Title of Study

INTERNAL GREEN SUPPLY CHAIN PRACTICES AND SUSTAINABLE PERFORMANCE IN TEXTILE SECTOR OF PAKISTAN

Thesis Submitted to

The Superior University, Lahore

In Partial Fulfillment of the

Requirement for the Degree of

Mater of Philosophy in Business Administration

By

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Roll No. (MSBA-S19-008)

Session: "2019"

FACULTY OF BUSINESS AND MANAGEMENT SCIENCES

THE SUPERIOR UNIVERSITY, LAHORE

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ACKNOWLEDGEMENTS

“All praise and thanks are due to Allah (*Subhanah Wtaala*) who gave me the ability to make this thesis possible. First, my sincere thanks to my beloved mother for her unconditional support, my thanks also go to my late father for his constant care, love, and support for my study.

It is a great pleasure for me to place on record my sincere thanks to Dr Qasim Ali Nisar., my research supervisor, whose kind, philanthropic and meticulous guidance provide support for me to complete this research. I might not have finished my thesis without his guidance. And all faculty members of the Business Department, The Superior College, have been a great source of inspiration to me. I thank all of them.

I am unable to express the depth of my indebtedness to my parents and family members for their endless and sincere prayers for my success. I cannot ignore the kindness of the Chairman of the Superior Group of Colleges, Chaudhry Abdul Rehman,. Thank you all”.

ABSTRACT

The main concern of this study is to investigate the relationship between internal green supply chain practices and sustainable performance and mediating role of supply chain environmental cooperation and green human resource management. To fulfill the objective of the study 150 respondents are textile managers and data are collected by using simple random sampling techniques. Data collection is very difficult due to the ongoing covid19 situation. The result indicated that age, nature of the contract, length of service, and gender. internal green supply chain practices have a significant impact on supply chain environmental cooperation and inside green providing chain practices has an impact on green human resource management and internal green providing chain practices has significant impact on sustainable performance, This research got the opportunity to contribute to the literature review to support authorities and main stakeholders to improve the sustainable performance. They need to make the policies how to increase the sustainable performance of a firm.

Keywords: *Sustainable performance, Green human resource management, Supply chain environmental cooperation, Internal green supply chain practices.*

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CHAPTER NO.1

1.1 Background of the study

The textile sector is the main pillar of most developing countries to step into international markets. The easy process of entering into the business of field and the easy availability of cheap raw materials in these countries is a big reason of and with the help of favorable conditions for the manufacturing and the exportation process of textile products (Shih & Agrafiotis, 2015) mainly developing countries as Turkey, Chinese Pakistan, are in the list of top ten textile-related exporters of the world (Statista, 2017). But more than "200 million people in the developing countries "are facing health issues from environmental pollution(Friedrich, 2016) There are "411 major firms in Pakistan" which is afterward divided into "12 sectors" and the Textile manufacturing sector is the bigger and important sector comprising several "164 firms which cover 40% of the overall non-financial sector of Pakistan"

Textile contributes "8.5 percent to the GDP and employs over 40% of the textile sector employees" Pakistan is the producer of different types of textile products, and is one of the top five producers. "Pakistan is the8th biggest exporter of textile products" Textile manufacturing industry sector of Pakistan is mainly the backbone of the economy of Pakistan and is majorly contributed both in the exports sector and employment. And, the sector "includes employees about 45% of the total labor force in the country and 38% of the manufacturing workers". In "2017-18 Exports of the textile sector increased by $4.4 billion" Pakistan is mainly "3rd biggest consumer of Cotton in the World and 464,316" textile units are in Punjab only. The textile sector has "57% of Pakistan's export revenues. The textile area addresses a huge piece of the non-monetary area of Pakistan, the monetary exhibition of this area may impact the presentation of different areas.

The essential and principal obligation of each monetary manager is to increase the investor's abundance and to expand the company's worth which is conceivable when the association's monetary execution can be expanded. The scientist's point during this examination is to recognize the quantity of factor that decides the company's monetary performance. For the last numerous years, the Pakistani textile industry is confronting an enormous number of emergencies because of the consistent burden shedding from the last numerous years. Countless

firms in this area have shut their activities because without power it is beyond the reality to expect to create any item in the material area.

And the textile sector is the 2nd sector that gives maximum employment (Kamran, 2018) Government of Pakistan 2018. In the same trend,(Youssef & Abderrazak, 2009) to check the financial and environmental impacts of green practices in the textile sector, there is a model. The findings of the model indicate that green practices improve the environmental-related performance, economic, social performance as the profitability of the firm. We characterize the maintainable exhibition of training as a mix of its monetary, social, and natural exhibitions. This compares to an all-encompassing origination design to demonstrate a reconciliation of the exhibitions in an engineered approach. Such joining can infer rationality between the three measurements with causality models associating different variables coming from various measurements.

The concept of Sustainability performance is a process to check the seriousness of a company against its goals, and firms keen for changes supply chains to achieve this goal sustainable performance plays an important role in the textile sector (Schaltegger & Burritt, 2014) to check sustainable performance there is more variables to check influence, And nowadays all firms are now making a valuable effort in stabilizing their environmental, money-making, social, related performance mainly for a better community, and regulatory pressures and more countries are now giving importance to sustainable performance (Calegari et al., 2014; Zaid, Jaaron, & Bon, 2018)

Countless investigations have proven that combined efforts are a critical component of supportability, and collective methodologies can help assemble more grounded and greater maintainability arranged associations (Govindan, Seuring, Zhu, & Azevedo, 2016; Lozano, 2007, 2008). Firms seek after sustainability challenges as a team with consumers, legislative organizations, different firms to promote the change to a more maintainable society (Seuring & Gold, 2010). Vachon and Klassen (2008) explain "that environmental sustainability is connected with human resource and supply chain practices of the firm" for better judgment of sustainable performance concept goes from the different criterion the sustainable performance concept for the objective to conduct the study, is explained as the real meaningful result after the application of GSCM and GHRM practices on the firms social, non-polluting, economic sector related

execution. Checking of profitable, environmental, and communal performance (Moneva, Archel, & Correa, 2006) are mainly connected with the human resource practices of the firm and also green supply network practices of the firm.

Supply chain-related internal policies in the textile industry include not only work-related conditions and wages, and also working conditions and whether they know green practices or not. Due to the difficulty in the textile supply chain practices, results suggest that there is a requirement to implement the providing chain practices strategies against the supplier level(Guest, 2002; Wilhelm, Blome, Bhakoo, & Paulraj, 2016) has explained that the "Impact of HRM on sustainable performance in the textile sector depends upon the response of workers towards HRM practices" and effect will be on view of employees by practicing HRM in the textile sector.

The expanding worldwide interest to meet practical advancement objectives is prompting the selection of cycles, creation of merchandise and arrangement of administrations that make less waste, decrease energy utilization, saves assets and less damage to the climate and human (Agyabeng-Mensah, Afum, & Ahenkorah, 2020; Ma, Zhang, & Yin, 2020). Many firms are receiving green policies to meet the necessities of government rules, financial backers, workers, media, worker's guilds, and non-legislative associations "(Azapagic, 2004; Mathiyazhagan, Govindan, NoorulHaq, & Geng, 2013) ; (Nikolaou & Evangelinos, 2010)" Different firms perceive green practices as a method for entering new business sectors and acquiring upper hand through upgraded firm standing "(Khan & Qianli, 2017; Wu, 2013)".

And foregoing research is linked with sustainable management to evaluate the textile sector, but there are still research gaps. writing proposes that human asset the board (HRM) framework has advanced from the antiquated type of work like low degree of representative contribution to a more participative and strong cycle wherein worker gets freedoms to create abilities, information and mentality (Lengnick-Hall, Lengnick-Hall, Andrade, & Drake, 2009; Singh, Mittal, Sengupta, & Pradhan, 2019). In a time of expanded mindfulness on natural administration and practical improvement of the assets (Cavicchi, 2017; Guthrie, Dumay, Roos, & O'Connor, 2015; Phillips, Lin, Schifter, & Folse, 2018), the green human asset the executives (GHRM) alludes to HRM rehearses focused on the natural and biological impact of the organizations and it is connected with the firm ecological procedure and green practices of workers (D. W. Renwick, Redman, &

Maguire, 2013) . Study contends that GHRM is fundamental to feasible HRM writing and spotlights on firm ecological administration rehearses and green HRM goes about as a stage to interface HRM practices to natural administration exercises of the firm (Masri & Jaaron, 2017; Shen, Dumont, & Deng, 2018).

In initial research, the focus was on the internal practices regarding providing chain of the textile firm for the development through different human capital practices and supply process environmental cooperation of textile firms on sustainable execution of firm. And our study had the reason to examine the reason and methods through which environmental-related and social-related supply chain policies are carried out. More studies have proven that cooperation with providers and customers is the main instrument for firms to increase their environmental performance "(Darnall, Jolley, & Handfield, 2008; González, Sarkis, & Adenso-Díaz, 2008)" and this type of cooperation can increase economic execution in management of providing chain practices (Montabon, Sroufe, & Narasimhan, 2007).

Ecological supportability is an inventory network basic as opposed to an authoritative goal (Squire, Vachon, & Klassen, 2006; Vachon & Klassen, 2007; Vasileiou & Morris, 2006). Advancement of harmless to the ecosystem cycles, items, and administrations requires a bound together exertion by all individuals from the production network to dodge sub-improvement at the accomplice level (Vasileiou & Morris, 2006).

Amassing affiliations have begun to execute green stock organization the board (GSCM) practices considering customer interest for things and organizations that are normally reasonable and that are made through earth viable practices and on account of administrative environmental rules(K. Green, Morton, & New, 1998; Murray, 2000). These practices require that makers work cooperating with suppliers and customers to improve natural acceptability. The use of GSCM practices is needed to achieve improved characteristic execution as assessed by diminishes in air outpourings, spouting waste, solid waste, and the use of destructive materials. There is a concern; in any case, whether or not such normal viability tries will finally change over into improved pieces of the general business and advantage.

1.2 Problem statement

However, the textile industry of Pakistan is mainly one of the most polluting industries of the economy of Pakistan, which directly affect the natural environment, human and social performance and due to which social performance is affected (Aftab, 2000) The textile sector of Pakistan uses harmful solid fuels which causes environmental issues such as air pollution which affect the society. But, the textile industry seems less willing to protect the environment. The main reason for rejection of Pakistani products in the international markets based on environmental labels suggested by the International Organization for Standardization (ISO) under its 14000 series has recognized the already poor industries of the country down the drain which badly affects their export businesses (Treon et al., 2015).

The main idea of the study is natural resource-related studies which need more inquiry into the effect of resources as green-related practices on sustainable performance (Bellani et al., 2018; Longoni, Luzzini, & Guerci, 2018) by putting GHRM as mediation, which is previously not studied in the literature. In the textile area of Pakistan there is the absence of examination about climate and exercises which hurt climate, as in material firms there are squander material tossed out from firms without and prudent steps. While purchasing crude material there is no exacting check n balance framework in material firms despite having offices and ability Pakistan is deficient in rivalry as some material items are dismissed in a few nations because of resistance with climate amicable approaches.

For any firm from starting their business to develop universally maintainable execution is a vital component to zero in on as a firm doesn't offer an incentive to their practical presentation for the maintainability in their exhibition may don't get by in market and confronted decay to closing down firms. The current study gives suggestions for the future researcher. The current study gives a valuable base for managers of firms to establish green practices into their internal supply process activities to achieve both competitions related and financial related objectives for firms. The study inspires manufacturing or other firms to adopt IGSCP, to increase production and to promote green practices within processes, to reduce risks to human-related activities and the environment, and increase products and services related policies, which become the cause for the improvement in SP.

With the assistance of this examination, human resource administrators and climate division directors can undoubtedly move their emphasis on exercises that can expand the association's

altruism in the neighborhood and global market. already there is the absence of spotlight on finding that there is network hotel monetary execution climate execution and social execution analysts disregards the part of green exercises and their effect on execution in the event of Pakistan. The study advises that IGSCP, GHRM, and SCEC describe the corporate image, which receives the belongings of environmentally curious individuals (Zaid, Bon, & Jaaron, 2018) which become a reason for the growth in the market size. The common explanation is GHRM activities are a costly process. Found by (Masri & Jaaron, 2017) the difficulty in the way of implementation of green process 'in manufacturing textile in Pakistan case Both Green HRM and Green SCM related research studies proves that certain practices which lead for the development of firm's performance purely results in increased sustainable performance.

To create approaches in regards to green practices in assembling cycle to complete item is simply related with human asset office and to make arrangements to expand generosity of firm is likewise related with human asset division that is the reason all exercises are interconnected. Social execution is worried about human asset office if a material firm doesn't focus on the most proficient method to improve their green practices with the assistance of clients and providers then, at last, they lose in rivalry and they is no economical exhibition in firm and analysts disregards this connection beforehand. And it is a notable concept that both green-related fields progressed in side by side, it is noted that there is negligence in exploring the link in Green HRM practices, Green SCM practices and sustainable performance " (Guerci, Longoni, & Luzzini, 2016; Jabbour & de Sousa Jabbour, 2016)"

As human asset office and climate office is exceptionally liable for green practices and how to improve green practices and how to ensure that is no hurtful consequences for climate because of their continuous cycle and their crude material as in old time there is no exacting guidelines in regards to climate assurance yet with the progression of society and culture now the world is more inquisitive about how to save our current circumstance by not contaminating it.in present-day business rules in regards to climate security is likewise severe individuals of present-day age like to purchase an item from firms which deal with climate insurance. A firm dealing with all principles likewise has an advantage over its rivals as far as monetary execution and social execution increment

This negligence raises the main issue for conducting research "(Jacob et al., 2010)" explained the importance for the adoption of efficient management in people resource practices and providing process department of the firm. This study, used as an addition to the first research which indicated that HRM, SCM practices (Zimmermann & Foerstl, 2014) can be a reason for benefit in competition to firms. Sustainable execution a bunch of execution which is the principle column for a firm additionally isolated into three significant sort's ecological monetary and social presence of the firm. I the instance of covid19 there is a decrease in firms' manageable execution and in Pakistan, there is carelessness while investigating the connection as to what firms can get by in the present circumstance and what mean for green practices can make on supportable execution. There is the absence of exploration on green practices in covid19 times in Pakistan as to how green practices can make sway on the execution of firms. And due to the gap in the previous study which neglects the role of sustainable performance we introduce sustainable performance as the dependent variable as the textile industry in Pakistan neglects the role of environmental performance and social and economic performance on society due to which they lost a competition.

Textile sector face declines current study adds a new relationship that previously has not checked the textile manufacturing industry, the green-related practices of HR and supply chain feature, environment-related feature with (SP) to provide sustainable firms more advantage through practicing of GHRM and GSCM practices. Finally, in research now we claimed that this study makes an addition in the existing literature by testing the relation which is not tested, in the case of Pakistan, and previously there is mainly lack of focus on research in this framework.

1.3 Research questions

- “What does the connection exist among inside green supply chain process and sustainable performance”?
- “What is the linkage among internal green providing process practices and supply chain environmental cooperation”?
- “What is the connection between internal green supply network practices and green human resource management”?
- “What is the association among supply process environmental cooperation and sustainable execution”?
- “What is the linkage between green people resource management and sustainable performance”?
- “Does provide chain environmental cooperation mediates the relationship among inside green supply chain practices and sustainable performance”?
- “Does green HRM mediate the relationship amongst inside green providing process activities and sustainable performance”?

1.4 Research objectives

- “To check the linkage among internal green providing chain practices and perceived performance”
- “To check the relatedness between inside green supply process activities and supply process environmental cooperation”

- “To observe the association in internal green supply process practices and green human resource management”
- “To check linkage between supply chain environmental cooperation and sustainable performance”
- “To find relatedness between green human resource management and sustainable performance”
- “To observe does supply chain environmental cooperation mediates the relationship between internal green supply chain practices and sustainable performance”?
- “To check does green human resource management mediate the relationship between internal green providing chain activities and sustainable performance”?

1.5sigificance of study

The study will highlight the factor which effects sustainable performance in textile sector of Pakistan. Sustainable performance measured through three. This examination can likewise feature the significance of feasible execution for material firms in covid19 circumstance. The study gives insight concerning how green works during this pandemic can make a serious edge in this predicament. will further examined the effect of internal green supply chain activities which a firm undertakes and meditational effects of GHRM and coordination with the environment can clear there is a relationship exist among environmental friendly practices which leads to social or financial growth.

Continuous examination causes troughs to explain the significance of green practices and collaboration with client and providers and human resource executives practices. This study contributes among managers of firms to understand if the firm is not following green practices rules and environmentally friendly practices there may be lost in terms of competition as in Pakistan textile firms do not pay much attention toward environmental policies as there is no strict rules regarding waste material disposal.

In Covid19 circumstance for firms, it is necessary to comprehend the significance of green practices In our study using (GHRM) and (SCEC) as mediation describe to check (SP) it is important to follow human resource practices and environmentally friendly policies as these all are interconnected with each other this model is related and significant with all aspects. This

study's rule is to describe the benefits of adopting green human resource practices if a firm needs sustainable performance. Rehearsing green practices in this Pandemic can likewise profit firms and make arrangements how to improve strategies in regards to green practices. And practicing both Green HRM and (IGSCP) for protection of employees environment, which helps firms in reducing the high cost of damages with corporate value and legal cases and fines "(Chien & Shih, 2007; Raut et al., 2019)"

1.5.1 Practical implication

The investigation adds to the literature differently. The investigation gives suggestions to experts. The investigation gives a solid base to administrators to bring green practices into their production network as methods for accomplishing both market and monetary targets. The findings urge firms to embrace IGSCP, for example, cleaner creation to consistently expand the green proficiency of cycles, limit dangers to people and the climate, and improve items and administrations, prompting an improvement in FP.

The investigation urges firms to intentionally actualize "IGSCP, GHRM, and SCEC" to encourage entrance into the international market, basically, in advanced nations. This permits firms to channel their assets toward beneficial endeavors prompting improved FP.

The examination reacted to the regular asset-based view considers requesting examination concerning the effect of assets (for example GSCM and GHRM rehearse) on FP (DEDE, 2019; Tran, Phan, Ha, & Hoang, 2020).

From a practical viewpoint, this study gives the idea of good sustainable performance in textile firms by describing their concerned person to link environmental-related activities with HRM, SCM practices 2nd the study's outcomes treats as a direction for managers to put more resources in Green HRM, in term of training as initiatives to improve employee knowledge about policies. 3rd the outcome of this research directs managers to check the improvement of sustainable performance in this pandemic situation. Considered that the internal (GSCP) positively influence (SP), the adoption of environmentally friendly standards according to organizational limits does

not fully check an organization's capability, and it is suggested that special attention is needed on this matter. 4th, according to study possible is to give certain improvements in the staffs training in textile firms.

This investigation additionally encourages the importance to comprehend the significance of sustainable execution effect and how green practices can make sway performance in this serious market and how green practices can improve in this covid19 circumstance. The outcome provides help for managers who hunt for improvement of sustainable performance. The study encourages managers to comprehend the significance of green practices in this pandemic and to see how green production network practices and green human resource executives rehearse make an impact on supportable performance. Results give rules to understand the connection between green practices and monetary, social, and environmental execution

1.6Definition of key terms

1.6.1 Insider green supply process activities

"Green supply chain practices is the external and internal -organizational control of supply chain practices to reduce or eliminate the total waste created by both the forward and reverse flows" (Rao & Holt, 2005; Y. Yu, Zhang, & Huo, 2019; Zhu & Sarkis, 2004)

"Internal green supply chain practices are the environmentally friendly practices implemented by organizations (Rao & Holt, 2005; Vachon & Klassen, 2006; Y. Yu et al., 2019; Zhu & Sarkis, 2004) to achieve the advanced corporate image and gain access to the international market"

1.6.2 Supply process environmental friendliness

"Supply chain environmental cooperation comprises Cooperation with providers and customers is important to reduce risk (Gunasekaran et al., 2017)" Vachon and Klassen (2008) "describe environmental cooperation with customers as the implementation of environmental practices with the customers of a firm to get a common green objective with the use of fewer resources". "Environmental cooperation with customers includes establishing strategic relationships with customers (Wu, 2013; Y. Yu et al., 2019) through a commitment to joint planning and implementation of green practices to increase performance"

1.6.3 Sustainable performance

Sustainable performance defined as "performance that checks the sustainability comprising at least economic, environmental, social value or checking other forms of value from a larger range of stakeholders" (Lüdeke-Freund, 2010; Schaltegger, Hansen, & Lüdeke-Freund, 2016)

1.6.4 Green people resource management

"Green HRM relates with activities to establish the balanced use of resources inside organizations and, more precisely promotes a reason of surrounding sustainability" (Marhatta & Adhikari, 2013).

1.7 Theory

In the human asset the board (HRM) discipline, the "Ability, Motivation, and Opportunity (AMO)" hypothesis has been embraced mainly to conceivably clarify the mind-boggling connection in how peoples are overseen and ensuing execution results. A normally acceptable view is that a mix of a person's capacity (A), inspiration (M), and chances (O) can give us a proportion of a person's presentation (P). The opportunity (AMO) hypothesis has been received widely to possibly clarify the perplexing connection between how individuals are overseen and ensuing execution results. The AMO speculation suggests that there are three self-governing work structure parts that shape agent ascribes and add to the achievement of the affiliation.

According to the speculation, definitive interests are best served by a system that deals with the specialist's limit, motivation, and opportunity (AMO).we utilized the capacity inspiration opportunity (AMO) hypothesis to inspect the HRM-execution interface which proposes that representatives' capacities, inspirations, and openings add to hierarchical execution; this is an incorporating point of view delineating why and how pioneers and vital HRM rehearses advance firm execution "(Appelbaum, Bailey, Berg, Kalleberg, & Bailey, 2000)". Ability-Motivation-Opportunity (AMO) theory "(Appelbaum et al., 2000)" is used in HRM "(Bos-Nehles, Van Riemsdijk, & Kees Looise, 2013)". According to the AMO hypothesis, HRM rehearses impact worker's capacity (e.g., through enlistment and determination, preparing and advancement), inspiration (e.g., prizes, impetus, and remuneration), and opportunity (e.g., cooperation, strengthening) to add to firm execution "(Gerhart, 2005)"

In addition, the AMO hypothesis recommends that representative association (inspiration) and advancement dependent on green practices (openings) actuate representatives to work steadily with providers and clients to upgrade FP (Tran et al., 2020). To have the important green HR abilities and arrangement of inspiration and openings eliminate the obstructions that ruin representatives from working adequately with upper and lower production network entertainers to streamline gains and offer danger related with green practices "(Acquah, Agyabeng-Mensah, & Afum, 2020; Jabbour, 2013, 2015; Teixeira, Jabbour, de Sousa Jabbour, Latina, & De Oliveira, 2016; Vidal-Salazar, Cordón-Pozo, & Ferrón-Vilchez, 2012)"

AMO hypothesis is the most far-reaching in arrangement Green HRM commitment towards ecological execution.. Grounded in the AMO hypothesis, we contend GHRM ought to be estimated utilizing three arrangements of HRM rehearses, which incorporates green preparing and improvement, green worker inspiration, and green representative association. Such GHRM adds to natural supportability by creating green representative "Capacity" (A) through pulling in/choosing and preparing good-performing workers and upgrading them; green representative "Inspiration" (M) through empowering responsibility through green activities; and giving "Openings" (O) for workers to engage in EM activities (D. W. Renwick et al., 2013).

CHAPTER.2

Literature Review

2.1 Internal Green supply chain Practice

Internal green supply chain practices include those activities which are indirectly connected with internal environmental management and eco-design in this activity customers and suppliers are not directly involved and these activities are performed by a single manufacturer and single party. (Bon, Zaid, & Jaaron, 2018; Zhu, Sarkis, & Lai, 2012) IGSCP is considered an important environmental activity by the concerned establishment (Rao & Holt, 2005; Vachon & Klassen, 2006; Y. Yu et al., 2019; Zhu & Sarkis, 2004) to get a competitive advantage over competitors in the international market. Green supply chain practices involved all those practices and activities which organization perform to control harmful impact on the natural environment as by going green as in their activities as in packaging designing (Agyabeng-Mensah, Ahenkorah, et al., 2020; Vachon & Klassen, 2006) GSCM incorporates environmental worries into production network the board. The inventory network incorporates exercises related to the change and stream of products of administrations from raw to the end shoppers including the mix of those exercises interior and outside to the firm (Bowersox & Closs, 1996).

GSCM can be seen at various levels having outer and inside GSCM viewpoints. We consider environmental administration rehearses that incorporate exchanges with providers and clients as outer inventory network exercises; those exercises without direct provider or client association, for example, eco-plan, natural administration, and monetary arrangements inside a maker's immediate control are considered as interior exercises (Zhu, Sarkis, & Lai, 2008).In the field of management, sustainability also gained importance "(Govindan, Sarkis, Jabbour, Zhu, & Geng, 2014; Gunasekaran & Spalanzani, 2012)" and is now a new competitive dimension "(Thürer, Godinho Filho, Stevenson, & Fredendall, 2013)", and topics such as "Green Supply Chain Management" (GSCM) are becoming important, mobilizing the scientific society "(Govindan & Cheng, 2011; Sarkis, 2012; Seuring & Müller, 2008)". Numerous examinations indicate that GSCM practices can better natural execution yet the linkage likewise relies upon authoritative limit (Judge & Elenkov, 2005).

IGSCM practices can be described as both characteristic and extraneous practices (Gimenez, Sierra, & Rodon, 2012; Wolf, 2014) which connects with the adoption of green qualities across many gracefully chain forms (Srivastava, 2007).We consider natural administration practices that incorporate exchanges with providers and clients as outer gracefully chain exercises; those exercises without direct provider or client inclusion, for example, eco-structure, ecological administration, and monetary strategies inside a manufacturer's immediate control are seen as internal practices (Zhu et al., 2008).GSCP include internal and outside control of firms supply process activities to lessen and to reduce the effects provided by inward and outward flows "(Rao & Holt, 2005; Y. Yu et al., 2019; Zhu & Sarkis, 2004)"

2.2 Supply chain Environmental Cooperation

SCEC is an "approach that utilizes customer and providers cooperation in environmental friendly cooperation" "Vachon and Klassen (2008)" defines "environmental cooperation as it involves all possible efforts of upper and lower-level actors mainly customer and suppliers to take environment-friendly projects and by ensuring environment-friendly steps by using fewer assets" Participation means building good relation with upper level to lower-level clients, (Wu, 2013; Y. Yu et al., 2019) through a responsibility of using green practices to propel execution. Environmental friendliness with providers is described as attempts by the organization and their suppliers to use environmentally friendly resources. (Vachon & Klassen, 2008; W. Yu, Chavez, Feng, & Wiengarten, 2014; Y. Yu et al., 2019) (EC) with clients is described as working with clients on the execution of Environment friendly actions (Vachon & Klassen, 2008).

It focuses on building natural coordinated effort with clients, through the undertaking of choosing ecological projects or resources, as taking care of natural resources. "(Klassen & Vachon, 2003)".SCEC covers the two providers and clients. Participation with providers and clients is fundamental to lessen danger and data unevenness related with green exercises "(Gunasekaran et al., 2017)". Providers are main gatherings to the compelling execution of natural practices "(Seuring & Müller, 2008; Zhu, Geng, & Lai, 2010)" This examination consolidates client and provider natural practices to frame SCEC. SCEC includes the exertion of a central firm combining upstream and lowers store network entertainers, for example, clients and providers to attempt biologically solid undertakings across the inventory network to dispense

with the negative effect of their procedure on the climate and to help with getting to business sectors, acquiring upper hand and improving execution.

Ecological store network participation (ESCC), a methodology that uses client and provider collaboration in natural administration, accordingly, participation with providers is fundamental for assembling undertakings to improve ecological execution just as to keep up creation quality and cost objectives (Geffen & Rothenberg, 2000). An absence of remotely engaged ESCC rehearses, like client and provider participation, may wreck the drawn-out inside productivity of undertakings.. Ecological participation with clients is characterized as working cooperatively with clients on the execution of EM rehearses "(Vachon & Klassen, 2008)" It centers around building ecological coordinated effort with clients on the downstream piece of the inventory network, through the obligation to aggregate natural objectives, for example, together with arranging and taking care of natural issues "(Klassen & Vachon, 2003)". Natural participation with providers is characterized as working cooperatively with providers on the execution of EM rehearses "(Vachon & Klassen, 2008; W. Yu et al., 2014)". It perceives the significance of building up ecological collaboration with providers on the upstream piece of the store network "(Feng et al., 2018; Zhu & Cote, 2004)"

2.3 Green Human Resources Management

As described by Kapil (2015), GHRM includes all human resource management frameworks build to guarantee the protection of natural resources." D. W. Renwick et al. (2013)" suggested that GHRM is a concept of including all system of environmental friendliness of an organization as carbon omission and improving green qualifications. Green HRM deals with policies to protect and preserve the natural resources. "D. Renwick, Redman, and Maguire (2008)" describe the concept of Green HRM in research describing sustainable HRM policies in all sizes of firms. As explained by them, "GHRM is a set of HRM application for environmental management and environmental sustainability and other business objectives". (GHRM) described as actions for the environmentally friendly effect of the firms and it is related with org environmental friendly strategy and concerns for green behaviors of workers "(Mampra, 2013; D. W. Renwick et al., 2013)" describe Green HRM as the practice to check the viable use of assets and give the reason for environment friendliness which further give confidence to the worker.

(GHRM) described as it is concerned with dealing with the policies inside an organization. Others described Green HRM as the use of practices, to maintainable usage of business assets (Zoogah, 2011) During the 1990s, concentrates on greening in associations strengthened "(Biehler-Baudisch, 1994; Hale, 1995; Wehrmeyer, 2017)". The essential clarification for the increase is the development of ecological administration frameworks and the dispatch of ISO14001, the most generally executed natural administration framework on the planet world" (E. S. Chan, 2011; Jabbour & Santos, 2008)". With increasing research on organizational greening "(Marcus, 2009)", it turned out to be certain that associations required the help of human asset rehearses, like preparing, execution assessment, and prizes, to actualize greening "(Daily & Huang, 2001; Govindarajulu & Daily, 2004)". The main work was identified with HR and the natural administration framework. It was presented by "(Wehrmeyer & Parker, 1996)"

GHRM includes both conventional human asset rehearses (enrollment, determination, execution assessment, preparing, and remunerates) lined up with natural objectives and "key measurements for HRM""(Jabbour, Santos, & Nagano, 2010)" and "new forms of work firms" "(Longoni, Golini, & Cagliano, 2014)", such as organizational culture "(Gupta, Kumar, Nayak, Saleh, & Barakat, 2013)" teamwork "(Jabbour, de Sousa Jabbour, Govindan, Teixeira, & de Souza Freitas, 2013)" and employee empowerment "(Daily, Bishop, & Massoud, 2012)" Another GHRM practice that has gotten considerable consideration from researchers is ecological preparing "(Yong et al., 2020)' More recently, "(Choi & Hwang, 2015)" expressed that ecological preparing is applicable to permit workers to receive further developed natural administration rehearses. "(Daily et al., 2012)" broke down the impacts of natural strengthening and ecological preparing on workers' view of ecological execution. GHRM is set up through the arrangement of the HRM rehearses, with the points of authoritative natural administration "(Jackson & Seo, 2010)"

2.4 Sustainable Performance

Sustainable performance is a combination of all practices of its performances. Sustainable performance is a powerful combination of feasible presentation of financial, natural, and social performance. Dilling (2010) as it may capacity of the association to diminish air pollution and waste management, no utilization of harmful material, (Zhu et al., 2008); and social related performance linked with the impacts of green practices on the socially related aspects identified

with their goods from the view of different partners, for example, providers, workers, clients, and the general public (Newman, Miao, Hofman, & Zhu, 2016). The monetary exhibition alludes to money-related and showcasing execution upgrades coming about because green practices that improve the organization's position (K. W. Green, Inman, Brown, & Willis, 2005; Zhu, Sarkis, & Geng, 2005).

The environmental performance elaborated as capability of the establishment to lesser air pollution and harmful material, decrease the use of dangerous and poisonous material, and also lower the number of environmental-related accidents "(Zhu et al., 2008)" and social performance deals with the green activities which deal with the social impact related to the goodwill of firm and there for different stakeholders "(Newman et al., 2016)". The economic execution deals with the financial performance betterment which results implementing green activities that increase the organization's place compared to the market "(Green and Inman, 2005; Zhu et al., 2005)". And the SP is "defined as the real outcome from the implementation of both GSCM and GHRM strategies on the organization's performance"

Inventive and proactive methodologies enable firms to build business esteems and along these lines improve maintainability execution. The maintainability idea has been perceived since the 1970s but very few firms proactively or inventively fuse an esteem-based system into the association's vision, strategies, or the component for execution assessment. Second, various contentions call for hypothetical and useful significance to give an audit on worth creation in a business and its job in supportable execution. Third, the partners' interest for esteem creation and its suggestion should go past association and across a production network setting, yet such worth creation endeavors are not embraced as a device to create execution. Ecological execution identifies with authoritative activities to meet and surpass cultural assumptions versus the common habitat "(R. Y. Chan, 2005)" in a way to go past simple compliances with rules and guidelines "(Chen, Tang, Jin, Li, & Paillé, 2015)". It includes ecological impacts of authoritative cycles, items, and asset utilization in a way that best fit with lawful natural prerequisites "(Dubey, Gunasekaran, & Ali, 2015)".

The textile business of Pakistan utilizes a gigantic measure of strong powers causing natural risk, for example, air contamination which influences the close by local area. Besides, the business additionally utilizes wood as a fuel that prompts deforestation in adjoining zones hence

compromising the general environment. Besides, the wastewater delivered by the business comprises water contaminations straightforwardly influence human wellbeing (Ahmed & Javed, 2016). But, the industry seems least willing to protect the environment

2.2 Hypothesis Development

1 green human resource regulation linked with internal green supply chain activities

Usage of GHRM may deal with the selection of inner green practices to provide the best possible planning of green activities that may aid to build up a powerful green culture. Researchers have explained the connection between GHRM and IGSCP.In investigating there is a positive effect of GSCP on GHRM, (Bon et al., 2018) said that GHRM affected IGSCP. Both concepts are related to each other and positively affect each other as internal green supply chain activities which are performed to gain a competitive advantage over others by using green policies and green human resource management mainly deals with activities regarding how to save resources and using environment-friendly policies in HR practices .internal green supply chain practices are mainly related with human resource activities and it may become the main subject for the HR department to promote green activities.

The craving of firms to secure their standing and gain an upper hand to upgrade their presentation has made them embrace different green procedures and practices. The viable execution of GHRM requires the underlying appropriation of interior green work to aid the legitimate planning of green freedoms, prize and motivator plans, limited time strategies, execution estimation, green preparing and schooling projects, and green enrollment that may help build up a hearty green culture. HRM assumes a vital part in hierarchical performance "(Schuler & Jackson, 2014)" and in the adoption of firms practice "(Schuler & Jackson, 2014)". This setting isn't not quite the same as effective SCM execution: HRM is additionally vital, yet the connection among HRM and SCM stays an ignored region of examination "(Lengnick-Hall, Lengnick-Hall, & Rigsbee, 2013)" Furthermore, the addition of "green issues" makes conversation of this relationship progressively scant and disregarded, legitimizing the reconciliation of GSCM and GHRM proposed in this work. it is explained that the "green" view, with the greening of establishment "(Marcus, 2009)" is the main objective of GSCM and GHRM, the term "GHRM" are highly connected with "GSCM" reason is said that human factors

are the main pillar for greening or paper less environment-friendliness of the providing chain. Both human resource policies and human resource factors, which are the reason for org change in the sustainability of the firm, are connected. GSCM can also relate with the firms' execution and then increase the power of firms to invest in human resources development activities. Inside green supply process management policies positively affects green human resources management activities.

H1a. IGSCP positively create an impact on GHRM

2 supply chain environmental friendliness affects internal green supply chain activities.

"Y. Yu et al. (2019)" described that IGSCP positively affects SCEC"(Bon et al., 2018)" described IGSCP has a positive effect on supply process environmental collaboration. The adoption and implementation of strategies related to green production, green buying, and these environmental processes may require companies to relate with providing chain parties to design green products, develop training related to green activities and education programs, check auditing system, and check progress report about green activities, and the complete procedure of usage and disposal of waste products. Supply chain environmental cooperation usually referred as part of supply chain practices, the supply chain includes all procedure which is from making of products to packing and then delivering green providing chain makes sure that in that procedure firm make sure to adopt all practices which are environment friendly that's why there is positive linkage exist between eco-freak supply process applications and supply chain environment cooperation.

Surviving writing proposes that IGSCP isn't sufficient for firms to accomplish exceptional enhancements in the usage and advantages of embracing natural practices "(Klassen & Vachon, 2003)". Inferable from this, organizations with a high tendency for green culture take proactive measures to broaden their green practices past their nearby surroundings to incorporate the two providers and clients "(P De Giovanni & Vinzi, 2012)" contends that the shortfall of the IGSCP makes it immaterial for org to attempt green undertakings with upper and downstream production network individuals. This proposes that it may not advantageous for org to work with store network accomplices if the firm had no interior green work.

SCEC terms are highly connected with providing chain practices and a part of green supply process practices. Companies nowadays to gain competitive advantage are now focusing on greening their all practices whether it is low usage or no usage of paper and taking proper measures for wastage due to which supply chain practices are now an important and integral part of firms policies. Environmental cooperation usually deals with activities and policies related to the environment of the firm and internal supply chain practices are also practices inside the firm to the stable environment of the firm. Thus research found there is a positive link exists between IGSCP and SCEC.

H2a. IGSCP significantly and positively influences SCEC.

3 Linking green human resource administration and supply process environmental association

"Y. Yu et al. (2019)" said that preparing, green chances, and motivation to workers help them to successfully help clients and providers on the adoption of green work over the chain. "Zaid, Bon, et al. (2018)" provide positive hold among GHRM and SCEC. This describes the contribution of staff in green practices urges them to describe their viewpoint to better the green procedural activities of a firm to lessen wastage of firm. As per "(Y. Yu et al., 2019)" there is a positive and significant influence among GHRM and SCEC with clients. Current studies suggest and investigated the impact of GRHM on SCEC and it either checks the effect of GHRM on just providers or clients. This examination considers the impact of GHRM on the two different parties as clients and providers. Human resource management is related to all activities related to hiring selection and other procedures in these activities greening these activities means to perform all these activities by considering environment-friendly policies green human resource mainly deals with the corporate environment whether inside or outside of the firm.

HR capacities are huge in the execution of SCEC. There is a requirement for representatives of firms to have the imperative information, specialized expertise, and the experience to have the option to work with providers and clients to execute green work appropriately.."(Daily & Huang, 2001) and (D. W. Renwick et al., 2013)" guarantee that the improvement of approaches that advances representative inclusion urges them to impart creative plans to providers and clients to advance green practices. The absolute quality administration researchers threaten that

representative contribution is an intense driver of consistent improvement "(Sila, 2020; Sila & Cek, 2017)", which is needed for legitimate SCEC.

This recommends that the inclusion of workers in green work urges them to share their perspectives to help better the green cycles of a firm to lessen waste and preserve energy. Additionally, it furnishes them with the essential information to work proficiently with production network entertainers to progress SP

By greening it means avoid wastage of natural resources in a firm supply chain process directly influence human resource management. Cooperation with environment-friendly activities is nowadays is the integral policy of a firm to gain a competitive advantage over others in the business field. Green human resource positively influence the supply chain surrounding cooperation as both are connected in such a way that supply chain environment-friendly activities are the main part of human resource management as nowadays in the corporate world to avoid wastage of resources are the main topic as how to avoid wastage and gain an edge over others by using minimum resources. The research found that there is a positive relationship exists between supply chain environment cooperation and green human resource management.

H3. GHRM has a significant impact on SCEC

4 internal Green supply process management activities and environmental performance

We describe that IGSCM is presently an important basic dependent on customers' requests for items that are naturally economical and that have been created by firms that are structured and worked to improve green manageability (Zhu et al., 2008) found an optimistic connection between a selection of green providing process practices and enhancements in financial execution. K. W. Green et al. (2008) contend that green buying is mostly going to bring about improved ecological performance. Supply chain practices concerning green activities are positively related to sustainable performance, as there are three dimensions of sustainable performance environmental performance related to the environment of the firm today for firms big challenge is to green their all activities inside or outside firm. If a firm provides its services perfectly then it is said as the firm is sustainable likewise if the firm is

taking care of environment-related activities then it is said that the firm's environment performance is good.

Different investigations recommended that GP and natural collaboration (EC) persuade providers and clients to act in an all the more attractively eco-accommodating route and to diminish their unreasonable conduct, which would prompt a positive effect on the EP of assembling organizations "(de Sousa Jabbour, Vazquez-Brust, Jabbour, & Latan, 2017; Diabat & Govindan, 2011)" Without a doubt, leading instructive and checking software engineers with the providers can help associations in giving materials in the result which can be described as just marginally dirtying the climate, accordingly improving the EP of associations.

The execution of assembling activities that are earth situated and which contaminate less positively affect the social elements of staff and society, as proposed by "Elkington (2004)"

"Zhu and Sarkis (2004)" suggest a linkage between green supply process practices and betterment in environmental and economic performance. "Geffen and Rothenberg (2000)" explained that, in or during the manufacturing process, good and close relationships with the suppliers gives good improved environmental performance "K. Green et al. (1998)" explained that green activities mainly result in improved environmental execution. GSCM practices are introduced mainly for the benefit of the environmental presentation of firms. Execution, in which there is green purchasing, cooperative behavior with customers, are subject to positively influence environmental performance. Environment friendly design will directly impact environmental performance as spot focus of the designers will be on diminishing the bad effect of the design on surroundings.

H4a. Green supply chain directly impacts environmental performance

5 Green provider chain management practices and economic performance

"Rao and Holt (2005)" describe a connection in green providing chain and economic execution. And they found that GSCM activities prompted seriousness and better monetary performance. "Klassen and McLaughlin (1996)" describe the impact of practices of winning natural honors by the associations on stock costs. The proof is that the market esteemed such acknowledgment and properly guaranteed the organizations with increased valuations as which is reflected by higher stock costs of the firm. GSCM activities mainly focus on the proper disposal of wastes connected

with environmental sustainability waste minimization should lead to lower costs give result in improved economic execution. We said that GSCM practices increase economic performance.

According to "(Zhu, Sarkis, & Lai, 2007)" economic execution stays the first concern for makers. There are a few examinations that have endeavored to interface GSCM rehearses with organizational monetary execution.

Environmental, economic, and social performance become a reason for cost-effectiveness and reflect an organization's power to satisfy and fulfill changing customer demands related to environmentally friendly products and services. Now, many empirical studies s that suggest a positive influence and relation between GSCM practices and Economic Performance which gives companies a competitive advantage. "(K. W. Green, Zelbst, Meacham, & Bhadauria, 2012; Laosirihongthong, Adebanjo, & Tan, 2013; Rao & Holt, 2005; Sroufe, 2006)" describe a positive linkage between Economic practices and cost reduction through green supply chain practices and then the sale in international markets, and cost reduction is mainly a big benefit in case of implementing those practices. By reducing their toxic material usage, by lowering of random product components, and lower the environmental impact of their products through Inside-GSCM, firms gain benefit which positively impacts the organization, sales, and income "(Porter & Kramer, 2006)". "(Gimenez et al., 2012)" suggest that an improved economic performance provide increased production efficiency as cost reduction and more savings in working costs due to waste minimization in the processes.

H5a. Green supply chain directly affects economic performance

6 internal Green supply chain management activities and Social performance

Social performance is an important pointer used to check an organization's social progress. It surveys the social results of the organization's movement mainly its representatives (working conditions, level of compensation), its suppliers, its clients (security effects of items). There are fewer studies on the linkage between GSCM practices and SP, proof describes that environmental friendly acts, in common, have a social responsibility such as increasing loyalty of customer "(Pietro De Giovanni, 2012)", increasing the firm's image "(Eltayeb & Zailani, 2011)" equal chances, safe products, and good working conditions, and ethical behavior and following of rules "(Porter & Kramer, 2006)".studies provide evidence about the link between

internal green supply chain activities and social performance of the firm and all activities inside a firm from beginning to end process are showing firms performance as taking care of wastage in and after the certain process taking care of employees taking care of suppliers concerns and cooperating with customers firm are considered as socially responsible and green activities friendly. Green activities are directly connected with the social performance of the firm.

The social performance deals with all activities done to promote and increase the goodwill of firms now day socially responsible firms are now making their way towards international markets and growing their businesses to other markets. Social responsibility is an international indicator used to check a company's social performance big firms for collaboration or partnership ventures now considering how many local firms are responsible towards social responsibilities as if the firm is taking care of environment-related activities or paying attention towards staff training, etc. there is a clear difference between firms who are more socially responsible and who are not .in competitive market firm grow faster who pay attention towards their all sectors and social activities. It gives the social result of the company's activities regarding its stakeholders, as how much firm is concern about stakeholders concerns as to whether they are taking care of their concerns towards firm or not and primarily its employees as working conditions as to whether there is suitable working conditions for workers or not and firm is taking care of workers concerns and paying wages on time giving them allowances and providing them health insurance, etc., level of remuneration, its suppliers and its customer's concerns & safety, and people in society as they are also stakeholders in mainly. Organizations developing GSCM into business activities may positively affect the social performance of a firm as a firm has social responsibilities too. the practicing of manufacturing operations that are environment friendly as a positive effect on the social performance of staff, as described by "(Elkington, 2004)"

H6a. Green supply process management positively impacts social performance.

7 Linking GHRM, inside green supply chain activities, SCEC, and sustainable performance

Scholars describe that increase in execution is the reason behind the greening of providers process "(Feng et al., 2018; Zhu et al., 2010; Zhu et al., 2008)" "(Agyabeng-Mensah, Ahenkorah, & Korsah, 2019)" said that there is positive linking between GSCP and sustainable performance. Study proof there is linkage exists between green practices and sustainable performance while

cooperation with customers and suppliers helps firms to increase supply chain activities and human resource activities .green activities are showing how much a firm is responsible towards society and international standards. Firms who want to expand their business in international markets tend to focus on their green activities.

In the presence of IGSCP is a condition for the better implementation of GHRM policies to improve FP gradually. Along cooperation with customers help corporation to better their quality execution and green activities in human resource and in the supply chain through feedback also (Khan & Qianli, 2017) Countless scholars have checked the impact of the mediating role of SCEC in between GHRM and environmental stability. Evidence describe that green humane resource activities connect with environmental stability as the environmental department and human resource department of the firm are connected. supply chain environmental cooperation is connected with the environmental performance of the firm. Study proof SCEC with customers and suppliers plays a mediating role between green human resource management activities and environmental performance.

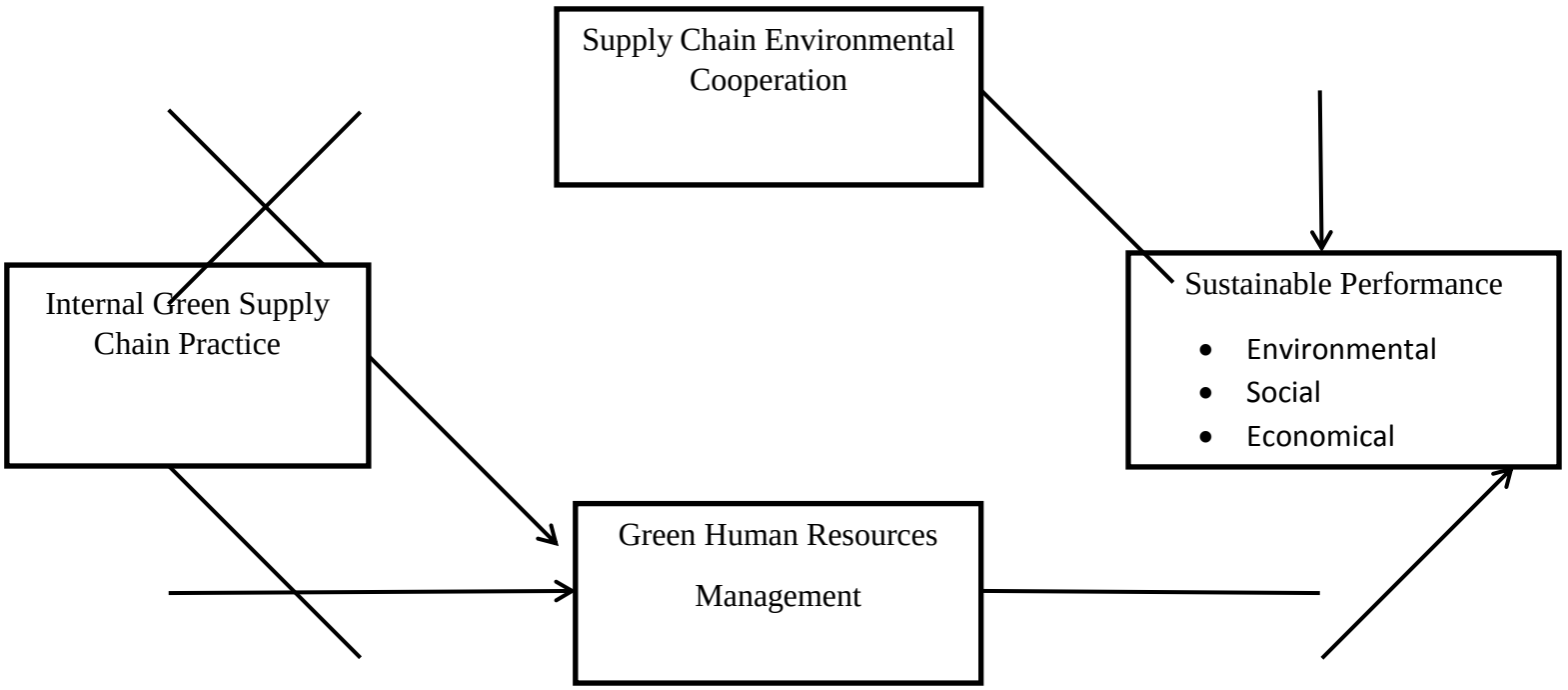
"Zaid, Bon, et al. (2018)" checked the mediating effect of IGSCP on the link between GHRM bundles and sustainable execution found that GHRM mediated between IGSCP and environmental, social, and economic performances. According to the "complementarity theory, "Green et al. (2019)" insist that the adoption of green practices in a specific order creates a link between strategies to improve performance-related factors". Most importantly green practices may make ways for a firm's access to new international markets, which become a reason for market growth and increased profitability. Mainly on the stakeholder resource view theory, "(Sodhi, 2015)" give an opinion that sharing ideas regarding greening and cooperation with customers to increase firms green acts may be a reason to satisfy the benefit which will become a reason for them to carry on to buy the goods of the firm which are going to increase their market size and profitability. Research suggests a positive effect between internal green supply chain acts and sustainable performance in presence of GHRM and SCEC.

H1b. "GHRM" mediates "IGSCP" and sustainable performance

H2b. "SCEC" mediates "IGSCP" and sustainable performance

H3b. "SCEC" and "GHRM" jointly mediate "IGSCP" and sustainable performance

2.3 Theoretical Framework



CHAPTER 3

Research Methodology

3.1 Introduction

This section clarifies the research procedure utilized in this investigation. The segments that follow clarify the research plan, populace and test, research scale, and information assortment techniques with steps. The last segment clarifies the factual strategies used to test the theories of the investigation.

3.2 Research Design

The point of this examination will be to explore the influence of inward green production network rehearses on apparent execution. This examination likewise checked the intervening job of GHRM and supply measure natural kind disposition on saw execution in assembling area as in material area. This investigation will be correlational. The theories testing with the motivations behind the examination to check the relationship to which varieties in a single factor compare with change in at least one variable dependent on connection coefficient. This connection study will be additionally cross-sectional in that information for all the examination factors was gathered at one place of time. This investigation will be attempted inside a non-devised setting in which aggravation to the workers will be less. Information on factors under investigation will be accumulated utilizing a self-regulated survey.

3.3 Population and Sample

In the study, we will use data of "128 firms from the textile industry listed on the Pakistan Stock Exchange" (PSX) https://www.psx.com.pk/.We will collect the required data from annual reports of textile firms and the State Bank of Pakistan (2015). The unit analysis in this study will be the firm. The owners/managers/employees of textile will be the key respondent to represent the firm. They will be chosen according to the requirement of being able to provide answers to questions. Another requirement for the questionnaire is they should know about the overall operational activities of the organization.

In any research, it is difficult to select a suitable sample. According to "(Krejcie & Morgan, 1970)", the assurance of a reasonable example size is expected to affirm that the example size chose addresses all parts of the populace. To acquire an acceptable sample size for this study, a table used by "(Krejcie & Morgan, 1970)" will be applied. As the population, we will use data

from the textile industry listed on the Pakistan Stock Exchange (PSX) 64 textile firms are now listed; the appropriate sample size will be 150 due to covid19 restrictions.

3.4 Sampling Procedure

The sampling method used will be simple random sampling, which is a straightforward method that gives each element of the sample an equal chance of being chosen as the subject. According to (Hair Jr, Babin, & Anderson, 2010) the simple random technique can keep away the researcher from becoming biased towards the selection of respondents because each element of the population has an equal chance of being selected. This technique provides a sample that is mainly a reflection of the population being studied and enables the researcher to generalize the results received for the total population.

3.5 Data Collection Procedure

When the respondents will distinguish, the following technique will be the conveyance of the surveys. The survey is chiefly an effective information assortment strategy. It is normally utilized in quantitative investigations to check enormous information to sum up to the populace all in all "(J. F. Hair, A. H. Money, P. Samouel, & M. Page, 2007)". The polls will be appropriated by and by to the respondents. At first, the analyst will be reached the material firms to guarantee that they were able to be a respondent. A detailed portrayal will be given to respondents concerning the motivation behind the investigation and they will be guaranteed that every one of the criticisms and data will be kept mysterious. What's more, a questionnaire will be conveyed to them. The respondents will be approached to finish the poll inside about fourteen days.

3.6 Measure

The questionnaire of the study will be comprised of an introductory letter and questions which are partitioned into segments A and B. The introductory letter in detail portrays the motivation behind examination, the mystery of the assembled information, and directions on the most proficient method to answer the questionnaire.

The dependent variable will be sustainable performance and the independent variables will be inside green supply process acts. Green people resource management and supply process environmental cooperation will be the mediating variable. The questionnaire developed in this study will have 47 items organized into four sections. Section A comprised 14 items, which measured internal green providing chain practices, green hiring, and customer green cooperation.

Section B comprised six items, which measured green human resource management, green hiring, and green training involvement. Section C had 10 items of supply chain environmental friendliness, cooperation with the customer, and cooperation with providers. Section D comprised 17 items of sustainable performance, economic, environmental, and social performance.

5point Likert scale will be utilized to gauge the things. Since most proprietors/directors/representatives of material firms have a medium instructive foundation, these distinctive point scales will encourage them while addressing the inquiries. The actions will be adjusted from various sources with satisfactory reliabilities (Cronbach's alpha coefficient). Table 3.6 displays an outline of the actions that will be utilized in this examination.

3.6.1 Internal green supply chain practices

GP1	"Providing design specification to suppliers that include environmental requirements for purchased items"
GP2	"Cooperation with suppliers for environmental objectives"
GP3	"Environmental audit for suppliers' internal management"
GP4	"Suppliers' ISO14001 certification"
GP5	"Second-tier supplier environmentally friendly practice evaluation"
GP6	"Suppliers are selected using environmental criteria"
GP7	"Eco-labeling of products"
CGC1	"Providing design specification which conforms to environmental requirements to customers"
CGC2	"Cooperation with customers for environmental objectives"
CGC3	"Cooperation with customers for eco-design"
CGC4	"Cooperation with customers for cleaner production"
CGC5	"Cooperation with customers for green packaging"
CGC6	"Cooperation with customers for using less energy during product transportation"
CGC7	"Cooperation with customers for product take-back"

Inside green Supply process practices A total of 14 items adapted Green purchasing from"(Zhu & Sarkis, 2004)" and "(K. W. Green et al., 2012)" Customer green cooperation Adapted from "(Zhu & Sarkis, 2004)" and "(Zhu, Sarkis, & Lai, 2013)"

3.6.2 Green human resource management

HR1	"Provide training programs on environmental management for our employees [training and development]"
HR2	"Organize environmental education activities for our employees [training and development]"
HR3	"Promote employee participation for green development [employee motivation]"
HR4	"Our employees introduce environmental issues to customers [employee involvement]"
HR5	"Purchasing personnel introduce environmental issues to suppliers [employee involvement]"
HR6	"Purchasing personnel receive training regarding the purchase of environmentally friendly products [training and development"

A total of 6 items adapted GHRM scales suggested by experts and knowledgeable academics "(Daily & Huang, 2001; Jabbour & de Sousa Jabbour, 2016; D. W. Renwick et al., 2013)".

3.6.3 supply chain environmental cooperation

ECS1	"Cooperate with the supplier to reduce packaging waste"
ECS2	"Require suppliers to use environmental packaging (degradable and non-hazardous"
ECS3	"Developing a mutual understanding of responsibilities regarding environmental performance with suppliers"
ECS4	"Conducting joint planning with suppliers to anticipate and resolve environmental-related problems"
ECS5	"Making joint decisions with supplies about ways to reduce the overall environmental impact of our products"
ECC1	"Cooperation with customers for eco-design"
ECC2	"Achieving environmental goals collectively with customers"
ECC3	"Developing a mutual understanding of responsibilities regarding environmental performance with customers"
ECC4	"Working together with customers to reduce the environmental impact of our activities"
ECC5	"Making joint decisions with customers about ways to reduce the overall environmental impact

	of our products”

A total of 10 items adapted from “(Vachon & Klassen, 2008)” and “(Zhu et al., 2010)” will be used to measure environmental cooperation with customers and providers

3.6.4 sustainable performance

EP1	“Lower discharge of noxious chemicals into the air and water”
EP2	“Lesser waste and recycling of materials during the manufacturing process”
EP3	“Increase in the usage of renewable energy and sustainable fuels”
EP4	“Enhancement in the company’s environmental state”
EP5	“Reduction in the frequency of environmental mishaps”
ECP1	“Reduction in cost of acquiring materials”
ECP2	“Reduction in cost of energy utilization”
ECP3	“Reduction in fee for treatment and discharge of waste”
ECP4	“Reduction in a penalty for environmental mishaps”
ECP5	“Average return on sales and investment over the past two years”
ECP6	“Average profit and profit growth over the past two years”
ECP7	“Average growth in market share over the past two years”
SP1	“Employees’ health and safety”
SP2	“Improving community health and safety”
SP3	“Development of economic activities”
SP4	“Providing inducements to engage local employment”
SP5	“Lowering the adverse impact of products and processes on the local community”

A total of 17 items adapted Sustainable performance EP “(Zhu et al., 2008, 2013)”

Ec.P “(Abdullah, Khan, Jebran, & Ali, 2015; P De Giovanni & Vinzi, 2012; K. W. Green et al., 2005; Zhu et al., 2005)” Total=47

3.7 Data Processing and Analysis

Information in the current investigation will be broken down utilizing Statistical Package for Social Science (SPSS) variant 25 and second era instruments alluded to as Partial Least Squares Structural Equation Modeling (PLS-SEM). The previous technique was utilized to check

information to clarify the attributes of the example "(Hair et al., 2007)", and the latter was used to check the hypothesized link in the model in the study "(Henseler et al., 2014; Wong, 2013)".

CHAPTER 4

Findings

4.1 Introduction

This chapter shows the results of the statistical data analysis, organized into four key sections. First are the results of the descriptive statistics and the characteristics of the respondents. The second section maps the results of the measurement model assessment. Finally, the results of hypothesis testing and the predictive relevance of the model are presented.

4.2 Response Rate

A total of 200 questionnaires were given to the managers of textile firms in Lahore, Pakistan. This area was selected due to the high concentration of textile. All textiles are selected showed their willingness to take part in the survey. Of the 200 questionnaires distributed, 150 were returned with a 75%response rate. It was with tremendous effort, hard work, and extra financial cost that this response rate was obtained. The response rate was high because of the use of self-administered questionnaire "(Farouk, Abu Elanain, Obeidat, & Al-Nahyan, 2016)"

4.3 Profile of Respondents

This section presents the demographic profile of the respondents, as shown in Table 4.2. Table 4.2 shows that more than half of the owners/managers were male 81(55.1%). In terms of age, close to half of them were relatively young 73 (49.7%) within 26 to 45 years old, followed by age of 46 to 55 (21.8%), up to 25 (26.5%), and 55+ (.7%). Regarding job tenure, 65 respondents (44.5%) had the experience of 2-5 years and 29(19.9%) respondents have experience of up to 1 year.44 (30.1%)respondents have experience of 5to 10 years and 8 (5.5%) respondents have experience of more than 10 years.

In terms of job nature, 79(54.5%) of the respondents were on contract, 68(45.5%) of respondents are permanently. Business owner, and 20.2% senior manager.

Table 4.2
Demographics

Demographic Variables	**Categories**	**Frequency**	**Percentage**

Gender	Male	81	55.1
	Female	66	44.9
Age	Up to 25	39	26.5
	26-45	73	49.7
	46-55	32	21.8
	55+	1	.7
Nature of Employment	Contractual	79	54.5
	Permanent	66	45.5
Length of Service	Up to 1 Year	29	19.9
	2-5 Years	65	44.5
	5-10 Years	44	30.1
	10+ Years	8	5.5

4.4 Non-response Bias

Due to how the information was gathered by and by the analyst, testing nonresponse predisposition couldn't be done. This is because all proprietors/administrators were given fourteen days to fill the questionnaire, after which the specialist by and by gathering them. As such, the distinction between the individuals who reacted before and later was a non-issue.

4.5Data Coding

After the confirmation that there was no issue of non-response bias, the data coding process was embarked on by the researcher, According to Churchill (1999); (Webb, Flambaum, Churchill, Drinkwater, & Barrow, 1999), data coding is mainly divided into two categories. One category is in regards to assigning code numbers to each construct for identification and glitch-free analysis. Another category assumes that each construct has its diverse section that asks questions about this particular construct. Therefore, this study arranged the questions in conformity with the constructs. All the variables in this study were coded as shown in Table 4.3.

Table 4.3
Data Coding

Constructs	Code
"Green purchasing"	GP
"Customer green cooperation"	CGC
"Green human resource management"	HR
"Supply chain environmental cooperation with suppliers"	ECS
"Supply chain environmental cooperation with customers"	ECC
"Economic performance"	ECP
"Environmental performance"	EP
'Social performance"	SP

4.6 Preliminary Analysis

This section gives a brief discussion on the preliminary analysis using the SPSS before the assessments of the measurement model and structural model. The preliminary tests included data screening, missing value analysis, outlier detection, and fundamental statistical assumptions.

4.7. Data Screening

Data screening needs to be performed on raw data before proceeding with the statistical analysis to ensure the accuracy of data. It is crucial as it makes sure that the collected data are good enough to proceed with the various analyses that are needed to test the hypotheses for the study. meanwhile, J. Hair, A. Money, P. Samouel, and M. Page (2007) also described that data screening is an important step before performing multivariate analysis. Data screening deals with the following steps. owner, and 20.2% senior manager. Less than 15% were business

partners (11.5%) and general managers (10%), while 5.9% held other positions such as listed in Table 4.2.

4.7.1. Detection of Multivariate Outliers

Outliers are defined as observations that are inconsistent with the rest of the data (Westerweel, 1994). The presence of outliers in data can misrepresent the estimates of the regression coefficients that lead to unreliable findings "(Verardi & Croux, 2009a, 2009b)". Outliers in data are detected to refute the effect of extreme values on the mean values of the items "(S. Sekaran, Foster, Lucas, & Hankins, 2003; U. Sekaran, 2003)". There are different methods used to identify the extreme values in data. This study used the "Mahalanobis distance statistical analysis" to detect outliers as it is the preferred technique to detect outliers. This method can detect observations that are located away from the mean of the data "(J. Hair, W. Black, B. Babin, R. Anderson, & R. Tatham, 2006; J. F. J. Hair, W. C. Black, B. J. Babin, R. E. Anderson, & R. L. Tatham, 2006)". Therefore, this study used the "Mahalanobis distance statistical analysis" by using SPSS 24 and no outlier was found for both datasets. This study used Smart PLS3 (Cheah, Sarstedt, Ringle, Ramayah, & Ting, 2018) for the data analysis as it can produce sensible results even with outlier values "(Joe F Hair, Ringle, & Sarstedt, 2011; Joseph F Hair, Ringle, & Sarstedt, 2012)".

4.7.2 Fundamental Statistical Assumptions

This study used Smart PLS3 "(C. Ringle, S. Wende, & J. Becker, 2015; C. M. Ringle, S. Wende, & J.-M. Becker, 2015)" for the data analysis, and it is non-parametric software that does not need to fulfill statistical assumptions. But, it is important to refer to some basic assumptions of normality and multicollinearity regarding the constructs to confirm the results and to deal with the occurrence of errors(Ritchie, Tkaczynski, & Faulks, 2010)

4.7.2.1 Multicollinearity

The presence of multicollinearity among predictors could increase the standard errors of the coefficients "(Tabachnick & Fidell, 2007)" and, it could also affect the regression coefficients and statistical significance tests "(J. F. J. Hair et al., 2006)". Therefore, it was crucial to assess the multicollinearity before the assessment of the proposed model. Table 4.5 reveals that the VIF values for all the predictors were less than 5, as suggested by "Joe F Hair et al. (2011)"; so, it could be said that there was no issue regarding multicollinearity.

Table 4.5

Multicollinearity

Constructs	**VIF**
CGC1	2.162
CGC2	3.107
CGC3	3.191
CGC4	2.761
CGC5	2.735
CGC6	2.086
ECC1	1.653
ECC2	2.492
ECC3	2.169
ECC4	2.388
ECC5	1.983
ECP1	1.453
ECP2	1.521
ECP3	1.716
ECP4	1.854
ECP5	1.759
ECP6	1.871
ECS1	2.04

ECS2	2.102
ECS3	2.487
ECS4	1.654
ECS5	1.633
EP1	1.787
EP2	2.152
EP3	1.987
EP4	1.538
EP5	1.621
GP1	1.523
GP2	1.723
GP3	1.634
GP4	1.813
GP5	1.438
GP6	2.396
GP7	2.069
HR1	1.735
HR2	1.948
HR3	2.568
HR4	2.056
HR5	1.662
HR6	1.581
SP1	1.83
SP2	1.947
SP3	2.249
SP4	1.504
SP5	1.386

4.7.2.2 Data Normality

Data normality is the basic assumption required for (SEM) structural equation modeling "(Byrne, 2016)". Nevertheless, this issue is less severe while using partial least square-structural equation modeling "(J. Hair, Hult, Ringle, & Sarstedt, 2016)" PLS-SEM employs a bootstrapping

technique to determine the significant relationship in the proposed model for non-normal data. There is no need to fulfill the normality assumption in PLS-SEM and it handles non-normal data; this is one of the major advantages of using PLS-SEM "(Bontis, Booker, & Serenko, 2007)"

Despite this, "J. Hair et al. (2016)" suggested that if data is extremely non-normal, it must be removed before the application of PLS-SEM. Although PLS-SEM does not require normally distributed data, it is crucial to assess the data normality distribution before applying inferential statistics "(J. Hair et al., 2007)". Therefore, as recommended by "Munro (2005)", this study checked the data normality by using the Skewness, Kurtosis, and histogram plots. The results showed that the data for this study were not normally distributed. Fortunately, there was no indication of highly non-normal data found. As stated by "J. Hair, Hult, Ringle, and Sarstedt (2017)", PLS-SEM generally does not assume the data normality as it is a non-parametric analysis technique that does not require the data to be normally distributed. Hence, this study proceeded with the subsequent analysis by using PLS-SEM.

4.8 Descriptive Statistics

As illustrated in Table 4.6, the mean value of customer green cooperation is 3.9772, and the mean value of environmental cooperation with the supplier is 3.8170, which were the highest to lowest mean values of all the variables for Pakistani data, respectively. Similarly, the mean value of EP is 3.8331 and EP mean value is 3.9699 mean value of social performance is 3.9733, 3.8510 mean value for GHRM and environmental cooperation with customer mean value is 3.9139 and green purchasing mean value is 3.8745.and for the data collected from Pakistan, the mean values of all the other variables were ranged between 3.8170 and 3.9772.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
EP	148	1.80	5.00	3.8331	.62753
ECP	148	2.29	5.00	3.9699	.54976
SP	148	1.80	5.00	3.9733	.64532
HR	147	1.00	5.00	3.8510	.65476
ECS	147	1.00	5.00	3.8170	.65982
ECC	147	1.00	5.00	3.9139	.64952
GP	147	1.14	5.00	3.8745	.61795
CGC	147	1.67	5.00	3.9772	.67778
Valid N (listwise)	147				

4.9 Assessment of Reflective Measurement Model

In PLS, the reliability of individual item/construct is assessed by inspecting the item loadings on their latent construct respectively "(Hulland, 1999)". The higher loadings mean that there is more variance shared between the construct and measurement rather than an error variance, whereas low loadings show that the power of model explanation is highly small which reduces the estimated parameters linking the constructs "(Hulland, 1999)". For the intelligent estimation model, the markers are firmly related and tradable and their dependability and legitimacy ought to be evaluated and announced in detail. Accordingly, to evaluate the estimation model, the scientist confirmed both dependability and legitimacy.

Reliability was measured through composite reliability and validity was assessed by convergent and discriminant validity. CFA was directed to evaluate inner consistency (for example composite dependability), merged legitimacy (for example normal change removed), and discriminant legitimacy (for example cross-loadings and Fornell-Larcker basis) of the

instruments. This is to affirm that the estimations are dependable and legitimate before evaluating the connections in the primary model

4.9.1 Composite Reliability

To assess the internal consistency reliability of the construct, (CR). Was determined. In this process, all items' constructs were tested to exceed a cutoff value of 0.5, as recommended by "Hair, Hult et al. (2014)". Table 5.4 shows that all items were loaded on their respective constructs item. All the item loadings exceeded the recommended cutoff value of 0.5. The loadings ranged from 0.858 to 0.933, which indicated that more than half of the variance in the observed variable is explained by the constructs. Items with loadings below 0.5 were deleted step by step to achieve a significant threshold value of internal consistency of the construct. For the reflective scale, items that were deleted might not affect the conceptual meaning of the particular construct as long as it retains adequate internal consistency. This is because the direction of causality flows from construct to items demonstrated the items represent the effects.

Therefore, the items are highly correlated because they are caused by the same underlying construct "(Hair, Hult et al., 2014; MacKenzie, Podsakoff, & Jarvis, 2005)". In this study, the result revealed that the internal consistency of all the constructs was within the acceptable range after the items were deleted from the scale. The CR values of reflective latent constructs ranged from 0.858 to 0.933 that exceeded the recommended cutoff value of 0.7 "(Hair, Black, Babin, & Anderson, 2010)". Therefore, all constructs showed a high level of internal consistency reliability.

4.9.2 Convergent Validity

To assess convergent validity, the average variance extracted (AVE) was determined. Table exhibits the convergent validity, which revealed that the AVE values of all "latent constructs were greater than the acceptable threshold of 0.5 and the values were in the range of 0.504 and 0.7, The AVE value greater than 0.5 specified that the latent construct explained more than half of the variance of its indicators". The table summarizes the result of the measurement model. The result showed that all constructs, green purchasing, customer green cooperation, GHRM, supply chain environmental cooperation with customer, supply chain environmental cooperation with suppliers, economic performance, environmental performance, and social performance were valid measures of their respective constructs based on their parameter estimates and statistical significance "(Chow & Chan, 2008)". Hence, the model constructs had sufficient convergent validity.

Table 4.7
Convergent Validity

outer items	loadings	Alpha	CR	AVE
CGC1	0.79	0.914	0.933	0.7
CGC2	0.865			
CGC3	0.873			
CGC4	0.84			
CGC5	0.854			
CGC6	0.794			
ECC1	0.741	0.865	0.903	0.652
ECC2	0.854			
ECC3	0.809			
ECC4	0.847			
ECC5	0.779			
ECP1	0.607	0.801	0.858	0.504
ECP2	0.724			
ECP3	0.757			
ECP4	0.776			
ECP5	0.636			
ECP6	0.743			
ECS1	0.827	0.848	0.892	0.624
ECS2	0.782			

ECS3	0.852			
ECS4	0.758			
ECS5	0.723			
EP1	0.77	0.836	0.884	0.604
EP2	0.823			
EP3	0.793			
EP4	0.735			
EP5	0.763			
GP1	0.674	0.842	0.881	0.517
GP2	0.727			
GP3	0.683			
GP4	0.764			
GP5	0.62			
GP6	0.818			
GP7	0.728			
HR1	0.781	0.868	0.9	0.601
HR2	0.806			
HR3	0.853			
HR4	0.782			
HR5	0.733			
HR6	0.689			
SP1	0.768	0.825	0.878	0.592
SP2	0.809			
SP3	0.863			
SP4	0.705			
SP5	0.688			

4.9.3 Discriminant Validity

To assess discriminant validity, two measures were involved. They were cross-loadings and Fornell-Larcker criterion. First, the analysis on cross-loadings of the items was conducted. "According to Hair et al. (2010) and Chin (1998)", the standardized loading estimates should be 0.5 or higher and ideally 0.7 or higher. The items with very low loadings (below 0.4) should be deleted "(Hair, Hult et al., 2014; Hair et al., 2011)".

Additionally, all measures of the construct should be significantly loaded onto their respective construct. The Fornell-Larcker basis recommends that more fluctuation is shared by a dormant

build with its pointers than with other inert develop in the underlying model (Fornell and Larcker, 1981). Consenting to this basis, the squared base of the AVE (addressed by the qualities in the corner to corner) determined ought to be more noteworthy than every one of the build connections (addressed by the qualities in the off-slanting) "(Hair, Hult et al., 2014)".

The table shows discriminant legitimacy for first-request builds and next for second-request develops. The two tables represent that all the square foundation of the AVE esteems was bigger than other connection esteems among the inert factors, showing that few develops utilized in the model have a place with particular substances. Generally, the estimation model showed great discriminant legitimacy among builds. A table displays the external loadings of the thing were more noteworthy than the cross-loadings of different builds, which were more prominent than 0.5. True to form, all pointers stacked onto their basic builds well, proposing no cross-loadings existed among markers.

Table 4.8

Fornell &larcker								
	ECC	ECS	CGC	ECP	EP	GHRM	GP	SP
cooperation with customer	**0.807**							
cooperation with supplier	0.787	**0.79**						
customer green cooperation	0.669	0.667	**0.837**					
economic performance	0.626	0.674	0.618	**0.71**				
environmental performance	0.519	0.652	0.572	0.672	**0.777**			
green HRM	0.691	0.783	0.613	0.63	0.578	**0.776**		
green purchasing	0.783	0.74	0.772	0.667	0.569	0.696	**0.719**	
social performance	0.668	0.728	0.601	0.67	0.611	0.693	0.632	**0.769**

Table 4.9

cross loading

	ECC	ECS	CGC	ECP	EP	GHRM	GP	SP
CGC1	**0.473**	**0.515**	**0.79**	**0.513**	**0.479**	**0.442**	**0.631**	**0.48**
CGC2	**0.528**	0.489	0.865	0.513	0.449	0.462	0.644	0.465
CGC3	**0.585**	0.593	0.873	0.555	0.587	0.555	0.668	0.55
CGC4	**0.591**	0.622	0.84	0.498	0.452	0.501	0.617	0.524
CGC5	**0.621**	0.562	0.854	0.507	0.466	0.57	0.623	0.485
CGC6	**0.541**	0.557	0.794	0.521	0.435	0.529	0.696	0.51
ECC1	0.741	**0.683**	0.507	0.45	0.448	0.596	0.569	0.551
ECC2	0.854	**0.713**	0.584	0.551	0.443	0.585	0.608	0.575
ECC3	0.809	**0.605**	0.544	0.474	0.333	0.534	0.651	0.579
ECC4	0.847	**0.613**	0.547	0.483	0.409	0.528	0.68	0.493
ECC5	0.779	**0.571**	0.517	0.566	0.467	0.555	0.643	0.502
ECP1	0.342	0.336	**0.437**	0.607	0.576	0.428	0.429	0.366
ECP2	0.514	0.565	**0.421**	0.724	0.471	0.502	0.535	0.501
ECP3	0.56	0.579	**0.519**	0.757	0.544	0.55	0.585	0.484
ECP4	0.523	0.556	**0.445**	0.776	0.474	0.496	0.561	0.507
ECP5	0.293	0.36	**0.345**	0.636	0.3	0.259	0.32	0.468
ECP6	0.384	0.429	**0.454**	0.743	0.489	0.408	0.372	0.521
ECS1	0.629	0.827	0.531	**0.532**	0.571	0.706	0.598	0.581
ECS2	0.589	0.782	0.502	**0.519**	0.496	0.518	0.593	0.582
ECS3	0.616	0.852	0.544	**0.566**	0.56	0.631	0.584	0.629
ECS4	0.654	0.758	0.528	**0.561**	0.45	0.636	0.62	0.614
ECS5	0.621	0.723	0.532	**0.482**	0.493	0.596	0.526	0.456
EP1	0.334	0.428	0.436	0.457	**0.77**	0.485	0.379	0.457
EP2	0.389	0.532	0.456	0.526	**0.823**	0.396	0.435	0.412
EP3	0.481	0.537	0.453	0.487	**0.793**	0.519	0.485	0.48
EP4	0.407	0.525	0.433	0.542	**0.735**	0.418	0.459	0.514
EP5	0.395	0.498	0.445	0.586	**0.763**	0.438	0.441	0.506
GP1	0.564	0.442	0.48	0.452	0.303	**0.434**	0.674	0.29
GP2	0.624	0.528	0.53	0.455	0.315	**0.487**	0.727	0.442
GP3	0.557	0.513	0.406	0.443	0.338	**0.442**	0.683	0.52
GP4	0.618	0.602	0.583	0.527	0.509	**0.552**	0.764	0.523
GP5	0.463	0.45	0.437	0.421	0.364	**0.511**	0.62	0.338
GP6	0.607	0.608	0.703	0.573	0.508	**0.616**	0.818	0.542
GP7	0.484	0.56	0.722	0.471	0.506	**0.448**	0.728	0.49
HR1	0.585	0.633	0.569	0.617	0.545	0.781	**0.598**	0.686
HR2	0.59	0.64	0.526	0.543	0.454	0.806	**0.589**	0.616
HR3	0.535	0.644	0.476	0.462	0.492	0.853	**0.556**	0.541
HR4	0.493	0.586	0.38	0.412	0.399	0.782	**0.491**	0.49
HR5	0.448	0.536	0.481	0.408	0.36	0.733	**0.488**	0.419
HR6	0.549	0.599	0.365	0.429	0.401	0.689	**0.486**	0.377
SP1	0.509	0.511	0.508	0.497	0.503	0.498	0.491	**0.768**
SP2	0.515	0.591	0.492	0.478	0.471	0.584	0.488	**0.809**

SP3	0.595	0.656	0.493	0.614	0.521	0.604	0.566	**0.863**
SP4	0.465	0.573	0.361	0.494	0.418	0.436	0.421	**0.705**
SP5	0.472	0.456	0.449	0.485	0.431	0.525	0.45	**0.688**

4.9.3.1 Heterotrait-Monotrait Ratio

A study by "Henseler, Ringle, and Sarstedt (2015)" introduced a new criterion to evaluate discriminant validity for variance-based structural equation modeling. They agreed that the Fornell-Larcker criterion and cross-loadings are the major approaches to assess the discriminant validity for variance-based structural equation modeling. Besides this, they argued that these approaches had not detected the lack of discriminant validity in various research situations. Therefore, "Henseler et al. (2015)" proposed an alternative approach, "the heterotrait-monotrait ratio of correlations", which is based on the "multitrait-multimethod matrix" to assess the discriminant validity. Various studies also used the HTMT ratio to assess the discriminant validity and also recommended the use of this approach to evaluate the discriminant validity "(Ab Hamid, Sami, & Sidek, 2017; Ali, Rasoolimanesh, Sarstedt, Ringle, & Ryu, 2018; Haider, Jabeen, & Ahmad, 2018; Henseler et al., 2015; Hussein & Baharudin, 2017; Janadari, Sri Ramalu, & Wei, 2016)".

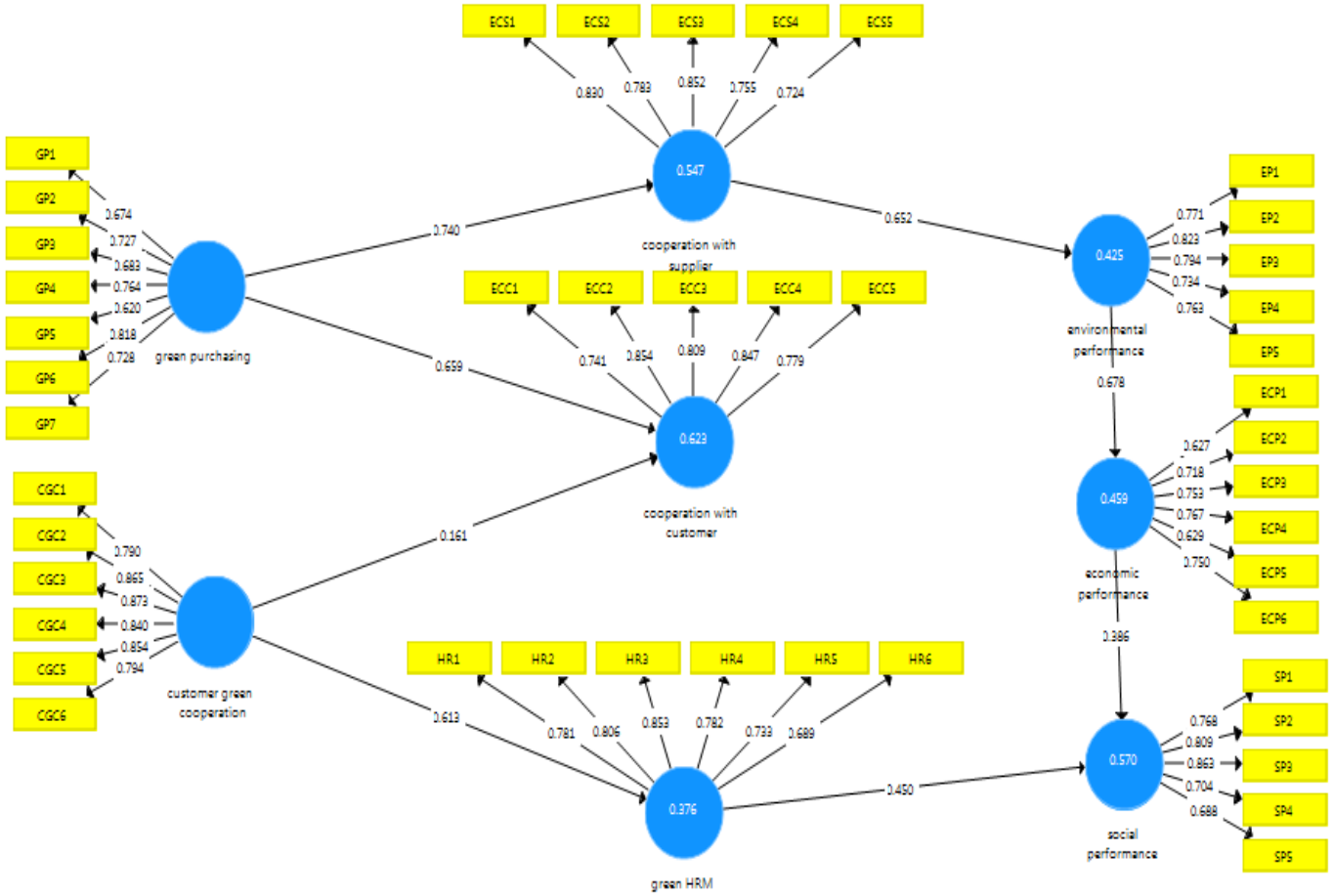
There are two ways to evaluate discriminant validity by using the HTMT ratio; the first one is as a criterion and the second one is as a statistical test (Henseler et al., 2015). In the first approach, the HTMT ratio should be less than 0.85 (Clark & Watson, 1995; Kline, 2011) or it should be less than 0.90 (Gold, Malhotra, & Segars, 2001). When the HTMT ratio is higher than the above-mentioned thresholds, there is a problem of discriminant validity. The second one is to test the null hypothesis (H0: HTMT $\geq$ 1) against the alternative hypothesis (H1: HTMT < 1) and if the confidence interval encompasses value one, this indicates the lack of discriminant validity

(Henseler et al., 2015). This study used the first criterion approach to assess the discriminant validity using the HTMT ratio.

Table 4.17 has presented all the values of the HTMT ratio for construct. As shown in Table 4.10, all the values of the HTMT ratio for all constructs were less than 0.90 and passed the criterion of the HTMT<0.90 (Gold et al., 2001). Thus, these findings indicated that discriminant validity had been established for all the constructs

Table 4.10
HTMT Ratio

	ECC	ECS	CGC	ECP	EP	HR	GP	SP
cooperation with customer								
cooperation with supplier	0.924							
customer green cooperation	0.748	0.757						
economic performance	0.741	0.808	0.722					
environmental performance	0.61	0.77	0.653	0.817				
green HRM	0.797	0.911	0.67	0.731	0.671			
green purchasing	0.914	0.874	0.878	0.802	0.672	0.806		
social performance	0.791	0.867	0.691	0.824	0.734	0.791	0.75	



Measurement Model Assessment

4.10 Assessment of Structural Model (SEM)

Once the measurement model had been made, the next step to test the hypotheses. By running the PLS-SEM algorithm and bootstrapping, the assessment of the structural model was performed "(Chin, 2010)". First, the predictive power of the structural model was evaluated by the coefficient of determination (*R*2 values) of the endogenous construct "(Chin, 2010; Henseler et al., 2009)" and the level and significance of the path coefficient was determined "(Hair, Hult et al., 2014)"

Table 4.11 indicates that exogenous constructs such as GP,CGC,HR,ECS,ECC,EP,ECP,

62.3% of the variance in supply chain environmental cooperation with the customer, and 54,7% of the variance in cooperation with supplier, 45.9% in economic performance,42.5%in

environmental performance,37.9% in green human resource management, and 57% in social performance respectively. According to "Henseler et al. (2009)", the *R*2 of endogenous variables with three or more exogenous latent variables should be at least substantial, which was met in this study.

Table 4.11
Coefficient of Determination

	R Square	R Square Adjusted
cooperation with customer	0.623	0.618
cooperation with supplier	0.547	0.544
economic performance	0.459	0.455
environmental performance	0.425	0.421
green HRM	0.376	0.372
social performance	0.57	0.564

4.10.1 Direct Relationship-Path Analysis

According to Hair et al. (2013), the ways that are non-huge or giving indications the inverse bearing to the theorized doesn't uphold earlier theories, while huge ways experimentally support the proposed causal relationship. Before the interceding impact was tried, bootstrapping with a resample of 150 was raced to get the t-esteem to survey if the immediate connections were critical. The way coefficients were delivered as demonstrated in Figure and Table 4.13 show the bootstrapping results. Definite outcomes are as per the following

"Hypothesis 1: supply chain environmental cooperation with the supplier is positively related with economic performance"

The result from the output of the algorithm and bootstrapping PLS-SEM showed a positive and significant association

($\beta = 0.411$, $t = 4.832$, $p < 0.05$). Therefore, Hypothesis 1 is supported.

“Hypothesis 2: supply chain environmental cooperation with the supplier is positively related with environmental performance”

The second hypothesis was also confirmed as a positive and significant association ($\beta = 0.652$, $t = 12.862$, $p < 0.01$).

“Hypothesis 3: customer green cooperation is not related with supply chain environmental cooperation with customer”

No significant relationship exist as ($\beta = 0.161$, $t = 1.807$, p 0.071). Hence, Hypothesis 3 is not supported.

“Hypothesis 4: customer green cooperation is positively related with green human resource management”

As the ($\beta = -0.613$, $t = 9.048$, $p < 0.01$). Based on the result, Hypothesis 4 is supported

“Hypothesis 5: Economic performance is positively related with social performance”

Economic performance is positively associated with social performance ($\beta = 0.388$, $t = 4.745$, $p < 0.05$), indicating support for Hypothesis 5.

“Hypothesis 6: Environmental performance is linked with economic performance”

A positive and significant association between environmental performance and economic performance was found ($\beta = 0.405$, $t = 4.678$, LL= 0.235 UL= 0.568, P< 0.01), supporting Hypothesis 6.

“Hypothesis 7: green human resource management is like with social performance”

The result showed that this hypothesis was supported ($\beta = 0.448$, $t = 5.386$, $p < 0.01$).

"Hypothesis 8: green purchasing is related with supply chain environmental cooperation with customer"

Since the path coefficient was positive and significant (β = 0.659, t = 8.434, p < 0.01), Hypothesis 8 received empirical support.

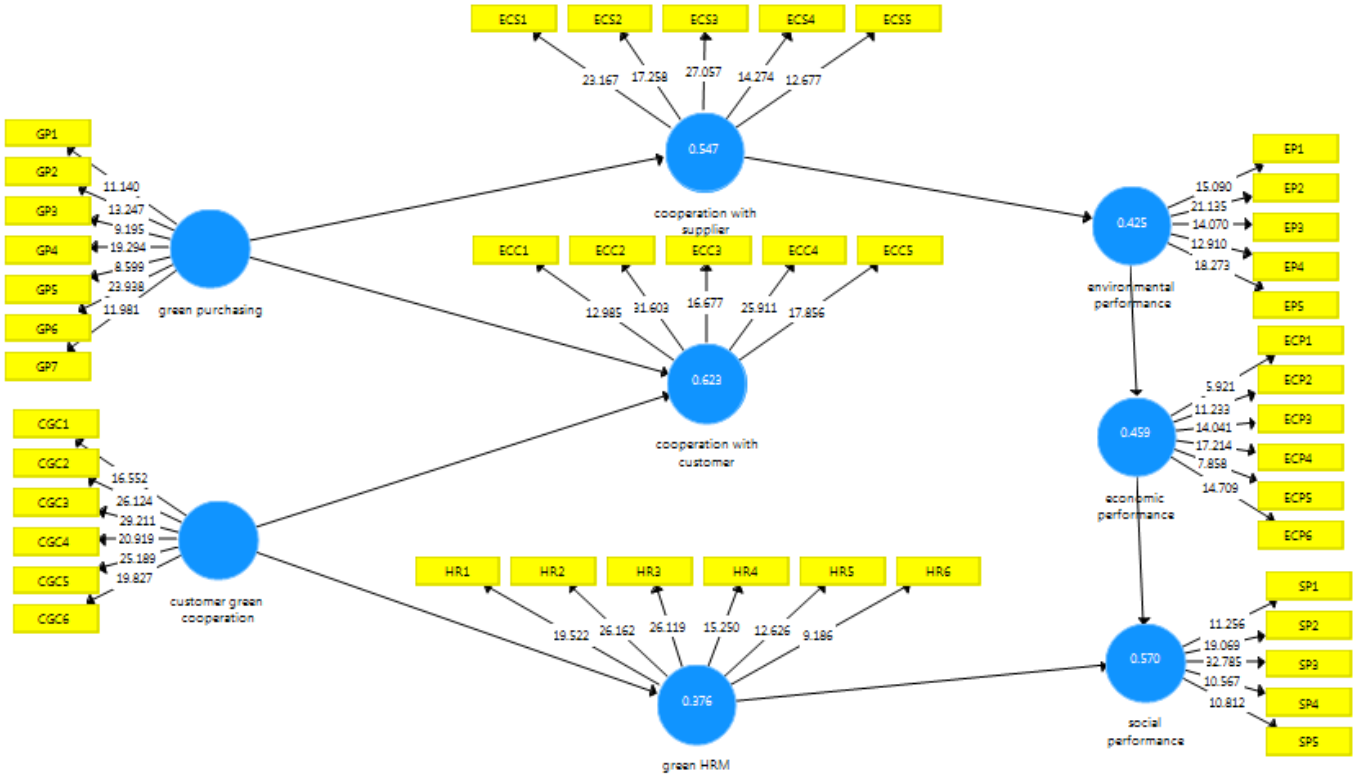
"Hypothesis 9: green purchasing is related with supply chain environmental cooperation with supplier"

Since the path coefficient was positive and significant (β = 0.74, t = 14.882, p < 0.01), Hypothesis 8 received support.

Table 4.13
Results of Direct Relationship

	beta	**SE**	**SD**	**T value**	**P Values**	**LL**	**UP**	**decision**
ECS -> economic performance	0.411	0.414	0.085	4.832	0	0.233	0.562	**supported**
ECS -> environmental performance	0.652	0.661	0.051	12.862	0	0.555	0.757	**supported**
CGC -> cooperation with customer	0.161	0.155	0.089	1.807	0.071	0.033	0.321	**not supported**
CGC-> green HRM	0.613	0.608	0.068	9.048	0	0.468	0.738	**supported**
ECP-> social performance	0.388	0.39	0.082	4.745	0	0.232	0.537	**supported**
EP -> economic performance	0.405	0.402	0.086	4.678	0	0.235	0.568	**supported**
HRM -> social performance	0.448	0.448	0.083	5.386	0	0.284	0.606	**supported**
GP -> cooperation with customer	0.659	0.662	0.078	8.434	0	0.511	0.816	**supported**
GP> cooperation with supplier	0.74	0.737	0.05	14.882	0	0.632	0.822	**supported**

4.11 Structural Model Assessment



4.12 Summary of the Chapter

This section detailed the discoveries of the investigation. SPSS was utilized to depict the respondents' profiles. Notwithstanding, the PLS-SEM examination was utilized to test the unwavering quality and legitimacy of the actions. The procedure of bootstrapping in PLS-SEM examination was utilized to test the exploration theories. All in all, the outcome demonstrated that the estimation model was considered worthy dependent on adequate proof of dependability, concurrent legitimacy, and discriminant legitimacy. After the estimation model was surveyed, and the primary model was tried. The accompanying section talks about the discoveries, joined by suggestions to practice and future exploration, and limits. Some finishing up comments ends the proposition.

Chapter no.5

5.1 Discussion

The discoveries of the current examination propose the meaning of the supportable presentation (social execution, natural execution, monetary execution) under the hypothetical underpinnings of the capacity inspiration hypothesis. The outcomes checked there is a huge relationship exists between inner green inventory network rehearses and economical execution and green human asset the board and green ecological collaboration intervenes the relationship. The discoveries propose that human asset experts working in material firms could one of the dynamic specialists who can include different representatives by making and creating natural information base HR rehearses.

Such natural information further instigates workers to embrace favorable to ecological conduct which could react in improving ecological execution and which prompts an increment in friendly execution and monetary execution. Henceforth, the investigation upholds the hole by experimentally confirmed the interceding impact of green human assets and store network natural collaboration. The examination discoveries showed that GHRM has a critical relationship with manageable execution.

Besides, the examination discoveries supported that favorable to ecological practices contribute emphatically to building environmental execution. The momentum research by gathering information from representatives working in textile firms of Lahore, Pakistan logical discoveries upheld the theories. In this way, the investigation filled a gap in the current writing by assessing the intervening job of green human resource management and supply chain environmental cooperation between the connection of IGSCP AND SP(Saeed, Majed, Khan, & Mallika, 2019)

Consequently, the investigation perceived that representatives assume a crucial part in the environmental exhibition while showing favorable natural conduct by utilizing green human resource rehearses and perceive corporate natural technique with a focal aim to advance overall sustainable performance.

5.2Theoretical Contributions

As examined above, feasible execution has become a huge exploration zone because of the consistently expanding worry to ensure the climate. Despite the exploration directed in this area, there is a need for additional examination. . Thus this examination is in augmentation by adding the intervention of green human asset. This investigation adds to the current collection of writing through the consolidation of inventory network natural collaboration as a middle person between inside green production networks rehearses and reasonable execution to fill the information hole featured in before examines.

In the area of sustainable performance, there is a gap while exploring the link between as how green activities can increase the performance of the firm and what is the link between internal supply chain practices and supply chai cooperation with customers and suppliers. Ongoing research clears the link between green activities and performance .in previous research there is a gap while exploring the connection and effect of supply chain practices and green human resource management and sustainable performance.

5.3 Practical implication

The examination gives a strong base to directors to bring green practices into their creation network as techniques for achieving market and financial targets. The discovering urges firms to accept IGSCP, for instance, cleaner creation to reliably grow the green capability of cycles, limit perils to individuals and the environment, and improve things and organizations, provoking an improvement in FP. The examination urges firms to deliberately realize IGSCP, GHRM, and SCEC, to energize their passageway into the worldwide market, essentially, in cutting-edge countries.

This grants firms to show their resources toward advantageous undertakings provoking improved FP. The examination urges firms to deliberately complete IGSCP, GHRM, and SCEC, to support their passage into the worldwide market, essentially, in cutting-edge countries. This licenses firms to show their resources toward helpful undertakings inciting improved FP.

From a functional perspective, this examination gives thought of good feasible execution in material firms by depicting their concerned individual to connect natural related exercises with HRM; SCM rehearses second the investigation's results treats as a course for administrators to place more assets in Green HRM, in term of preparing as activities to improve worker information about strategies. 3th, as per study conceivable is to give certain enhancements in the staffs preparing in material firms.

The result assists directors who chase for the development of practical execution. The study urges chiefs to appreciate the meaning of green practices in this pandemic and to perceive how green creation network practices and green human asset heads practice affect acceptable execution.

5.4Limitations and Future Research Directions

Even though the ebb and flow research study has accomplished its targets there are sure restrictions related to it. Right off the bat, the information was gathered from material firms situated in Lahore, Pakistan exclusively by utilizing a purposive inspecting strategy. So future exploration could be directed by gathering information from various firms and areas of Lahore who follow the green practices to get increment supportable execution, Secondly, there could be an issue of CMV; as self-detailed study surveys were utilized to gather information through a solitary wellspring of the information

At long last, this exploration study inspected green human asset and store network natural participation as an intervening variable on the connection between interior green inventory network practice and feasible execution. Therefore, the author calls for future researches to explore the moderating influence and to study this model on other firms or in other cities also. Research indicates also to check more mediating effects of variables

5.5 Conclusion

This examination study reasons that the GHRM and supply network ecological participation procedure pivots as a significant interceding variable to increment supportable execution with regards to material firms of Pakistan to enlarge generally practical execution. The investigation minutely inspected how GHRM and inner green supply network rehearses and ecological participation can assist the firm with expanding economical execution. Besides, the outcomes

shed light on the exact significance of the corporate level ecological system to inspire representatives for the making of ecofriendly work environment prompting advancing in general manageable execution. At long last, to inspire the far-reaching advantages of green ecological practices requested by the association's investigation uncovered the intervening impact upgraded natural execution, social execution, and financial execution of firm.

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Appendix A

Being student of Superior University Lahore, I am conducting a survey on ***"Impact of internal green supply chain practices on sustainable performance"***. You are kindly requested to respond to the following statements. Your responses are of great importance as this survey forms a part of academic research study. We therefore value your cooperation very highly. The survey comprise of different kind of questions. There is no right and wrong answer to the question. We are only interested in your personal opinions. Your responses will be treated in strict confidence and will only be used for research purposes. Thanking you in advance

SECTION – I

Gender **1.** Male **2.** Female

Age Group (In Years) **1.** Up to 25 **2.** 26-45 **3.** 46-55 **4.** 55+
Education **1.** Bachelor **2.** Master **3.** PHD **4.** Other ----------
Nature of Employment **1**. Contract **2**. Permanent
Length of Service (In Yrs.) **1.** Up to 1 **2.** 2-5 **3.** 5-10 **4.** 10+

SECTION – II

Strongly Agree = 5; Agree = 4; Neutral = 3; Disagree = 2; Strongly Disagree = 1

	Items	SD	D	N	A	SA
Sustainable performance						
1	Our firm focus on how to lower discharge of noxious chemicals into the air and water					
2	Our firm focus on how to Lesser waste and recycling of materials during the manufacturing process					
3	Our firm focus on how to Increase the usage of renewable energy and sustainable fuels					
4	Our firm focus on how to do enhancement in the company's environmental state					
5	Our firm focus on how to do reduction in the frequency of environmental mishaps					
6	Our firm focus on how to do reduction in cost of acquiring materials					
7	Our firm focus on how to do reduction in cost of energy utilization					
8	Our firm focus on how to do reduction in fee for treatment and discharge of waste					
9	Our firm focus on how to reduction in penalty for environmental mishaps					
10	Our firm focus on how to increase average return on sales and investment over the past two years					
11	Our firm checks average profit and profit growth over the past two years					
12	Our firm checks average growth in market share over the past two years					
13	Our firm gives employees' health and safety					
14	Our firm focus on Improving community health and safety					
15	Our firm focus on development of economic activities					
16	Our firm is providing inducements to engage local employment					
17	Our firm focus on lowering the adverse impact of products and processes on the local community					
GHRM						
1	Our firm is provide training programs on environmental management for our employees					
2	Our firm provides organize environmental education activities for our employees					

3 Our firm Promote employee participation for green development
4 Our employees introduce environmental issues to customers
5 Our firm focus on purchasing personnel introduce environmental issues to suppliers
6 Our firm focus on purchasing personnel receive training regarding the purchase of environmentally friendly products

environmental cooperation

1 Our firm cooperate with supplier to reduce packaging waste
2 Our firm require suppliers to use environmental packaging (degradable and non-hazardous
3 Our firm focus on developing a mutual understanding of responsibilities regarding environmental performance with suppliers
4 Our firm focus on conducting joint planning with suppliers to anticipate and resolve environmental-related problems
5 Our firm is making joint decisions with supplies about ways to reduce overall environmental impact of our products
6 Focus of our firm is cooperation with customers for eco-design
7 Focus of our firm is achieving environmental goals collectively with customers
8 Focus of our firm is on developing a mutual understanding of responsibilities regarding environmental performance with customers
9 Our firm focus on working together with customers to reduce environmental impact of our activities
10 Our firm is making joint decisions with customers about ways to reduce overall environmental impact of our products

Green purchasing

1 Our firm focus on providing design specification to suppliers that include environmental requirements for purchased items
2 Our firm cooperation with suppliers for environmental objectives
3 Our firm have Environmental audit for suppliers' internal management
4 Our firm have Suppliers' ISO14001 certification
5 Our firm focus on Second-tier supplier environmentally friendly practice evaluation
6 Our Suppliers are selected using environmental criteria
7 Our firm focus on Eco-labeling of products

Customer green cooperation

1 Our firm is providing design specification which conform to environmental requirements to customers
2 Our firm cooperate with customers for environmental objectives
3 Our firm cooperate with customers for eco design
4 Our firm cooperation with customers for cleaner production
5 Our firm cooperation with customers for green packaging
6 Our firm cooperation with customers for using less energy during product transportation
7 Our firm Cooperate with customers for product take back