-2859-4-19>
- Barney, J. B. (1995). *Looking inside for competitive advantage*. 9(4).
- Baron, R. M., & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research. Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Behavior, O., & Processes, H. D. (1998). *The Influence of Framing on Risky Decisions: Organizational Behavior and Human Decision Processes*.
- Ben, W., Hikkerova, L., & Sahut, J. (2017). *Technological Forecasting & Social Change External knowledge sources , green innovation and performance*. January. <https://doi.org/10.1016/j.techfore.2017.09.017>
- Bhatt, A. (2016). Factors affecting customer's adoption of mobile banking services. *Journal of Internet Banking and Commerce*.
- Binder, M., Kathrin, A., & Heinz, B. (2020). Pro - environmental Norms , Green Lifestyles , and Subjective Well - Being : Panel Evidence from the UK. In *Social Indicators Research* (Issue 0123456789). Springer Netherlands. <https://doi.org/10.1007/s11205-020-02426-4>
- Book Review Section. (1980). *Personnel Psychology*. <https://doi.org/10.1111/j.1744-6570.1980.tb02372.x>
- Brown, K. W., & Kasser, T. I. M. (2005). *WELL-BEING COMPATIBLE? THE ROLE OF VALUES , MINDFULNESS , AND LIFESTYLE*. 349–368. <https://doi.org/10.1007/s11205-004-8207-8>
- Buyse, K., & Verbeke, A. (2003). Proactive environmental strategies: A stakeholder management perspective. *Strategic Management Journal*. <https://doi.org/10.1002/smj.299>
- Chen, Y., & Chen, Y. (2008). *The Driver of Green Innovation and Green Image – Green Core Competence*. 531–543. <https://doi.org/10.1007/s10551-007-9522-1>
- Chen, Y., Lai, S., & Wen, C. (2006). *The Influence of Green Innovation Performance on Corporate Advantage in Taiwan*. 331–339. <https://doi.org/10.1007/s10551-006-9025-5>
- Chinn, W. W. (1998). The Partial Least Squares Approach to Structural Equation Modelling. *Modern Methods for Business Research*.
- Chiou, T., Kai, H., Lettice, F., & Ho, S. (2011). The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan. *Transportation Research Part E*, 47(6), 822–836. <https://doi.org/10.1016/j.tre.2011.05.016>
- Chithambaranathan, P., Subramanian, N., Gunasekaran, A., & Palaniappan, P. K. (2015). Service supply chain environmental performance evaluation using grey based hybrid MCDM approach. *International Journal of Production Economics*. <https://doi.org/10.1016/j.ijpe.2015.01.002>
- Christensen, C. M. (1997). Innovator ' s Dilemma. In *Business*.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*. <https://doi.org/10.1007/BF02310555>
- Daily, B. F., Bishop, J. W., & Govindarajulu, N. (2009). *Business & Society*. <https://doi.org/10.1177/0007650308315439>

- De Marchi, V., Di Maria, E., & Micelli, S. (2013). Environmental Strategies, Upgrading and Competitive Advantage in Global Value Chains. *Business Strategy and the Environment*. <https://doi.org/10.1002/bse.1738>
- Dembkowski, S., & Hanmer-Lloyd, S. (1994). The environmental value-attitude-system model: A framework to guide the understanding of environmentally-conscious consumer behaviour. *Journal of Marketing Management*. <https://doi.org/10.1080/0267257X.1994.9964307>
- Divine, R. L., & Lepisto, L. (2005). Analysis of the healthy lifestyle consumer. *Journal of Consumer Marketing*, 22(5), 275–283. <https://doi.org/10.1108/07363760510611707>
- Dobson, P. C., & Tosh, M. (2010). *Creating a learning organization : Training and development in British Steel 's universal beam mill*. October 2014, 37–41. <https://doi.org/10.1080/0954412988587>
- Eiadat, Y., Kelly, A., Roche, F., & Eyadat, H. (2008a). *Green and competitive? An empirical test of the mediating role of environmental innovation strategy*. 43, 131–145. <https://doi.org/10.1016/j.jwb.2007.11.012>
- Eiadat, Y., Kelly, A., Roche, F., & Eyadat, H. (2008b). Green and competitive? An empirical test of the mediating role of environmental innovation strategy. *Journal of World Business*. <https://doi.org/10.1016/j.jwb.2007.11.012>
- Fabrigar, L. R., MacCallum, R. C., Wegener, D. T., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. In *Psychological Methods* (Vol. 4, Issue 3, pp. 272–299). <https://doi.org/10.1037/1082-989X.4.3.272>
- Fabrizio, K. R. (2009). *Absorptive capacity and the search for innovation*. 38, 255–267. <https://doi.org/10.1016/j.respol.2008.10.023>
- Finisterra do Paço, A. M., & Raposo, M. L. B. (2010). Green consumer market segmentation: Empirical findings from Portugal. *International Journal of Consumer Studies*, 34(4), 429–436. <https://doi.org/10.1111/j.1470-6431.2010.00869.x>
- Florenthal, B., & Arling, P. (2011). Do Green Lifestyle Consumers Appreciate Low Involvement Green Products? *Marketing Management Journal*, 21(2), 35.
- Fraj, E., & Martinez, E. (2006). Influence of personality on ecological consumer behaviour. *Journal of Consumer Behaviour*, 5(3), 167–181. <https://doi.org/10.1002/cb.169>
- Fraj, E., & Martinez, E. (2007). Ecological consumer behaviour: An empirical analysis. *International Journal of Consumer Studies*. <https://doi.org/10.1111/j.1470-6431.2006.00565.x>
- from the SAGE Social Science Collections . All Rights Reserved . (n.d.).
- Galanou, E., & Priporas, C. (2009). *A model for evaluating the effectiveness of middle managers ' training courses : evidence from a major banking organization in Greece*. 221–246.
- Gluch, P., Gustafsson, M., & Thuvander, L. (2009). *Construction Management and Economics An absorptive capacity model for green innovation and performance in the construction industry An absorptive capacity model for green innovation and performance in the construction industry*. October 2014, 37–41. <https://doi.org/10.1080/01446190902896645>
- Gollwitzer, P. M. (1999). *Implementation Intentions*. 54(7), 493–503.
- González-Benito, J., & González-Benito, Ó. (2010). A study of determinant factors of stakeholder environmental pressure perceived by industrial companies. *Business Strategy and the Environment*. <https://doi.org/10.1002/bse.631>
- Hair, Joe F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*. <https://doi.org/10.2753/MTP1069-6679190202>
- Hair, Joseph F, Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate Data Analysis. In *Vectors*. <https://doi.org/10.1016/j.ijpharm.2011.02.019>
- Hanafizadeh, P., Behboudi, M., Abedini Koshksaray, A., & Jalilvand Shirkhani Tabar, M. (2014). Mobile-banking adoption by Iranian bank clients. *Telematics and Informatics*. <https://doi.org/10.1016/j.tele.2012.11.001>
- Hart, S. L. (1995). A Natural-Resource-Based View of the Firm. *The Academy of Management Review*, 20(4), 986. <https://doi.org/10.2307/258963>
- Hart, S. L., Academy, T., & Oct, N. (2008). *A Natural-Resource-Based View of the Firm*. 20(4), 986–1014.
- Hayes, A. F., & Matthes, J. (2009). Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior Research Methods*. <https://doi.org/10.3758/BRM.41.3.924>
- Henriques, I., & Sadorsky, P. (1999). *THE RELATIONSHIP BETWEEN ENVIRONMENTAL COMMITMENT AND MANAGERIAL PERCEPTIONS OF STAKEHOLDER IMPORTANCE*. 42(1), 87–99.
- Henseler, J., & Fassott, G. (2010). Testing Moderating Effects in PLS Path Models: An Illustration of Available Procedures. In *Handbook of Partial Least Squares*.

- https://doi.org/10.1007/978-3-540-32827-8_31
- Hoffman, J. I. E. (2019). Resampling Statistics. In *Basic Biostatistics for Medical and Biomedical Practitioners* (pp. 631–637). Elsevier. <https://doi.org/10.1016/b978-0-12-817084-7.00037-1>
- House, J. S., Robbins, C., & Metzner, H. L. (1982). The association of social relationships and activities with mortality: Prospective evidence from the tecumseh community health study. *American Journal of Epidemiology*. <https://doi.org/10.1093/oxfordjournals.aje.a113387>
- Hrm, G., Beitrag, D., & Hrm, G. (2011). *Green Work-Life Balance: A New Perspective for Green HRM* **. 25(2), 140–156. <https://doi.org/10.1688/1862-0000>
- Huang, R. L. R. C. F., Lin, R., & Chen, R. (2014). *Green innovation in the automobile industry*. <https://doi.org/10.1108/IMDS-11-2013-0482>
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*. [https://doi.org/10.1002/\(sici\)1097-0266\(199902\)20:2<195::aid-smj13>3.0.co;2-7](https://doi.org/10.1002/(sici)1097-0266(199902)20:2<195::aid-smj13>3.0.co;2-7)
- Janson, J. C. (2011). Protein Purification: Principles, High Resolution Methods, and Applications: Third Edition. In *Protein Purification: Principles, High Resolution Methods, and Applications: Third Edition*. <https://doi.org/10.1002/9780470939932>
- Kasser, T., & Kasser, T. (2017). *Subject Areas : Author for correspondence : Living both well and sustainably : a review of the literature , with some reflections on future research , interventions and policy*.
- Kassinis, G., & Vafeas, N. (2006). Stakeholder pressures and environmental performance. *Academy of Management Journal*. <https://doi.org/10.5465/AMJ.2006.20785799>
- Kim, K.-J., Bonk, C. J., & Zeng, T. (2005). Surveying the future of workplace e-learning. *ELearn*. <https://doi.org/10.1145/1073198.1073202>
- Kim, Y. J., Kim, W. G., Choi, H. M., & Phetvaroon, K. (2019). The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance. *International Journal of Hospitality Management*, 76(August 2017), 83–93. <https://doi.org/10.1016/j.ijhm.2018.04.007>
- Kline, P. (2011). Oaxaca-Blinder as a reweighting estimator. *American Economic Review*. <https://doi.org/10.1257/aer.101.3.532>
- Kollmuss, A., & Agyeman, J. (2010). *Mind the Gap: Why do people act environmentally and what are the barriers to pro- environmental behavior? Mind the Gap: why do people act environmentally and what are the barriers to pro-environmental behavior?December 2012, 37–41*. <https://doi.org/10.1080/1350462022014540>
- Kreith, F., Kearney, D., & Bejan, A. (1980). End-use matching of solar energy systems. *Energy*. [https://doi.org/10.1016/0360-5442\(80\)90103-6](https://doi.org/10.1016/0360-5442(80)90103-6)
- Küçükoğlu, M. T., & Pınar, R. İ. (2015). Positive Influences of Green Innovation on Company Performance. *Procedia - Social and Behavioral Sciences*. <https://doi.org/10.1016/j.sbspro.2015.06.261>
- Lanoie, P., Laurent-Lucchetti, J., Johnstone, N., & Ambec, S. (2011). Environmental policy, innovation and performance: New insights on the porter hypothesis. *Journal of Economics and Management Strategy*. <https://doi.org/10.1111/j.1530-9134.2011.00301.x>
- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally friendly products. *Journal of Consumer Marketing*. <https://doi.org/10.1108/EUM0000000006155>
- Lyon, F., & Humbert, A. L. (2012). Gender balance in the governance of social enterprise. *Local Economy*. <https://doi.org/10.1177/0269094212455158>
- Martín-de Castro, G., Amores-Salvadó, J., & Navas-López, J. E. (2016). Environmental Management Systems and Firm Performance: Improving Firm Environmental Policy through Stakeholder Engagement. *Corporate Social Responsibility and Environmental Management*. <https://doi.org/10.1002/csr.1377>
- McClelland, D. C., & Boyatzis, R. E. (1982). Leadership motive pattern and long-term success in management. *Journal of Applied Psychology*. <https://doi.org/10.1037/0021-9010.67.6.737>
- Mcguire, D., & Germain, M. (2015). *Testing the Existence of a Green Contract: An Exploratory Study*. <https://doi.org/10.1177/1523422315599622>
- McNabb, D. E. (2015). Research methods for political science: Quantitative and qualitative methods: Second edition. In *Research Methods for Political Science: Quantitative and Qualitative Methods: Second Edition*. <https://doi.org/10.4324/9781315701141>
- Mullins, L. J. (n.d.). *The Service Industries The Hotel and the Open Systems Model of Organisational Analysis*. October 2014, 37–41. <https://doi.org/10.1080/02642069300000001>

- Murillo-Luna, J. L., Garcés-Ayerbe, C., & Rivera-Torres, P. (2008). Why do patterns of environmental response differ? A stakeholders' pressure approach. *Strategic Management Journal*. <https://doi.org/10.1002/smj.711>
- Nath, V., Nayak, N., & Goel, A. (2014). GREEN BANKING PRACTICES – A REVIEW. *International Journal of Research in Business Management*.
- Ng, Y. C., Siu, N. Y. M., Ng, Y. C., & Siu, N. Y. M. (2007). *The International Journal of Human Resource Training and enterprise performance in transition : evidence from China Training and enterprise performance in transition : evidence from China*. December 2014, 37–41. <https://doi.org/10.1080/0958519042000192997>
- Nielsen, K., & Randall, R. (2010). Does training managers enhance the effects of implementing team-working? A longitudinal, mixed methods field study. <https://doi.org/10.1177/0018726710365004>
- Nielsen, K., Randall, R., Yarker, J., & Brenner, S. O. (2008). The effects of transformational leadership on followers' perceived work characteristics and psychological well-being: A longitudinal study. *Work and Stress*, 22(1), 16–32. <https://doi.org/10.1080/02678370801979430>
- Nordhaus, W. D., & Tobin, J. (2019). Is Growth Obsolete? In *Green Accounting*. <https://doi.org/10.4324/9781315197715-3>
- Owen, A., Videras, J., & Wu, S. (2010). *Review of Social Economy Identity and Environmentalism: The Influence of Community Characteristics*. October 2014, 37–41. <https://doi.org/10.1080/00346760903480533>
- Özbilgin, M. F., Beaugregard, T. A., Tatli, A., & Bell, M. P. (2011). *Work – Life , Diversity and Intersectionality: A Critical Review and*. 13, 177–198. <https://doi.org/10.1111/j.1468-2370.2010.00291.x>
- Pakistan Bureau of statistics. (2018). EMPLOYMENT TRENDS Government of Pakistan. *Pakistan Bureau of Statistics*.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, and Computers*. <https://doi.org/10.3758/BF03206553>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*. <https://doi.org/10.3758/BRM.40.3.879>
- Qi, G. Y., Shen, L. Y., Zeng, S. X., & Jorge, O. J. (2010). *The drivers for contractors ' green innovation : an industry perspective*. 18, 1358–1365. <https://doi.org/10.1016/j.jclepro.2010.04.017>
- Ramus, C. A. (2002). Encouraging innovative environmental actions: What companies and managers must do. *Journal of World Business*, 37(2), 151–164. [https://doi.org/10.1016/S1090-9516\(02\)00074-3](https://doi.org/10.1016/S1090-9516(02)00074-3)
- Rees, P. A. (2018). Statistics. In *Examining Ecology* (pp. 275–295). Elsevier. <https://doi.org/10.1016/B978-0-12-809354-2.00010-5>
- Reinartz, W., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of Research in Marketing*. <https://doi.org/10.1016/j.ijresmar.2009.08.001>
- Rennings, K. (2000). *Redefining innovation — eco-innovation research and the contribution from ecological economics*. 32, 319–332.
- Review, H. B. (2015). *Beyond Greening : Strategies for a Sustainable World Beyond Greening :*
- Ryan, A. M., & Doran, T. (2012). The effect of improving processes of care on patient outcomes: Evidence from the United Kingdom's quality and outcomes framework. *Medical Care*. <https://doi.org/10.1097/MLR.0b013e318244e6b5>
- Saltelli, A., Tarantola, S., & Chan, K. P. S. (1999). A quantitative model-independent method for global sensitivity analysis of model output. *Technometrics*. <https://doi.org/10.1080/00401706.1999.10485594>
- Sexton, S. E., & Sexton, A. L. (2014). Conspicuous conservation : The Prius halo and willingness to pay for environmental bona fides. *Journal of Environmental Economics and Management*, 1–15. <https://doi.org/10.1016/j.jeem.2013.11.004>
- Sharma, S., & Vredenburg, H. (1998). Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. *Strategic Management Journal*. [https://doi.org/10.1002/\(sici\)1097-0266\(199808\)19:8<729::aid-smj967>3.3.co;2-w](https://doi.org/10.1002/(sici)1097-0266(199808)19:8<729::aid-smj967>3.3.co;2-w)
- Shrivastava, P. (1995). *ENVIRONMENTAL TECHNOLOGIES AND COMPETITIVE ADVANTAGE*. 16(1 995), 183–200.
- Shu, C., Zhou, K. Z., & Xiao, Y. (2014). *How Green Management Influences Product Innovation*

- in China : The Role of Institutional Benefits*. <https://doi.org/10.1007/s10551-014-2401-7>
- Soewarno, N., Tjahjadi, B., & Fithrianti, F. (2019). Green innovation strategy and green innovation: The roles of green organizational identity and environmental organizational legitimacy. *Management Decision*, 57(11), 3061–3078. <https://doi.org/10.1108/MD-05-2018-0563>
- Song, W., & Yu, H. (2017). *Green Innovation Strategy and Green Innovation: The Roles of Green Creativity and Green Organizational Identity*. <https://doi.org/10.1002/csr.1445>
- Sunitsch, S., Gilg, M., Kashofer, K., Leithner, A., Liegl-Atzwanger, B., & Beham-Schmid, C. (2016). Case Report: Epstein-Barr-Virus negative diffuse large B-cell lymphoma detected in a peri-prosthetic membrane. *Diagnostic Pathology*. <https://doi.org/10.1186/s13000-016-0533-z>
- Teece, D. J. (2000). *Strategies for Managing Knowledge Assets : the Role of Firm Structure and Industrial Context*. 33, 35–54.
- Tsai, H., Huang, W. S., & Hseu, Z. Y. (2007). Pedogenic correlation of lateritic river terraces in central Taiwan. *Geomorphology*. <https://doi.org/10.1016/j.geomorph.2006.11.004>
- Tzschentke, N. A., Kirk, D., & Lynch, P. A. (2008). *Going green : Decisional factors in small hospitality operations*. 27, 126–133. <https://doi.org/10.1016/j.ijhm.2007.07.010>
- United Nations Organisation. (1992). Rio -Erklärung über Umwelt und Entwicklung. *Konferenz Der Vereinten Nationen Über Umwelt Und Entwicklung Vom 3. Bis 14. Juni 1992 in Rio de Janeiro, 1972*(June 1972), 1–4. <http://www.un.org/depts/german/conf/agenda21/rio.pdf>
- Urbach Frederik, N. and A. (2010). Structural Equation Modeling in Information Systems Research Using Partial Least Squares. *Journal of Information Technology Theory and Application (JITTA)*.
- van Strien, T., & Koenders, P. G. (2012). How do life style factors relate to general health and overweight? *Appetite*. <https://doi.org/10.1016/j.appet.2011.10.001>
- Ven, D. (1991). *ORGANIZATIONAL INNOVATION: A META-ANALYSIS OF EFFECTS OF DETERMINANTS AND MODERATORS*. 34(3).
- Wallace, E., de Chernatony, L., & Buil, I. (2013). Building bank brands: How leadership behavior influences employee commitment. *Journal of Business Research*. <https://doi.org/10.1016/j.jbusres.2012.07.009>
- Wang, C., & Wang, C. (2019). *How organizational green culture influences green performance and competitive advantage The mediating role of green innovation*. <https://doi.org/10.1108/JMTM-09-2018-0314>
- Wendler, T. (2019). About the Relationship Between Green Technology and Material Usage. In *Environmental and Resource Economics* (Issue 0123456789). Springer Netherlands. <https://doi.org/10.1007/s10640-019-00373-4>
- Weng, H. R., Chen, J., & Chen, P. (2015). *Effects of Green Innovation on Environmental and Corporate Performance: A Stakeholder Perspective*. 4997–5026. <https://doi.org/10.3390/su7054997>
- Yu, W., Ramanathan, R., & Nath, P. (2016). Technological Forecasting & Social Change Environmental pressures and performance: An analysis of the roles of environmental innovation strategy and marketing capability. *Technological Forecasting & Social Change*. <https://doi.org/10.1016/j.techfore.2016.12.005>
- Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*. <https://doi.org/10.1086/651257>