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Research Article

Impact of Green supply chain management practices and environmental management system on corporate performances and the moderating role of institutional pressures

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ABSTRACT

Natural resource depletion and global warming alter the way businesses operate. The cycle of manufacturing and distribution has altered. Many nations have adopted carbon taxation and launched the "Go Green" idea. However, additional study on green supply chain management (GSCM) with an emphasis on environmental management systems (EMS), corporate performance (CP), and green supply chain management practices (GSCMP) was required. The purpose of this research was to assess the influence of green supply chain practices and environmental management systems on company performance and green supply chain management. This study is quantitative in nature. The executive and managerial staff of the textile sector is the key respondent to this research. Data was gathered from 553 respondents. The analysis software SPSS and PLS-SEM were used. The majority of hypotheses were supported by the findings. The findings show that GSCMP has a positive effect on CP and EMS has a positive effect on GSCM. This research assists managers in determining how to increase environmental competence in order to benefit the environment. This study fills a gap in the current literature by focusing on the implementation of EMS, which has received little attention.

Keywords: *Green Supply Chain Management; Corporate Performance; Environmental Performance; Environmental Management System*

1. INTRODUCTION

Global warming and changed biodiversity endanger the world's sustainability. Scientists, researchers, academics, practitioners, and others from many fields provided guidance on how to safeguard and improve environmental sustainability (Tseng, Islam et al. 2019). Factory irresponsible and unplanned operations are frequently cited as possible challenges to sustainability (Salaiz, Chiu et al. 2021). Peer groups are attempting to build long-term viability. Furthermore, corporations are worried about the external environment and are shifting their ambitions toward a "going green" mission (Bansal and Roth 2000, Scheepers 2021).

This green phrase is also known as "doing in accordance with environmental or ecological concerns." The management supply chain plays an essential role in operations and has a significant influence on the environment. It includes pollution, emission, and community health hazards, among other things. Environmental considerations are being integrated into enterprises' supply chains. The purpose is to reduce the environmental effect. Green supply chain management (GSCM) means integrating environmental considerations into supply chain management procedures (Li and Sarkis 2021). The GSCM has evolved into a significant academic subject with a particular role in sustainability. Researchers have been working on GSCM over the past two decades, and more work is still needed. Our main focus of research is based on GSCM.

Umar, Khan et al. (2021) performed research that comprised 218 Pakistani manufacturing enterprises that practiced GSCM. Among such industrial enterprises, a large number of textile mills using GSCM were founded. The textile sector is the largest manufacturing industry in Pakistan. Pakistan is Asia's 8th largest exporter of textile products. 45% of the country's workforce is employed in the Textile Sector. Based on these facts, we are eager to work in Pakistan's textile sector.

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In addition to GSCM, we will talk about the environmental management system (EMS), which will be an independent variable in our work. EMS is a set of internal policies, plans, implementation measures, and evaluations that influence the overall business and its interactions with the environment (Coglianese and Nash 2010). The role of environmental management practice (EMP) as a moderator will be examined. EMP is the best practice for reducing a company's environmental effect and is integrated into internal value chain operations. These Includes green product design, procurement, manufacturing, packaging, and shipping (Klassen and McLaughlin 1996, Christmann 2000, Hart 2004; Irum et al. 2018). Institutional pressures including market, regulatory, and competitive pressures will act as a moderator variable. These institutional influences might have an impact on a company that is implementing GSCM activities (Zhu and Sarkis 2007).

Younis, Sundarakani et al. (2019) have researched GSCM practices and corporate performance practices. He researched in detail using a mixed-method approach. He identified some gaps and suggested assessing the link between EMS certification such as ISO14001 and GSCM. In our research context seeking guidance from other researchers like (Zhu and Sarkis 2007, Yu, Ramanathan et al. 2016, Bananuka, Bakalikwira et al. 2021). We will also further work on economic performance, green purchasing, and environmental performance along with other variables.

2. THEORETICAL CONTEXT AND HYPOTHESIS DEVELOPMENT

Supply chain research is progressively incorporating ideas, concepts, and approaches from other disciplines, as well as broadening its field of inquiry to include more management concerns and global contexts (Schoenherr 2009, Georgi, Darkow et al. 2013, Stank, Esper et al. 2019). The process of theory building in supply chains does not have to be limited to the classic deductive model; rather, understanding the theoretical dynamics might promote new analyses and enhance findings (Touboulic, Walker et al. 2015).

Recently, Ashforth, Harrison et al. (2008), Kauppi and Management (2013) proposed using Institutional Theory. The reason is to enhance understanding of occurrences in the Supply chain and provide significant management insights. As a result, several studies in the field have adopted this approach. Institutional Theory acts as the foundation for their analysis. According to the study, we may acquire a deeper knowledge of the function of cyclical phenomena and identify the evolution of the supply chain context using the institutional perspective.

2.1. GREEN SUPPLY CHAIN MANAGEMENT AND ENVIRONMENTAL MANAGEMENT SYSTEM:

We use previous related and relevant research to frame the research hypotheses based on the literature review. An environmental management system (EMS) is defined as "a formal method of defining goals, making decisions, obtaining information, monitoring progress, and improving performance" in terms of resource consumption, throughput, and emissions (Zhu and Sarkis 2007)**.** EMS assists businesses in establishing "formalized organizations, procedures, and processes" committed to decreasing environmental consequences (Taşdemir and Research 2022). EMS is mainly uncontrolled (Reyes□Rodríguez, Ulhøi et al. 2022). EMS certification can be costly, yet organizations seek it willingly. EMS is less reliant on the will of EMPs and technology (Taşdemir and Research 2022)**.** Firms with the same EMS certification may use diverse EMPs and associated technologies (Flowers, Matisoff et al. 2020).

Darnall, Jolley et al. (2008) found that those companies who had started practicing EMS implemented GSCM by the frequency of 13-22% than those who had not considered EMS. At this point, they were not likely to calculate the cost of wastages in their supply chain. Those companies who had completed the EMS process showed much stronger results of GSCM between 7-29% than those who had not implemented. While Younis, Sundarakani et al. (2019) suggest future directions to work on EMS and GSCM.

H1: There is a positive relationship between the implementation of EMS certification and GSCM.

2.2. Environmental management system, Environmental management practices, and Environmental performance

EMPs are technologies that may be included in the internal value chain. Green item structure, procurement, production, logistics, and packaging to reduce an organization's environmental impact (Reyes□Rodríguez, Ulhøi et al. 2022). Various organisations may face varying market demands and constraints on available resources and technology. They will most likely use a portfolio approach to environmental management (Nguyen, Adomako et al. 2022). This indicates that strategic choices must be developed. Wong, Wong et al. (2020) studied 395 organizations and discovered a substantial relationship between EMS and EMP, as well as between EMP and environmental performance (EP).

They also distinguish business features and come to the conclusion that large enterprises have greater annual revenues of more than US$20 million. The majority of significant companies have formalized EMS certification and are either state-controlled or cooperatively owned. Prajogo, Tang et al. (2014) investigated the impact of EMS on EMP and discovered a strong link. While Yu, Ramanathan et al. (2016) conducted a study of 3000 manufacturing enterprises in the UK and discovered that EMP had a mediation influence on EP.

H2: There is a positive relationship between the implementation of EMS certification and EMP.

H3: EMP mediates the relationship between the implementation of EMS certification and environmental performance.

2.3. Eco design, Economics performance, Operational performance, and Environmental performance

The management supply chain is an essential aspect of operations with influence on the environment. It includes pollution, emissions, and community health hazards, among other things. Organizations are incorporating environmental considerations into their supply chains to minimize the environmental effect. Green supply chain management (GSCM) refers to the practice of integrating environmental considerations into supply chain management procedures (Sarkis 2012). The GSCM has evolved into a prominent academic subject with a particular role in sustainability. Researchers have been working on GSCM for the previous two decades and still need to do more. Green supply chain techniques include the use of ED, GP, and RL. Younis, Sundarakani et al. (2019) used the mixing method in their research and discovered a favorable association between ED and EP, ED and OP, and ED and ENP.

H4: There is a positive and significant relationship between ED and EP.

H5: There is a positive and significant relationship between ED and OP.

H6: There is a positive and significant relationship between ED and ENP.

2.4. Green purchasing, Environmental performance, Operational performance, and Economics performance

Green purchasing is concerned with working with suppliers to create environmentally sustainable products. Sharma, Saha et al. (2020) Environmental performance refers to a manufacturing plant's capacity to minimise air emissions, effluent waste, and solid waste, as well as the consumption of hazardous and toxic chemicals (Rehman, Kraus et al. 2021). As discussed above that these variables are part of GSCM practices. Green, Zelbst et al. (2012) researched in the United States and discovered 159 businesses that claimed GP had a substantial association with ENP, OP, and EP.

H7: There is a positive and significant relationship between GP and EP.

H8: There is a positive and significant relationship between GP and OP.

H9: There is a positive and significant relationship between GP and ENP.

2.5. Reverse logistics, Environmental performance, Operational performance, and Economics performance

All processes involving the re-use of products and materials are referred to as reverse logistics. It is defined as the process of relocating commodities from their usual end destination with the goal of extracting value or disposing of them properly. Economic performance refers to a manufacturing plant's capacity to lower expenses related to acquired materials, energy consumption, waste treatment, waste disposal, and environmental penalties (Bilan, Hussain et al. 2020). The ability of a manufacturing facility to create and deliver items to consumers more efficiently is referred to as operational performance (Trattner, Hvam et al. 2019).

Many researchers have tried to see the relationship between RL with EP, OP, and ENP. These include Lee, Kim et al. (2012) who conducted a study of Korean enterprises and discovered a favorable relationship between these variables.

H10: There is a positive and significant relationship between RL and EP.

H11: There is a positive and significant relationship between RL and OP.

H12: There is a positive and significant relationship between RL and ENP.

2.6. Green purchasing, Economics performance, and Institutional pressures

Hoffman and Ventresca (1999) examine institutional pressures like regulatory, market, and competitive pressures as moderators. So here Zhu and Sarkis (2007) took environmental practices as a moderator and their performance both non-market and market pressure but in varying ways. Environmental concerns are often viewed as negative externalities by regulators and activist organizations, and they may put pressure on firms to improve their environmental performance through the legal system and other mechanisms. Environmental concerns are addressed by market participants in order to enhance corporate performance and relationships.

Zhu and Sarkis (2007) conducted research to find moderation of institutional pressures on Green supply chain practices and performance by including heavy polluters and exporting goods manufacturers. Upon analysis, they found the moderation of institutional pressure between green purchasing and economic performance. Hence

H13: Institutional pressure moderates the relationship between green purchasing and economic performance.

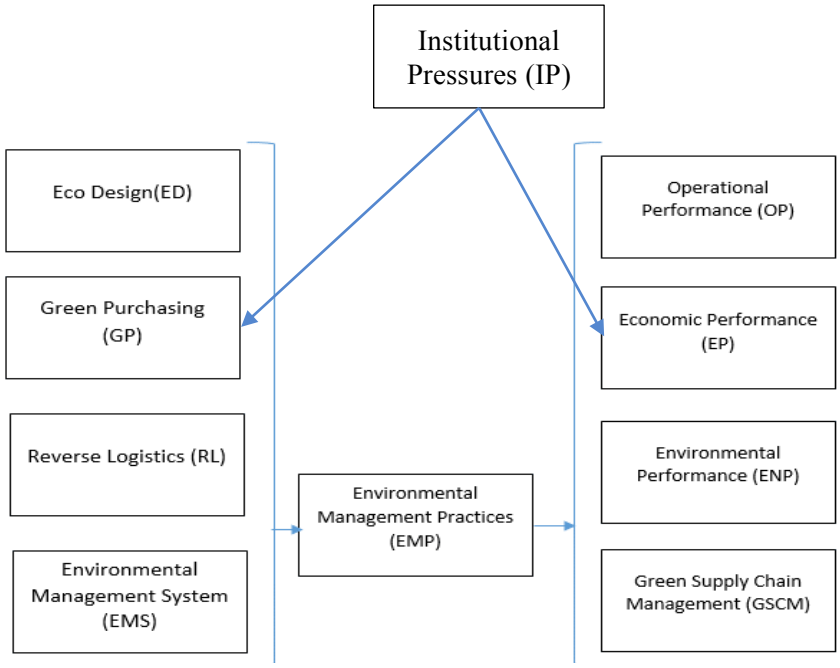

Fig. 1. Theoretical Framework

3. METHODS

3.1. SAMPLE AND DATA COLLECTION

This study selected textile companies from (Lahore, Faisalabad, Sheikhupura, and Gujranwala) Punjab, Pakistan for observing all our variables. The executive and managerial staff of the textile sector is the key respondent to this research. They consider this because they are able to provide answers to questions on these variables. Given a population of 60 textile companies, a sample size of 553 employees was appropriate. This practice enhances the generalizability of results and can improve validity (Hyman 1982)**.** The probability sampling technique was adopted and the Cluster sampling method is used (Wenzel 1994)**.** There are several small and large textile companies in Punjab, which were working on shifting their process and procedures on environmentally friendly systems using EMS, GSCM, and keeping in view economic and environmental performance measures. As the government of Pakistan has also started taking initiatives for environmental protection thus the institutional pressure has also a part to play. So in the current scenario collecting data from textile companies of Punjab provides a varied condition of economies of scale and environmental regulations to enhance the generalizability results.

The sample size for this study was determined by a table which was developed by (Krejcie, Morgan et al. 1970). Based on the technique of data collection used by different authors we adopt the questionnaire item multiplier method. The ever-increasing requirement for a representative statistical sample in empirical research has generated a need for an efficient technique of estimating sample size. Krejcie, Morgan et al. (1970) developed a table for estimating sample size for a given population for simple reference in order to fill a gap in the literature. Our questionnaire has 52 items multiplying by 10 results 520. Almost 600 questionnaires had been distributed out of which 553 responses were usable.

Data Collection is a very challenging task due to the Covid19 pandemic. For the collection of data senior and middle executives of the textile companies who were looking after environmental, supply chain, operations, and sustainability management were selected as samples. These executives were Coordinating in cross-functional matters to overview environmental impact in different production cycles. We use the emails and contact numbers of executives to send them the link of our online developed literature-based questionnaire and to explain to them the purpose of our study. We asked the executives to express their knowledge about GSCM and its practices. CEOs, COO's, functional managers overseeing environmental management, logistics, operations, and supply chain management were our main respondents.

3.2. QUESTIONNAIRE AND MEASURES

We use measurement scales by taking support from literature and we choose items that were used in previous studies to get reliable and valid measurements. 5-point Likert scale (1 = 'Strongly disagree', 5 = 'Strongly Agree') was used to ask respondents about their opinion. To measure GSCM 16 item scale Chiu and Hsieh (2016) was used, which measures the aftereffects of GSCM implementation. EMS was measured using 6 item scale (Wong, Wong et al. 2020). EMP and Environmental performance were measured using 8 items and 4 items scale (Yu, Ramanathan et al. 2016). 6 item scale of Green purchasing, 3 item scale of Eco-design, 6 items operational scale, and 5 item scale of economic performance, measure these variables. Green, Zelbst et al. (2012) the scale was used. Institutional pressure was measured using 6 item scale (Zhu and Sarkis 2007).

Aiming at self-reported data, Chang, Van Witteloostuijn et al. (2010), Nelson-Becker (2010) indicates many apparent troubles linked with self-report are exaggerated. Howbeit, realization regarding self-report limitations linked different solutions. Different ex-ante solutions are applied to questionnaire design. Firstly, respondents were guaranteed confidentiality and anonymity. Respondents were appealed to give their opinion honestly**.** Secondly different scale formats and endpoints to the criterion and predictor measures to lessen the risk of biases caused by frequent use in scale endpoints and anchor effects (Podsakoff, MacKenzie et al. 2003). Thirdly scale reordering was used to reduce artifact consistency effects (Sprangers, Schwartz et al. 1999). Lastly, the questionnaire does not have any vague, ambiguous, and unfamiliar terms like individual items and was made concisely (Lindell and Whitney 2001).

4. FINDINGS

This study used PLS-SEM for data analysis. Structural equation modeling (SEM) and measurement model assessment (MMA) was used to analyze the theoretical framework, construct validity was validated by using confirmatory factor analysis (Bollen and research 1989)**.**

4.1. MEASUREMENT MODEL ASSESSMENT

Table 1. Convergent Validity

Constructs	**Items**	**Loadings**	**CR**	**AVE**
Environmental management performance	EMP1	0.809	0.935	0.647
	EMP2	0.805		
	EMP3	0.737		
	EMP4	0.898		
	EMP5	0.908		
	EMP6	0.819		
	EMP7	0.834		
	EMP8	0.578		
Environmental management system	EMS1	0.888	0.907	0.625
	EMS2	0.878		
	EMS3	0.853		
	EMS4	0.55		
	EMS5	0.748		
	EMS6	0.774		
Environmental Performance	ENP1	0.828	0.947	0.783
	ENP2	0.879		
	ENP3	0.904		
	ENP4	0.908		
Green Supply chain management	GSCM14	0.588	0.902	0.516
	GSCM15	0.695		
	GSCM16	0.852		
	GSCM17	0.361		
	GSCM5	0.737		
	GSCM6	0.853		
	GSCM7	0.754		
	GSCM8	0.782		
	GSCM9	0.71		
Green purchasing	GP1	0.489	0.874	0.543
	GP2	0.687		
	GP3	0.822		
	GP4	0.799		
	GP5	0.713		
	GP6	0.853		
Economic performance	EP1	0.884	0.947	0.783
	EP2	0.744		
	EP3	0.922		
	EP4	0.94		
	EP5	0.92		
Operational performance	OP1	0.898	0.939	0.688
	OP2	0.818		
	OP3	0.795		
	OP4	0.908		
	OP5	0.735		
	OP6	0.853		
	OP7	0.785		
Reverse logistics	RL1	0.952		
	RL2	0.977		
	RL3	0.936		
Eco-design	ED1	0.862	0.923	0.8
	ED2	0.924		
	ED3	0.897		

Table 1 shows the convergent validity of the constructs which elaborates the factor loadings, composite reliability (CR), and average variance extracted (AVE). The validity of the constructs will be convergent when

items load highly (>0.50) on their variables (Hair, Ringle et al. 2011), and the result reveals that the values of the factor loadings were greater than 0.50. The convergent validity of the constructs was measured by using the average variance extracted and the composite reliability. The values of the AVE for all of the constructs were above 0.50, and the composite reliability was greater than 0.8, indicating that the convergent validity of the entire construct had been established. To get more accurate and valid results we have removed some items of GSCM, whose factor loadings are less than 0.50. in this case GSCM item 1,2,3,4,10,11,12 and 13 were removed.

Table 2. Discriminant Validity (HTMT Ratio)

	ED	EMP	EMS	ENP	EP	GP	GSCM	IP	OP	RL
ED										
EMP	0.974									
EMS	0.62	0.75								
ENP	0.515	0.602	0.771							
EP	0.564	0.799	0.789	0.448						
GP	0.508	0.689	0.824	0.562	0.893					
GSCM	0.464	0.564	0.647	0.56	0.599	0.68				
IP	0.438	0.337	0.56	0.449	0.274	0.39	0.533			
OP	0.751	1.012	0.786	0.556	0.939	0.767	0.624	0.266		
RL	0.475	0.713	0.725	0.433	1.014	0.889	0.49	0.234	0.82	

Table 2 shows the HTMT ratio, which is a strong approach to measure discriminant validity. (Kline, 2005) defined that the HTMT ratio should be less than 0.85 to find the discriminant validity, all of the ratio values were greater except that of EMP with ED, OP with EMP, OP with EP, and RL with EP and GP that was the evidence of the discriminant validity. Figure 2 Shows Measurement Model Assessment.

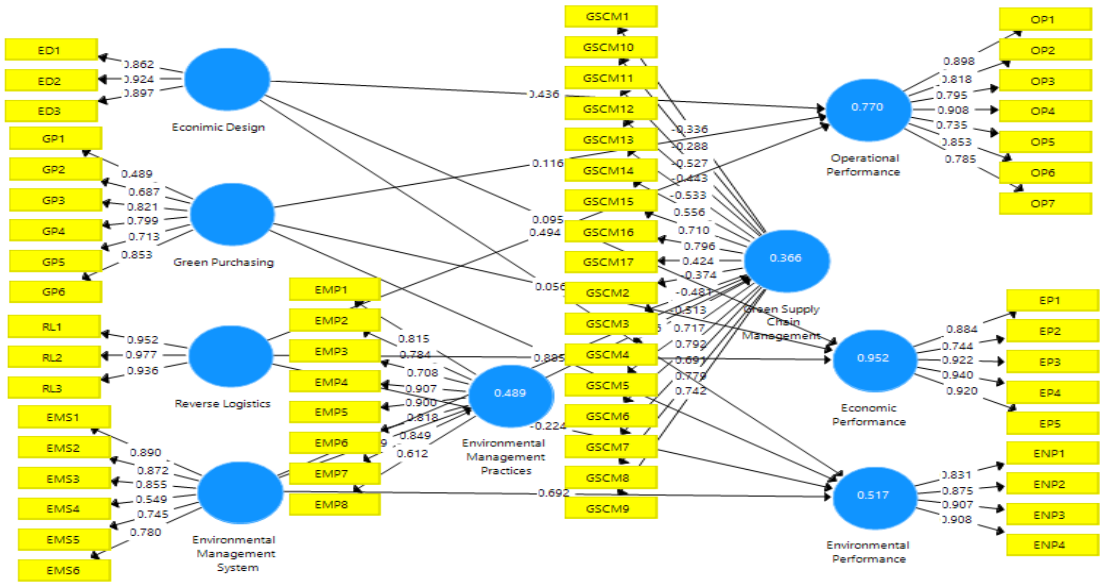

Fig. 2. Measurment Model Assessment

4.2. STRUCTUAL MODEL ASSESSMENT

Table 3. Path Analysis

	Relationships	Std. beta	Std. Error	t-Value	R^2	Decision
H1	EMS -> GSCM	0.617	0.043	14.492	0	Supported
H2	EMS -> EMP	0.703	0.033	21.433	0	Supported
H4	ED -> EP	0.107	0.021	5.161	0	Supported
H5	ED -> OP	0.436	0.032	13.608	0	Supported
H6	ED -> ENP	-0.212	0.102	2.079	0.019	Not Supported
H7	GP -> EP	0.071	0.019	3.756	0	Supported
H8	GP -> OP	0.116	0.051	2.254	0.012	Not Supported
H9	GP -> ENP	0.388	0.114	3.419	0	Supported

H10	RL -> EP	0.879	0.02	43.334	0	Supported
H11	RL -> OP	0.494	0.054	9.157	0	Supported
H12	RL -> ENP	-0.298	0.121	2.469	0.007	Not Supported

Table 4. Indirect Effects

	Relationships	Std. beta	Std. Error	t-Value	R^2	Decision
H3	EMS -> EMP -> ENP	0.509	0.107	4.775	0	Supported
H13	Moderating Effect 1 -> EP	-0.043	0.011	4.095	0	Supported

Relationship effects within the constructs could be understood by using SEM PLS structural model analysis (Bollen and research 1989)**.** The study used a bootstrapping procedure to find out the significance of the path coefficients. Table 3 shows direct relationships and table 4 shows indirect effects. The results identified that EMS was positively and significantly related to GSCM (β = 0.617, *EMS->GSCM t* = 14.492) and supported H1. Moreover, there was a positive relationship between EMS and EMP (β = 0.703, t = 21.443) and supported H2. There was a positive and significant relationship between ED>EP, ED>OP (β = 0.107 and 0.436, t = 5.161 and 13.608) and supported H4 and H5 while no significant relationship was found between ED>ENP (β = 0-0.212, t = 2.079) and not supported H6. GP shows a positive and significant relationship with EP and ENP (β = 0.071 and 0388, t = 3.756 and 3.419) and supported H7 and H9 as no significant relationship was found between GP>OP (β = 0.116, t = 2.254) and not supported H8. The relationship between RL and EP and RL with OP is positive and significant (β = 0.879 and 0.494, t = 43.334 and 9.157) and supports H10 and H11 while no significant relation between RL and ENP was found (β = -0.298, t = 2.469) and not supported H12. Additionally, the findings also divulged that EMP mediates positively between EMS and ENP (β = 0.509, *t* = 4775) and supported H3. Meanwhile, there was a negative moderation role of IP between GP and EP (β = -0.043, *t* = 4.095) and supported H13. Figure 3 Shows Structural Model Assessment.

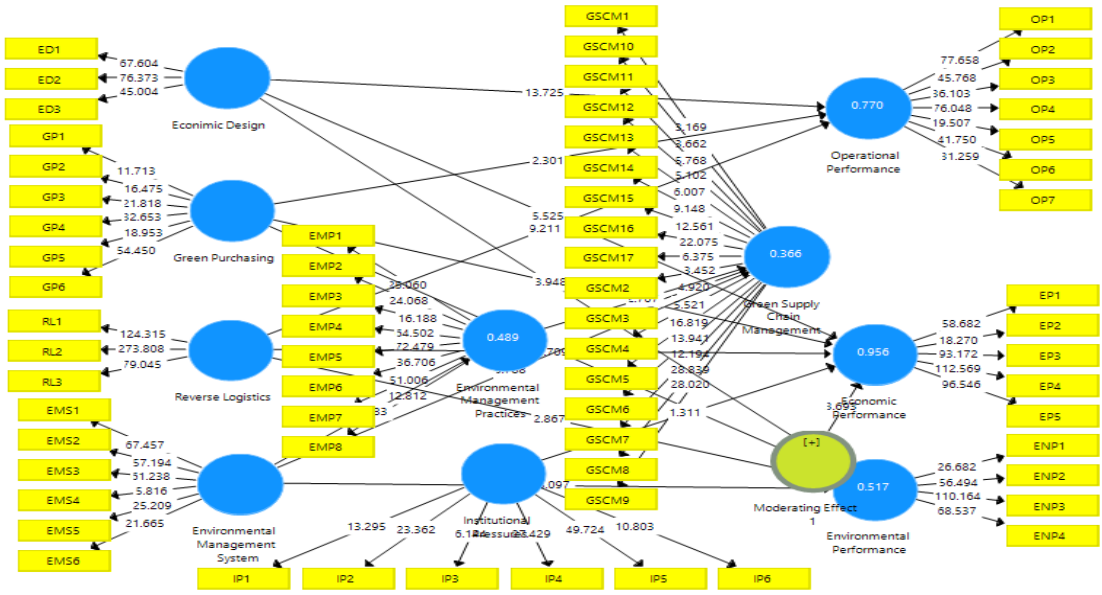

Fig. 3. Structural Model Assessment

5. DISCUSSION

The analysis shows that the implementation of EMS certification has a strong impact on the adaption of GSCM in the textile industry of Punjab Pakistan which is more than 61%. The majority of people disagreed that the implementation of GSCM has increased total, distribution, manufacturing, and inventory costs. They also disagreed that due to GSCM customer response time, customer complaints, manufacturing lead time, and shipping errors did not increase. While many people agreed that GSCM cause return on investment, revenue, on-time deliveries has increased. Also, change in output levels, planned delivery dates, product variety, new product development is increased. Taking EMS into discussion our respondents gave us a green signal that EMS

integrates environmental responsibility and environmental criteria into resource management decisions. It includes environmental criteria in commercial decisions. EMS is based on a lifecycle approach and is supported by an integrated information system. Our study is aligned with Younis, Sundarakani et al. (2019) as they surveyed in UAE and found that many companies they surveyed are EMS certified and the rest were willing to adopt EMS certification which leads towards GSCM. Our studies also aligned with Melnyk, Sroufe et al. (2003) find a positive relationship between EMS certification and performance improvement.

Taking EMP into discussion the analysis shows that the implementation of EMS impacts almost 70% of EMP. Most people agree that their companies encourage new ideas for environment conservation and have won awards from the government and other bodies for environment protection. Strategic decisions are made after considering environmental criteria while a strategic alliance has been established to improve environmental performance. People also agree that their companies look for the availability of energy-efficient technologies and try to integrate environmental considerations while considering the recycling process and we're hoping to collaborate with a professional body for knowledge enhancement. This study is aligned with Wong, Wong et al. (2020) who confirms the positive and significant relationship between EMS certification and EMP. Prajogo, Tang et al. (2014) also, find a significant relationship between said constructs.

ED impacts almost 10% on EP and 43% on OP. most people agree with the statement that Eco design causes the product design for less consumption of material. It causes the product design for reuse, recycles, and recovery of material and it causes avoid or reduce the use of dangerous products in their manufacturing process. RL impacts 87% on EP and 49% on OP. People agree that reverse logistics program examinations are based on written standards. Accountability and duties for reverse logistics are written in procedures and policies. GP impacts 7% on EP, 11% on OP and 38% on ENP. Most people agree that green labeling of products became economical and the company has cooperated with suppliers for environmental objectives.

Talking about the mediation effect of EMP between EMS certification and ENP the analysis is significant between these constructs. People agree that their companies achieved environmental-related certification and have achieved targets on wastage reduction and recycling. The company has saved an ample amount of money due to environmental-friendly practices and overall economic performance over five years has improved. This study is aligned with (Yu, Ramanathan et al. 2016, Bananuka, Bakalikwira et al. 2021) who found mediating effect between the above said constructs.

Analysis of moderation to see the effect of IP between GP and EP found significance between these constructs. People agree that EP causes a decrease in energy cost, material purchasing, waste discharge, waste treatment, and decrease violations for environmental accidents. People also agree that through GP product labeling became economical and the company has cooperated with suppliers for environmental objectives. The company chooses suppliers having ISO certification and has completed an environmental audit for supplier internal management. This study is aligned with Li and Sarkis (2021), Zhu and Sarkis (2007) who found moderating effects between these variables.

5.1. Theoretical and Practical Implications

A major part of Ems in the research body has addressed the motivation, adaption, installation, and performance implications but a very small group of researchers investigated from the cross-functional perspective. This research assists managers in determining how to increase environmental competence in order to benefit the environment. As per our findings, the implementation of EMS in the organization shows a significant favorable effect on GSCM. The results polish the previous studies of (Darnall, Jolley et al. 2008, Younis, Sundarakani et al. 2019) which highlighted the importance of EMS implementation. In this study implementation of EMS certification is reviewed in a cross-functional situation which not only results in the certification but drives the key EMP's. This improvement is a tangible procedure that EMS is not just to attain certificate but is deeply embedded into an organizational routine. As the process of EMS implementation gets faster it strong the EMP and GSCM as the overall organizational Culture is feasible towards environmental protection issues.

5.2. LIMITATIONS AND FUTURE DIRECTIONS

One limitation of this study was that it focuses on textile firms only. The reason for choosing the textile industry was that they account for a part of the environmental impact. The study was also limited to the textile industry of Punjab Pakistan because the research by choice aims to gain an understanding of the behavior of firms towards environment protection.

Further research may include the different perspectives of corporate performance impact and the outcomes of the implementation of green practices. Further researchers may extend this study to other sectors in Pakistan to view the performance of other industries impacted by the implementation of EMS certification and how they address environmental issues.

6. CONCLUSION

Finally, the paper checks the impact of EMS certification on GSCM and EMP, mediating the relation of EMP between EMS and ENP and moderation relation of IP between GP and EP. It founds the significance between direct relationships while no significant relationship has been found in mediating and moderating constructs. Analysis shows that people agree that EMS certification has a positive impact and it can address environmental issues.

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