Alhamd Multidisciplinary Research Journal

ISSN 2789-5866

Stakeholders' Pressure on Implementation of Environmental Practices Empirical Evidences From Textile Sector of Sindh

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Paper ID: AMRJ-02

Volume 2 Issue 2

Keywords:
Environmental Corporate Social Responsibility; Stakeholder's pressure; Knowledge Management Process; Green Innovation; Environmental Strategy

Abstract

There has been growing debate about the effectiveness and implementation of environmental practices to endorse the notion of sustainable development. This study investigates the impact of Stakeholder's pressure (SP) on Environment Corporate Social Responsibility (ECSR), Green Innovation (GI) and Environmental Strategy (ES). This study further employs Knowledge Management Process (KMP) as a mediator to investigate the nexus among stakeholders' pressure ECSR, GI, ES and the KMP. Based on the 305 responses received from the large textile mills of Sindh Province of Pakistan, SEM approach was applied for data analysis. The study findings indicate that stake holders' pressure has significant positive impact on KMP, ECSR, GI and ES. Furthermore, KMP partly mediate the association among study variables. The study findings validate the notable influence of SP on ECSR, GI and ES to attain environmental protection results in textile sector of Sindh, Pakistan. The study findings offer valuable insights to practitioners, policy makers and regulatory authorities to enhance the interior resources like KMP, ECSR, GI and ES to boost ecological performance in emerging economies.

1. Introduction

A few years ago, textile industrialists, environmental legislators and academic researchers did not concern about the environment due to the assumptions that goods manufactured in textile industries did not influence environment significantly. The

environmental deprivation has become global concern due to the alarming situation that could pose serious threat to the environmental sustainability. Taken this into consideration, now day's textile industrialists, environmental legislators, and academic researchers are agreed that the reasons behind the environmental deprivation encompass change of climate, increasing air, water pollution, due to the usage of hazardous materials in their textile industries (Ma et al, 2020). Presently the business styles have been changed in world quickly due to the environment. It is not possible to run a successful business without implementing environmental practices. The present study emphases on what environmental experts examine environmental performance. Textile industries are major contributor of environmental degradation. The major cause of environmental pollution is wastage of textile industries. To response the global challenges, it is necessary to promote the environmental practices (Anwar et al., 2020; Centobelli et al. 2020).

The awareness about environment, growth of economy, and societal consistency are main issues, linking these all issues in one research are more important every day (Hernandez et al., 2020). Furthermore, ECSR impact has introduced the new trends to conduct the business by incorporating environmental, social, and economic policies and business policies (Hernandez et al., 2020). Dealing with the damaging outcome on environment due to the commercial activities is global problem, many stakeholders are increasing pressure on firms to protect environment. Mostly the less developed countries, SP plays an important role in controlling the environment degradation (Drazkiewicz et al., 2015). In sustainable development SP is the predecessor while facing vibrant circumstances of existing business environment (Del Giudice et al.,, 2019). To minimize the opposing influence and increase sustainability of the environment, firms increasingly recognize the importance of ECSR, GI, ES (Huang & Li, 2017). Primarily, 2018 was the hottest year and this extreme weather was attributed to the environment related issues. Stakeholders are pressurizing the firms to reduce the environmental pollution of industries production processes. (Yu et al.,, 2017). Because of the several ecological problems which have been stated, the industries need to focus on environment and nature preservation tasks. From the last few year industrialist and researchers are paying more attention to GI (Melay et al.., 2017; Vallaster et al.., 2019). The researchers are progressively changing their focus from overall planning to build the green human resource management practices (Singh et al.,, 2020) Green supply chain management (Wu and Kung, 2020) Green Bonds (Tolliver et al.,, 2020) and Green revolution (Singh et al.,, 2020; Zhang et al., 2020; Moin, Omar, Wei, Rasheed, & Hameed, 2021).

Furthermore, incorporating the environment to CSR to conduct the business in novel ways (Hernandez et al., 2020) and industrialists has to pay serious attention to ECSR (Xu et al.,, 2018). The SIF (Social Investment Forum 2014), reported that 160 nations and 8000 firms of the world, spend huge amount on CSR. This reflects an understanding that industrialist have to sell their product but it is also their responsibility to save environment (Hou, 2019). Currently, due to the increasing emphasis on environment, the notion of CSR has gained significant organizations. (Arrive et al., 2019). Conventionally, firms have focus on profit solely but now they are expected to equally focus on environmental issues too (Kraus et al., 2018). Furthermore, the research has shown that GI plays vibrant role to achieve ecological presentation (Chen, 2008, Zhou et al., 2019). ES is absolutely connected to economic performance (Walker et al., 2014). The eco-entrepreneurs' emphasis on the protection and prevention of environmental problems between industries and to produce environment friendly products (Melay and Kraus, 2012). Consequently, industries are facing pressure from stakeholders like employees, customers, government and NGO's about environmental problems (Pekovic and Vogt, 2020). Due to observing the immense increase in environmental calamities because of the human insensitiveness attitude towards environment. (Banyte et al., 2010), business firms are required to follow the ECSR. Corporations must incorporate environmental policies in their firms. These policies include promoting and encouraging the profits of ecological goods (Jansson, 2010; Pickett-Baker, 2008; Ramayah, Lee, & Mohamad, 2010).

The environmental sustainability is an important issue at global level but less attention is paid to this in developing countries like Pakistan. Although regulatory framework and institutional policies are being advised to take serious note of environmental concerns but the actual implementation and general awareness among the key stakeholders still lack empirical evidence. Textile sector is the backbone of the Pakistan's economy and it contributes large share in export and overall economic progress (Economic Survey 2021-22). Keeping in view the significance of environmental considerations, this study investigates the impact of Stakeholders' pressure (SP) on Environment Corporate Social Responsibility (ECSR), Green Innovation (GI) and Environmental Strategy (ES). Furthermore, the study employs Knowledge Management Process (KMP) as a mediator to investigate the nexus among stakeholders' pressure ECSR, GI, ES and the KMP.

The contribution of this study to the extant literature is extensive. First, this study offers theoretical insights based on the stakeholder theory in relation to environmental consideration in the textile sector of Pakistan. Second, this study empirically test the inclusive model based on relationship of multiple key variables such as GI, KMP, and ES which are generally ignore

in prior studies. Third, this study focuses on ECSR specifically, whereas, generally CSR is highlighted so the stand alone contribution of ECSR is overlooked. Fourth, the study offers empirical evidence concerning the implementation of various environmental protection practices in textile sector of Pakistan.

2. Background Literature and Hypotheses

2.1. Stakeholder Theory

Literature identified that SP is the main component of implementation of ecofriendly practices in firms (Lee et al., 2018). Experimental proof and the theory of stakeholders defined the SP and implementation of progressive ecofriendly policies are directly associated (Betts et al., 2015). SP increase stakeholders' knowledge about environmental problems and social responsibility (Reed et al., 2009). Moreover, the competitiveness of firm not merely depends on product, price and quality, but also on the innovation, environmental problems, and social responsibility (Sarkis et al., 2010). As the GI revolution came into manufacturing industries from end of the 20th century, managing the environmental problems are a complete business philosophy where all participants have to cooperate. Stakeholder's theory assumes that many SP influences the industries to implement diverse ecofriendly policies for ecological environmental preservation (Sarkis et al., 2011). Nowadays, the shareholders' perception about environmental problems has extended expressively and firms are beneath increasing environmental pressure from different stakeholders to develop plans, policies, and strategies that synchronized with the firms environmental goals (Yu & Ramanathan, 2015). Since this feature, stakeholders both external and internal force firms to reduce opposing effects and to make the most of positive ones (Sarkis et al., 2010). An explanatory concept observed by this theory that related to experiences to the implement the various environmental policies (Sarkis et al., 2011, 2010). The significant and positive relationships between SP and ecological policies of a firm would identified by previous researchers (Darnall et al., 2010).

2.2. Stake Holders' Pressure

The current research expresses the hypothetical model that plans to examine, at what extent SP will define the GI and ECSR and ES policies of firms in an awareness perception. Specifically, this research extends previous research works on ECSR, KMP and GI in many ways. First of all, the stakeholders' role is well defined in the literature of the management, though, very less attention has been given to SP to act assertively in firms to the implementation of ECSR, GI policies and ES. This research introduces the KMP as a new mediator hypothesis between the relationship of SP, ECSR, GI and ES, previously this is an unexplored research area (Weng and Huang, 2017). Finally, the KMP and GI is a combination of new capabilities

and strength of research and development, this research work contributes to the literature as well. Existing research also emphasized that different stakeholders ECSR events had to be strong influence on sustainable and GI (Shahzad et al., 2020a).

2.3. Stake Holders' Pressure on ECSR

ECSR is a conception, where firms communicate with stakeholders and incorporate ecological policies in their firms. The perception of ECSR developed from the conceptions of environmental management and Corporate Social Responsibility. ECSR is a vital and separate feature of Corporate Social Responsibility (Rahman & Post 2012). The impact of ECSR and competitiveness is a subject of attention for firms especially for green ecological performance (Chuang &Huang, 2018). The idea of ECSR initially developed from the theories of environmental management and Corporate Social Responsibility. ECSR is a component of Corporate Social Responsibility (Rahman and Post 2012). ECSR is also known as ecofriendly activities (Lyon and Maxwell 2008; Portney 2008). From the perception of business environmental awareness, enterprises take measures to reduce the natural environment destruction. These measures are clean and green production process, reduce the energy consumption (Bansal and Roth 2000). From the government policy side, however not affect firm's performance but reduce the use of resources, which include carbon dioxide emissions and energy waste.

H1. Stakeholders' pressure has significant and positive influence on Environment Corporate Social Responsibility

2.4. Stakeholders' pressure on GI

The theory of Stakeholder has recommended the effect of multi stakeholders might increase the organization's inspiration to pay full attention on anti-environmental tasks and boost them to apply eco-friendly policies which help to achieve GI (Zhang and Zhu, 2019). GI states that revolution in green technology which used to reduce the waste, global warming, water pollution, air pollution, and minimize the usage of petroleum, gas, or power energy. Currently world is facing one of the severe problem Global warming (Li et al., 2020). Organizations link the Green revolution with environmental management plan to encourage the ecological performance (Adegbile et al., 2017). Moreover, green product plus process development not merely reduces the harmful ecological effect of industry, also increases financial and social performance of organizations by the reduction of price and waste material (Weng et al., 2015). Additionally, the green technological revolution expressively expands export performance (Ferreir et al., 2020). Stated that technology transfers and innovation have minimum effect on environment. Though, studies stated above, not capable to evaluate that how ecological performance defines by GI. (Chiou et al., 2011). Now distinction, the

relationship between GI and performance of environment is inadequate and wants to study further. The following hypothesis is proposed.

H2. Stakeholders' pressure has significant and positive influence on Green Innovation.

2.5. Stakeholders' pressure on ES

Stakeholder's are progressively worried about, by which method firm's measure, observe and report the environmental problems (Bouma and Kamp-Roelands, 2000; Cormier et al., 2004; Henriques and Sadorsky, 1999; Milne, 1996; O'Dwyer et al., 2005). Stakeholders are observed to influence on the organization's ES. Previous study shows that stakeholders' have influence on organization's ES in one direction (Cormier et al., 2004, Kassinis and Vafeas, 2006, Roberts, 1992). Later, viewing the influence of different stakeholders in different manner in organization (Mitchell et al., 1997). The academics and experts emphasis on ES (Solovida and Latan 2017). Companies should initiate an ES to achieve environmental performance's benefits as compare to other companies which lack ES. Newly, academics have verified the main predictor of environmental protection and business processes is business strategy (Kong et al., 2020). Furthermore, research work has clearly define the positive ES increase economic performance of firm. (Walker et al., 2014, Brulhart et al., 2017). Moreover, a substantial number of ES observed the organization's performance (Quan et al., 2018). In distinction, managerial performance does not determine by ES (Rotzel et al., 2019). Though, the performance of companies and association between ES is not final so it wants to study more. Therefore, proposed the following hypothesis.

H3. Stakeholders' pressure has significant and positive influence on Environmental Strategies

2.6. Stakeholders' pressure on KMP

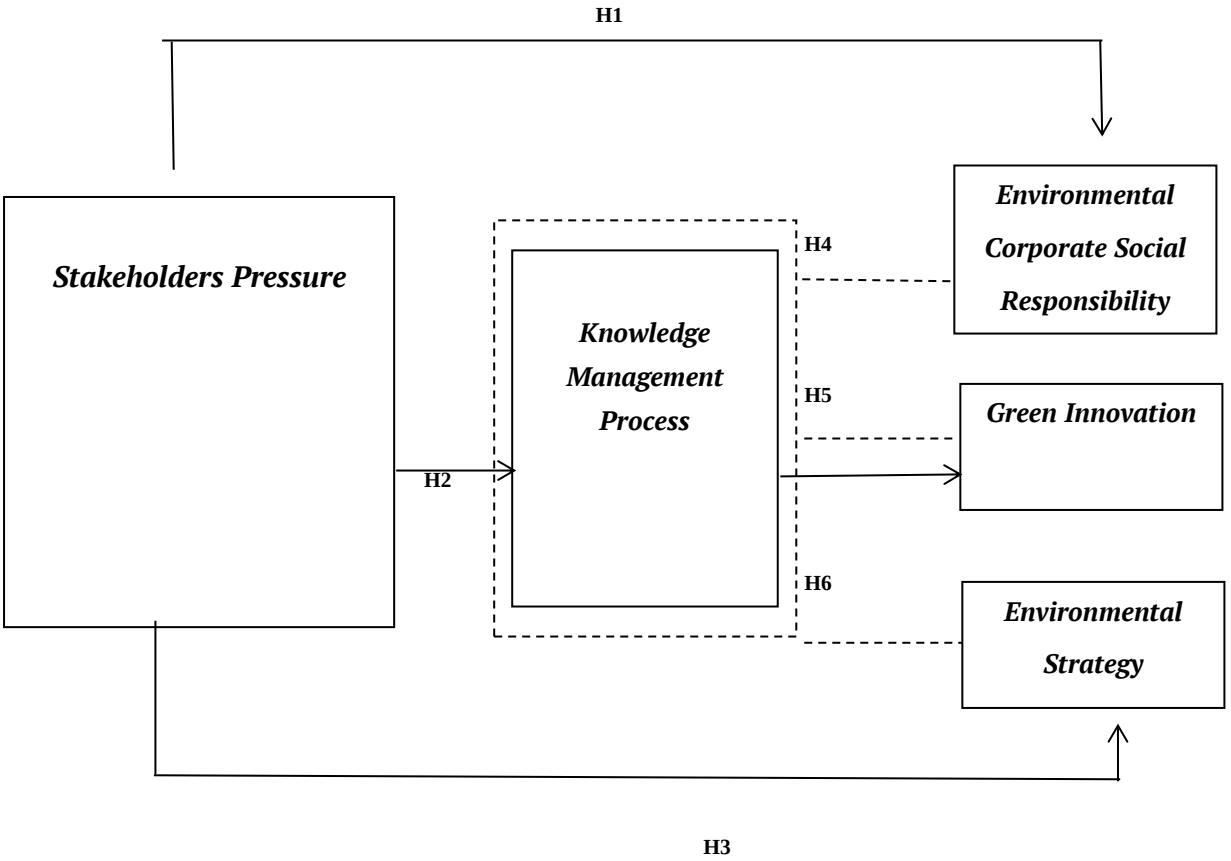
KMP is known as preplanned strategic action to use information that firms enclosed to enhance the performance and also offer services to the community. Furthermore, Knowledge Management is a process for gaining, distribution, and effective utilization of corporate knowledge resources. (Lim et al. 2017). An important component that allow a firm to answer the Stakeholders Pressure to include ecological preservation information (Cantor et al., 2014). Numerous firms consider knowledge is a source which support the firms toward getting the competitive advantage (Janz and Prasarnphanich, 2003). The esteemed knowledge is not giving benefit to firm directly, but the applied result gives benefits to firm that's why, organizations must funding the firm's knowledge management (Ayuso et al., 2011). "Knowledge is an intangible asset". (Lim et al., 2017), knowledge is basic reason for firms for competitive advantage. (Nonaka, I., & Takeuchi,1995).

Stakeholders influencing the firms to improve the knowledge management which revels deepened risk towards firms (Cantor et al., 2014). Stakeholders influencing the firms to

follow an environmental policies and integrate important and also recently developed knowledge in research and development to adopt the latest technologies and advance processes to reduce environmental decline (Albort-Morant et al., 2018). Present research studies which carried out in United States manufacturing industries show that stakeholders' pressure have positive impact on the knowledge management (Cantor et al., 2014). Furthermore, (Liao, 2018) identified, that institution's pressure has effect on Knowledge management as it is one of the basic plans and experiences for firms to increase performance of organization (Darroch, 2005). Companies should use previously learned knowledge to improve innovation and performance, (Kianto et al., 2017, Kuo et al., 2011). The above discussion reflects that the relationship between KMP, ECSR, GI, ES is well recognized; though, how stakeholder's pressure tells to ECSR, GI, and ES straight, and through KMP might carry out some remarkable facts. Therefore, the following hypotheses presented the straight and intermediating role of KMP.

H4. KMP mediating the association between Stakeholders' Pressure and ECSR

H5. KMP mediating the association between Stakeholders' Pressure and GI



3. Methods

This research applied quantitative research method and cross-sectional research design is used. The participants of this research were employees of textile mills of Sindh. Data were collected through the google survey form in the time period of 5th-03- 2022 to 14th -04- 2022 as

suggested by ; The google survey comprised of demographic details. Details about the textile mills were obtained from their official websites. Email with an official survey letter and survey link had been email to the HR managers of textile mills to share the google survey link with managerial level employees.

3.1. Participants

The target population of this study is manager level employees of textile manufacturing industries of Sindh. These textile mills are "ISO 9001, 14001" certified. These textile mills registered on the "Pakistan Stock Exchange (PSX),", "Securities and Exchange Commission of Pakistan" (SECP). Participants of present study comprised of employees especially junior, middle and senior level managers of textile mills of Sindh. Five-item Likert scale was used to measure the variables (Khan et al., 2019). The simple random sampling method used to collect data. The data collected from textile mills. The G* power 3.1.9.2 software used to examine the sample size. The minimum sample size is 43. The minimum 43 research participants of each textile company have to validate the research results (Faul et al., 2007). Overall 305 employees replied the online survey questionnaire form. The demographic detail of participants in Table 1.

3.2. Measures

The researcher survey contains five sections. The first section is SP second section KMP, third section ECSR, fourth section GI and fifth section ES. The Likert scale had been adopted from literature and contained five items.

Table 1. Participants' Demographics

Gender	Frequency	Percent
Male	209	68.5
Female	96	31.5
Total	305	100.0
Education		
Technical degree	3	1.0
Bachelor	156	51.1
Master or above	146	47.9
Total	305	100.0
Job Experience		
1-5 years	156	51.1
6-10 years	144	47.2
11-15 years	5	1.3
Above 15 years	0	.3
Total	305	100.0
Job Status		

Junior level	48	15.7
Senior level	142	46.6
Middle level	115	37.7
Total	305	100.0

3.3. Data Analysis

The percent and frequency of demographic details analyzed in SPSS 23. The partial least square (PLS-SEM) SMART PLS version 3.0 used to analyze the validity, reliability, significance and relevance of path coefficients (Ringle et al., 2015; Saleem, Rasheed, Malik, & Okumus, 2021). To examine the relationships between SP, KMP, ECSR, GI and ES. To ignore the damages in data analysis, the results of primary analysis reveals that there is no missing data. The online survey decreased incidence of missing values (Hair et al., 2017; Yousaf, Rasheed, Kaur, Islam, & Dhir, 2022).

4. Results

The key indicators represented in Figure 1 of the measurement model. Table 2 shows the outer loadings > 0.50. Therefore, this one founds the indicator reliability (Hair et al., 2017). The composite reliability (CR) values > 0.7. Therefore, this one shows internal consistency is reliable (Hair et al., 2006). The values of Average variance extracted (AVE) are > 0.5. Therefore, this one founds the convergent validity (Hair et al., 2006). Table 3 discriminant validity (Henseler et al., 2015).

Table 2. Outer loadings, composite reliability & average variance extracted

Construct	Items	Loadings	C A	CR	AVE
SP	SP1	0.725	0.924	0.933	0.541
	SP2	0.713			
	SP4	0.613			
	SP6	0.647			
	SP8	0.881			
	SP9	0.869			
	SP10	0.870			
	SP11	0.637			
	SP12	0.645			
	SP15	0.770			
	SP16	0.742			
	SP17	0.640			
KMP	KMP1	0.747	0.893	0.912	0.541
	KMP2	0.708			
	KMP3	0.528			
	KMP4	0.701			
	KMP5	0.802			
	KMP6	0.876			
	KMP7	0.587			
	KMP8	0.805			

	KMP9	0.800			
ECSR	ECSR1	0.630	0.812	0.878	0.646
	ECSR2	0.870			
	ECSR3	0.840			
	ECSR4	0.852			
GI	GI1	0.843	0.943	0.954	0.777
	GI2	0.797			
	GI3	0.918			
	GI4	0.907			
	GI5	0.949			
	GI6	0.867			
ES	ES1	0.783	0.882	0.906	0.532
	ES2	0.719			
	ES3	0.887			
	ES4	0.859			
	ES5	0.341			
	ES6	0.835			
	ES7	0.780			
	ES13	0.500			
	ES14	0.678			

Note: SP 3,5,7 & ES 8,9,10,11,12 due to low outer loadings these statements are removed (Source: Researcher)

Table 3. Fornell & Larcker, 1981 of Discriminant validity

	1	**2**	**3**	**4**	**5**
ECSR	**0.804**				
ES	0.784	**0.729**			
GI	0.534	0.684	**0.882**		
KMP	0.723	0.711	0.508	**0.736**	
SP	0.387	0.429	0.421	0.322	**0.736**

Table 4. HTMT RATIO of Discriminant validity

	1	**2**	**3**	**4**	**5**
ECSR					
ES	**0.845**				
GI	0.582	**0.724**			
KMP	0.803	0.694	**0.482**		
SP	0.415	0.480	0.426	**0.302**	

Table 5. Hypothesis testing results								
	Hypothesized Relationship	**Beta**	**Std Error**	**T Value**	**P Value**	**LCI (5%)**	**UCI (95%)**	**Accepted/ Rejected**
H1	SP→ ECSR	0.233	0.045	5.231	**0.000**	0.133	0.291	**Accepted**
H2	SP→ GI	0.164	0.038	4.307	**0.000**	0.086	0.206	**Accepted**
H3	SP→ ES	0.229	0.039	5.874	0.000	0.134	0.273	Accepted

Table 6. Mediating effect / specific indirect effect								
	Hypothesized Relationship	**Beta**	**Std Error**	**T Value**	**P Value**	**LCI (5%)**	**UCI (95%)**	**Full/Partial Mediation**
H4	SP→KMP→ECSR	0.233	0.045	5.231	**0.000**	0.133	0.291	**Partial Mediation**
H5	SP→ KMP→GI	0.164	0.038	4.307	**0.000**	0.086	0.206	**Partial Mediation**
H6	SP→ KMP→ES	0.229	0.039	5.874	**0.000**	0.134	0.273	**Partial Mediation**

Table 7. Effect size of a model.		
Effect size of a model.	**f^2**	**Effect Size**
SP→ ECSR	1.098	Large effect
SP→ GI	0.348	Large effect
SP→ ES	1.024	Large effect
SP→ KMP	0.116	Medium

Table 8. Predictive Relevance (Q^2)				
Endogenous Latent Variable	**SSO**	**SSE**	**Q^2 (=1-SSE/SSO)**	**Predictive Relevance**
ECSR	1220.000	833.070	0.317	Strong
ES	2745.000	2094.966	0.237	Moderate
GI	1830.000	1528.606	0.165	Moderate
KMP	2745.000	2623.120	0.044	Weak

5. Discussion

This research incorporates the theoretical framework that developed from stakeholder theory to analyze the associations between SP, KMP, ECSR, GI and ES, previously these were

less researched. This study, data collected from textile mills of Sindh, to analyze the hypotheses. The results reveal that SP strengthen ECSR, GI and ES policies to places focus on environmental considerations as highlighted in the stakeholder theory. Results show SP completely influences ECSR policies, accepting (H1) hypothesis. The findings are reliable with Ingenbleek and Dentoni (2016) and Yu and Choi (2016), our research partly supported the findings of Helmig et al. (2016). SP also has significant and positive influence on GI, accepting (H2) hypothesis. SP also has significant and positive influence on ES, accepting (H3) hypothesis. The results of this research linked with prior research work of Ayuso et al. (2011); Guoyou et al. (2013); Hall et al. (2018); Veronica et al. (2019). The findings prove that SP has a vital role in textile manufacturing industries to implement ECSR, GI and ES policies to protect the environment.

Firms that prioritized the stakeholders can enjoy the benefits of sustainable development for long term (Graham, 2017). The organizations that implement KMP are most probably focus to new procedures and innovative technologies, to enhance their performance in manufacturing industry. Marzucchi and Montresor (2017) as recommended the results, the eco-novelty can be recommend management of knowledge resources. The results show that KMP is vital part to raise ECSR, GI and ES in an emerging economy to get a variety of stakeholders. Furthermore, investigating the indirect association between SP, ECSR, GI and ES through KMP, the results show that KMP partially mediating the associations of SP to ECSR, GI, ES that supported the hypotheses fourth H4 fifth H5 and sixth H6. The meditating and significant role of KMP on ECSR, GI and ES stated that KMP offers employees various opportunities to cooperate and transfer knowledge between various stakeholders.

5.1. Conclusion

This study has achieved many results that considered as contribution to the knowledge. As stakeholder's involvement in firms ES may apply pressure on firms to implement green policies for ecological results. Previous literature and stakeholder theory, we developed frame work of this research and tested hypothesis through PLS-SEM. This research demonstrated that SP has direct effect on environmental performance. SP directly affect the ECSR, GI and ES significantly and positively. Finally, KMP significantly partially mediate between ECSR, GI and ES. Since stakeholders' participation in firm's ES and providing essential information, that might force to implement mutual and green policies for ecological results. We developed the framework of this research which based on the stakeholder theory. Used PLS-SEM to test hypothesis. These results demonstrate that the pressure from various stakeholders support firms to attain eco- environmental objectives.

5.2. Policy Implications

Government of Pakistan is determined to encourage and promote the green environmental policies to reduce the environmental decline effect Conversely, the government have to offer the tax exceptions and encouragements for use of natural resources and energy saving. This research recommends experts to fallow the advantages to increase competence and capability for dealing with unpredicted changes, firms must be capable to achieve, integrate and apply information into firm's processes. Earlier, the firms disagree with the significance of KMP to accomplish goals. The results of Shahzad et al. (2019) emphasized to increase firm's sustainability, not only investing in green technologies but external knowledge and its use is also important. Therefore, the senior managers and policy makers should offer additional efforts about workforce growth. KMP is an important process to improve ECSR and GI. More, the findings of this study are useful for growth of industries. Senior managers and policy makers should concentrate on ECSR, ES and GI to measure environmental performance.

5.3. Limitations and future directions

This study have some areas that need to be investigated in future. This research is limited to textile industries of Sindh; future researchers cover the other textile manufacturing industries of the other parts of the country. The findings got from other countries also compare with this research. This model should be tried in other business sectors as well.

Acknowledgement

The authors acknowledge that no funding was received for this research project.

6. References

Albort-Morant, G., Leal-Rodríguez, A.L., De Marchi, V., 2018. Absorptive capacity and relationship learning mechanisms as complementary drivers of green innovation performance. J. Knowl. Manag. 22, 432e452.

Anwar, N., Mahmood, N.H.N., Yusliza, M.Y., Ramayah, T., Faezah, J.N., Khalid, W., 2020. Green Human Resource Management for organisational citizenship behaviour towards the environment and environmental performance on a university campus. J. Clean. Prod. 256, 120401.

Ayuso, S., Rodríguez, M._A., García-Castro, R., Ari~no, M._A., 2011. Does stakeholder engagement promote sustainable innovation orientation? Ind. Manag. Data Syst. 111, 1399e1417.

Betts, T.K., Wiengarten, F., Tadisina, S.K., (2015). Exploring the impact of stakeholder pressure on environmental management strategies at the plant level: what does industry have to do with it? *J. Clean. Prod*. 92, 282e294.

Cohen, L., Manion, L., Morrison, K., 2013. Research Methods in Education. Routledge.

Darnall, N., Henriques, I., Sadorsky, P., 2010. Adopting proactive environmental strategy: the influence of stakeholders and firm size. J. Manag. Stud. 47, 1072e1094.

Del Giudice, M., Scuotto, V., Garcia-Perez, A., Messeni Petruzzelli, A., 2019. Shifting Wealth II in Chinese economy. The effect of the horizontal technology spillover for SMEs for international growth. Technol. Forecast. Soc. Change 145, 307e316.

Drazkiewicz, A., Challies, E., Newig, J., (2015). Public participation and local environmental planning: testing factors influencing decision quality and implementation in four case studies from Germany. *Land Use Pol*. 46, 211e222.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175–191. https:// doi.org/10.3758/BF03193146

Ganguly, A., Talukdar, A., Chatterjee, D., 2019. Evaluating the role of social capital, tacit knowledge sharing, knowledge quality and reciprocity in determining innovation capability of an organization. J. Knowl. Manag. 23, 1105e1135.

Gotz, O., Liehr-Gobbers, K., Krafft, M., 2010. Evaluation of Structural Equation Models Using the Partial Least Squares (PLS) Approach.Handbook of Partial Least Squares. Springer, pp. 691–711.

Graham, S., 2017. The influence of external and internal stakeholder pressures on the implementation of upstream environmental supply chain practices. Bus. Soc. 1e33.

Guoyou, Q., Saixing, Z., Chiming, T., Haitao, Y., Hailiang, Z., 2013. Stakeholders' influences on corporate green innovation strategy: a case study of manufacturing firms in China. Corp. Soc. Responsib. Environ. Manag. 20, 1e14.

Hair, J. F., Babin, B. J., & Krey, N. (2017). Covariance-based structural equation modeling in the journal of advertising: Review and recommendations. *Journal of Advertising*, *46*(1), 163– 177. https://doi.org/10.1080/ 00913367.2017.1281777

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. Vol. 6 Pearson Prentice Hall

Hall, J., Matos, S., Gold, S., Severino, L.S., 2018. The paradox of sustainable innovation: the 'Eroom' effect (Moore's law backwards). J. Clean. Prod. 172, 3487e3497.

Helmig, B., Spraul, K., Ingenhoff, D., 2016. Under positive pressure: how stakeholder pressure affects corporate social responsibility implementation. Bus. Soc. 55, 151e187.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). *The use of partial least squares path modeling in international marketing*. In New challenges to international marketing: Emerald Group Publishing Limited.

Hernandez, J.P.S.-I., Yanez-Araque, B., Moreno-Garcia, J., (2020). Moderating effect of firm size on the influence of corporate social responsibility in the economic performance of micro-, small-and medium-sized enterprises. *Technol. Forecast Soc. Change* 151, 119774

Huang, J.W., Li, Y.H., (2017). Green innovation and performance: the view of organizational capability and social reciprocity. *J. Bus. Ethics* 145, 309e324.

Kianto, A., S_aenz, J., Aramburu, N., 2017. Knowledge-based human resource management practices, intellectual capital and innovation. J. Bus. Res. 81, 11e20.

Khan, S.N., Hussain, R.I., Rehman, S.-u., Maqbool, Q., Engku, A.E.I., Numan, M., 2019. The mediating role of innovation between corporate governance and organizational performance: moderating role of innovative culture in Pakistan textile sector. Cogent Bus. Manag. (just-accepted), 1631018

Lee, J.W., Kim, Y.M., Kim, Y.E., (2018). Antecedents of adopting corporate environmental responsibility and green practices. *J. Bus. Ethics* 148, 397e409.

Lim, M.K., Tseng, M.L., Tan, K.H., Bui, T.D., 2017. Knowledge management in sustainable supply chain management: improving performance through an interpretive structural modelling approach. J. Clean. Prod. 162, 806e816.

Ma, X., Jiang, P., Jiang, Q., (2020). Research and application of association rule algorithm and an optimized grey model in carbon emissions forecasting. *Technol. Forecast. Soc. Change* 158, 120159.

Marzucchi, A., Montresor, S., 2017. Forms of knowledge and eco-innovation modes: evidence from Spanish manufacturing firms. Ecol. Econ. 131, 208e221.

Moin, M. F., Omar, M. K., Wei, F., Rasheed, M. I., & Hameed, Z. (2021). Green HRM and psychological safety: How transformational leadership drives follower's job satisfaction. Current issues in Tourism, 24(16), 2269-2277

Qiu, Y., Zhou, D., Liu, J., & Yuan, T. (2020). Mental wellness system for COVID-19. *Brain, Behavior, and Immunity*, *87*, 51–52. https://doi.org/10.1016/j.bbi. 2020.04.032Rajkumar

Qiu, L., Jie, X., Wang, Y., Zhao, M., 2020. Green product innovation, green dynamic capability, and competitive advantage: evidence from Chinese manufacturing enterprises. Corp. Soc. Responsib. Environ. Manag. 27 (1), 146–165.

Rasheed, M. I., Weng, Q., Umrani, W. A., & Moin, M. F. (2021). Abusive supervision and career adaptability: The role of self-efficacy and coworker support. Human Performance, 34(4), 239-256

Reed, M.S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., Prell, C., Quinn, C.H., Stringer, L.C., 2009. Who's in and why? A typology of stakeholder analysis methods for natural resource management. J. Environ. Manag. 90, 1933e1949.

Rehman, S.-u., Mohamed, R., Ayoup, H., 2019b. The mediating role of organizational capabilities between organizational performance and its determinants. J. Glob. Entrep. Res. 9 (1), 1–23.

Ringle, C. M., Wende, S., & Becker, J. M. (2015). *SmartPLS 3*. SmartPLS GmbH.

Saleem, S., Rasheed, M. I., Malik, M., & Okumus, F. (2021). Employee-fit and turnover intentions: The role of job engagement and psychological contract violation in the hospitality industry. Journal of Hospitality and Tourism Management, 49, 385-395

Sarkis, J., Zhu, Q., Lai, K.H., (2011). An organizational theoretic review of green supply chain management literature. *Int. J. Prod. Econ.* 130, 1e15.

Shahzad, M., Qu, Y., Javed, S., Zafar, A., Rehman, S., (2020a). Relation of environment sustainability to CSR and green innovation : a case of Pakistani manufacturing industry. *J. Clean. Prod.* 253, 119938

Shahzad, M., Qu, Y., Rehman, S., Zafar, A., Ding, X., Abbas, J., 2019. Impact of knowledge absorptive capacity on corporate sustainability with mediating role of CSR: analysis from the Asian context. J. Environ. Plann. Manag. 63, 148e174.

Solovida, G.T., Latan, H., (2017). Linking environmental strategy to environmental performance Sustain. *Account. Manag. Policy J.* 8 (5), 595–619.

Surroca, J., Tribo, J.A., Waddock, S., 2010. Corporate responsibility and financial performance: the role of intangible resources. Strateg. Manag. J. 31 (5), 463–490.

Veronica, S., Alexeis, G.P., Valentina, C., Elisa, G., 2019. Do stakeholder capabilities promote sustainable business innovation in small and medium-sized enterprises? Evidence from Italy. J. Bus. Res. 1e11.

Weng, H.-H.R., Chen, J.-S., Chen, P.-C., (2015). Effects of green innovation on environmental and corporate performance: a stakeholder perspective. *Sustainability* 7 (5), 4997–5026

Weng, R.H., Huang, C.Y., 2017. The impact of exploration and exploitation learning on organisational innovativeness among hospitals: an open innovation view. Technol. Anal. Strat. Manag. 29, 119e132.

Yousaf, S., Rasheed, M. I., Kaur, P., Islam, N., & Dhir, A. (2022). The dark side of phubbing in the workplace: Investigating the role of intrinsic motivation and the use of enterprise social media (ESM) in a cross-cultural setting. Journal of Business Research, 143, 81-93

Yu, W., Ramanathan, R., 2015. An empirical examination of stakeholder pressures, green operations practices and environmental performance. Int. J. Prod. Res. 53, 6390e6407.

Yu, Y., Choi, Y., 2016. Stakeholder pressure and CSR adoption: the mediating role of organizational culture for Chinese companies. Soc. Sci. J. 53, 226e235.

Zhang, F., Zhu, L., 2019. Enhancing corporate sustainable development: stakeholder pressures, organizational learning, and green innovation. Bus. Strat. Environ. 2018, 1e15.