

Role of Social Media in SME Environmental Performance in Pakistan Leather Industry: A Mediating Role of Social License**Muhammad Imran, Jawad Iqbal, Hassan Mujtaba Nawaz Saleem***School of Business Management & Administrative Sciences, The Islamia University of Bahawalpur, Punjab, Pakistan***Rabia Rahim***Department of Media Studies, The Islamia University of Bahawalpur, Punjab, Pakistan***Abstract**

The wastage of leather industry is polluting the water, air and soil in Pakistan. This kind of population is distressing the natural environment and increasing the diseases, which is alarming situation for general public health. However, the government and social activist enforce to companies of leather industry to improve their environmental performance for pollution control. Besides, in this respect the companies of leather industry are claimed to implementation the different environmental practices to improve the environmental performance. However, the main concern of the present study is to investigate the environmental performance of leather manufacturing companies in Pakistan. The smartPLS-3 statistical software was employed to examine the one hundred seventy-five respondent data from leather industry. The results of the study revealed the positive and significant role of social media in environmental performance. Moreover, the present found the mediatory role of social license between social media and environmental performance. Hence, proved that social media and social license are considered influential factors for higher environmental performance for any company. The implications and limitations of the study are discussed.

Keywords: Social Media, Social License, SMEs, Environmental Performance, Leather Industry

The leather industry of Pakistan is playing the main role in economic development as well as in jobs creations. This is contributing around 5% to GDP of Pakistan, 7.39% in total exports of Pakistan. Furthermore, leather industry offers more than 500000 million jobs (Hashmi et al., 2017). This is a second largest export-oriented sector of Pakistan. Besides, the leather industry is the subsector of SMEs, basically the firms of leather industry fulfilling the SMEs definition. SMEs are more market orientated than large firms, they are more sensitive to competition and more tend to innovation. However, this sector is facing intensive competition from regional competitors such as Turkey and Bangladesh, those are offering high quality leather products at low price (Awan, Khattak, & Kraslawski, 2019). Thus, Pakistan leather industry should be modernized and invested in advance technology to become an internationally competitive (Wahga, Blundel, & Schaefer, 2015). Nevertheless, as past researches stated that leather industry of Pakistan are using various chemicals and discharging in open environment which is causing air, soil and water pollution (Afzal et al., 2014). Additionally, revelation of these harmful chemicals are causes for different complications such as respiratory tract, eyes irritation and cancer of lungs, buccal, pancreatic and bladder in industry workers as well as society (Padda & Asim, 2019). Nonetheless, this is showing the lack of proper environment management, which may difficult for SMEs due to their resource dearth. However, this is responsibility of SMEs to protect the natural environment as well.

Thus, leather industry of Pakistan can build the actions considering the principle of eco-friendly, aiming at the adoption of environmental practices, which also generate the cost saving. This is not only protecting the environment as well as positively affect the company financial performance. Furthermore, proper environment management can advertise the positive image of the firm not only inside country as well as outside the country, this can also improve the competitive advantage of the firm inside and outside of the country. Along with, there are many factors are influencing the environmental performance of SMEs, such as regulations motive, perceived market benefits, company size (Brammer, Hojmoose, & Marchant, 2012). Another study stated the driving forces for environment management such as Government (Government incentive, Government regulations and Government assistance), Society (Community requirements, Environmental associations and

Media exposure), Market (Competitors, Buyer requirements) Enterprise (Market expansion, Profitability improvement) (Zeng et al., 2011).

Anyhow, the main objective of the study is to explore the link between society and environmental performance of leather manufacturing companies. The study is taking the social media as dimension of society. Basically, the social media can allow the open communication, which can help to companies to know the customer feedback regarding their needs and wants and what they have image of company in their minds. Once the company exposed by public through social media, the government can take the step towards imposition of penalty on company due to public voice (Zeng et al., 2011). Henceforward, social media can be the influential factor for leather manufacturing companies. Additionally, the perceived social license refer to “the broad and ongoing acceptance or approval of a company’s operations by local communities and other stakeholders, who can affect the profitability of those operations” (Zhang et al., 2015). Though, the social license relatively enforced to large and multinational companies to incorporate with environmental performance. In other words, social license can play the mediating role between social media and environmental performance. Moreover, social license is less implemented in SMEs context. Therefore, the present study raises the research question “is the social license playing the mediating role between social media and environmental performance?”

The further sections of the study will try to answer the proposed research question. The next part will cover the literature review and propose the hypothesis, after the detail discussion of literature review, the research methodology will discuss. The fourth section will discuss the finding of the study. The last section will conclude the study and discuss the implications, limitations and future recommendations of the study.

Literature Review

In this section will cover the past literature on environmental performance, social media and social license. Furthermore, this section will propose the hypothesis and underpinning theory and research framework.

Environmental performance

Henriques and Sadorsky (1996) stated that firms are responsible to implementing the environment friendly practices to control the environmental issues. However, the most of past studies discussed the driving forces of environment management such as Government (Government incentive, Government regulations and Government assistance), Society (Community requirements, Environmental associations and Media exposure), Market (Competitors, Buyer requirements) and Enterprise (Market expansion, Profitability improvement). Furthermore, these forces considered as powerful tools for SMEs environmental performance (Zeng et al., 2011).

The main concern of the study to investigate the society driving force for environment performance leather industry of Pakistan, whereas, the industry is generating the 850kg waste on daily basis (Hashmi et al., 2017). The tanning process is producing huge number of byproducts and waste either solid, liquid and gaseous type, such as chemical oxygen demand, total dissolved solid, chlorides, sulphates and heavy metals, which contributed in air and water pollution respectively (Hashmi et al., 2017). Basically, the environment issues are directly affecting to society due to different diseases such as lungs, skin, bladder, testicular, Soft Tissue Sarcoma, Pancreatic Cancer. However, these issues are attaining the attention of society and companies. Hence, the current study believes that the literature on society driving force through social media and social license can play the vital role to manage the environment effectively.

Social media and environmental performance

Social media is explained as promoting the media through internet connected devices, which are allowing to user for social networks and collaboration with each other (Gikas & Grant, 2013). The social media is not only can use through desktop, it can use through mobiles and smart phone. The Twitter, Facebook, Instagram and YouTube are the most popular social media, these are providing the fast and effective communication, as well as the medium for spreading information to a wider audience (Hawn, 2009). Henceforward, the power of such social media could be further connected for the benefit of the natural environment.

However, the social media role in environment management cannot be ignored. Although the less studies have been reported link between social media and environmental performance of SMEs. Particularly, in context of SMEs, the owner / managers have perception to reduce the cost benefit, they are promoting the social and environment activities (Jorge, Madueño, Martínez-Martínez, & Sancho, 2015). The natural environment caring behaviour is important not only for companies to reduce their cost, as well as it is very important to sustain the environment which can help us to stop the climate change and global warming (Yang, Wang, Zhou, & Jiang,

2018). At this point, social media can be an effective tool to promote the environment awareness and which can also help to government and companies regarding environment management (Simon, 2019). Basically, the environmental management is very important in two perspectives such as the number one perspective is about changes in behaviour are brought about by increasing public knowledge through raising awareness regarding an issue and by fostering an appropriate attitude (Hamid, Ijab, Sulaiman, Md. Anwar, & Norman, 2017). The second perspective recommends that individuals systematically review their choices and then act in their economic self-interest without the need to have enough knowledge and awareness in the first place (Simon, 2019).

However, in contextual view, in biggest city of Pakistan, the Karachi where the environment situation is totally change due to industry waste. Recently, heavy rain makes problem for general public of city, because the rainwater cannot flow due to large solid waste in drainage outlets. These outlets are blocked due to solid waste of different industry such as leather and other manufacturing factories. Many people raising their voice through social media on this situation and enforcing to companies and Government to take the effective steps regarding proper waste management. Secondly social media giving accurate information related effective areas in terms of pictures and videos, which are showing the real situation of waste. Hence, we cannot neglect the role of social media. Social media is playing main role to raising the voice against bad condition of environment, this environment making worse by many manufacturing companies waste such as leather and textile industry specifically in Karachi, Lahore, Faisalabad, Sialkot and Kasur (Hori, 2020).

Therefore, the present study proposes the following hypothesis in the behalf of above discussed literature.

H₁: There are positive link between social media and SMEs environmental performance.

Social license as a Mediator

The concept of social license explained as informal social contract existing between industry and community in which operate (Jijelava & Vanclay, 2018). Furthermore, it refers to acceptance of industry operations by local community. In other words, the social license originated from corporate social responsibility, which can help for decision making regarding environment management. However, when it comes to leather industry of Pakistan, the social license pressure for improving the environmental performance might be weak due to traditional policies of Government. As past researchers stressed that legalization or social license pressure is the key driver for environmental initiative of small and medium business (Luke, Brueckner, & Emmanouil, 2018). As past literature presented that social license operate from civil society and involve communities from a very early stage in their environmental decision making (Graafland & Smid, 2017). The contact between companies and societal organization such as non-Government organizations (NGOs) might make the manager more aware about moral dimensions for being more socially responsible and this action can improve the environmental performance not only for market benefits (Hashemi, Sadighi, Chizari, & Abbasi, 2019).

However, the media and NGOs are the key players and have ability to influence the environmental performance of SMEs. Basically, the societal institutions pressuring the companies for effective implementation of environmental practices. Additionally, social media and societal institute can promote the moral reasons related with environment and foster to implement the environment practices in SMEs (Graafland & Smid, 2017). Moreover, social media is providing current and accurate information to societal institutions, on the behalf of this information societal information can deal with non-financial firms such as leather industry small and medium firms to implement the environment management practices improving their environment performance. In other words, every company must include the environmental performance dimension into total performance and they should report into income statement and balance sheet (Hossain, Alam, Hecimovic, Alamgir Hossain, & Choudhury Lema, 2016). Furthermore, in this case social license pressure can play the mediating role between social media and SMEs environmental performance. However, the social media and social license pressure could be the key drivers to motivate the SMEs specifically in leather industry of Pakistan to include the environmental performance measures. Hence, the present study on the behalf of past literature discussion propose the following hypothesis.

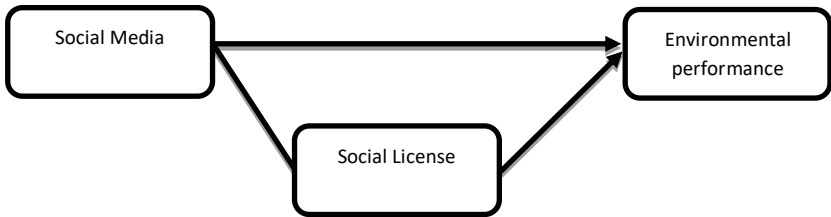
H₂: The social media is influencing the environmental performance of SMEs through social license pressure.

Research Framework

The proposed research framework has formed based on past literature review. The stakeholder theory is covered the following research framework. According to Zizka (2017), the

stakeholder theory is about expectations of stakeholder which are knotted with society's views or expectations of business performance, i.e. financial performance, satisfactory performance and environmental performance. The companies should consider the all stakeholders, when they are going to take any step regarding social responsibility. Furthermore, the stakeholder may ask the question regarding social responsibility practices in inside the company (Hossain et al., 2016). In other words, the companies are responsible sustain the natural environment and as well as they have to produce the environment friendly products (Leonidou, Christodoulides, & Thwaites, 2016). Hence, the companies have to consider the all stakeholders such as customer, competitors, shareholders, investors, Government and media, and all these stakeholders perceived multiple motives for CSP such as management of natural environment as well (Barnett, Henriques, & Husted, 2018). If the companies will not adopt the effective practices of natural environment, it can refuse by stakeholders for any investment in company. Thus, stakeholders are rising their voice opposed to illegal and hostile practices from the company against the natural environment. However, the stakeholder theory is playing the main role to test the proposed research framework.

The independent variable is the social media and social license would play the mediating role between social media and environmental performance. The last dependent variable is the environmental performance of SMEs. The figure of research framework as under.



Research Methodology

The target population of the study is leather manufacturing small and medium companies. As according to SMEDA (2019) that Pakistani manufacturing SMEs defined on the basis of employees and annual sales turnover, thus, companies whose annual sales turnover are not more than two hundred fifty million PKR with less than two hundred fifty employees are counted SMEs. However, the three hundred and twenty-eight leather companies are registered on Pakistan tanner association and Pakistan leather garments manufacturer and export association. These 328 companies are taken as sampling frame of the study. Krejcie and Morgan (1970) table is used to find the minimum sample size of the study, according to it, the current study has taken 175 sample size for the study. This is enough to represent the total population of the study. The responded of the study has selected randomly.

This is survey-based study, in this regard, the scales of the constructs have been adapted from past studies. The scale of social media has formed based on in-depth review of past studies on social media (Ahmad, Abu Bakar, & Ahmad, 2019; Hamid et al., 2017; Tajvidi & Karami, 2017). The scale of social license adapted from the study of Graafland and Smid (2017). The dependent variable scale has adopted from the study Jorge et al. (2015). Furthermore, these all construct are measured unidimensional.

Moreover, the pretesting and pilot study has conducted to verify the scale face and content validity. For pretesting author has contacted with senior professor from the Universiti Utara Malaysia, Malaysia and University as Negeri Padang, Indonesia to verify the face and content validity of the scale. Furthermore, in respect of pilot testing, we have collected the 40 response to verify the validity and reliability of the scale. However, the values of construct reliability and validity are found within the acceptable range. The final scale of the study can see in table 1. Moreover, after the pretesting and pilot study, we have collected the data, which started from February 2019 to May 2019. The Microsoft excel rand formula has used to select the random respondents. The data has collected face to face strategy. Moreover, this is firm level study, in other words, we have taken one response from one firm.

Table 1. *Instrument*

Social Media (Ahmad et al., 2019; Hamid et al., 2017; Tajvidi & Karami, 2017)		
List of items	Operational definition	
1	Social media is promoting the environment performance in the company	The usage of network sites such as Facebook, Instagram, twitter to raise the community voice
2	Social media is promoting the use of recycle	

3	material Social media is enhancing the company image due to effective implementation of environmental management practices	regarding companies' activities related with natural environment.
4	It would affect the firm environmental performance if it decided not to adopt social media	
5	Interaction with social media is clear and understandable	
6	Our company is receiving the feedback through social media regarding environment performance	
7	Social media is creating awareness about solid waste management	
8	Social media is raising the community voice against company waste generation	

Social License Pressure (Graafland & Smid, 2017)

Details of items		Operational definition
1	The relationship with local community is important for your enterprise	social license is about reducing obvious opposition to industrial activity related with natural environment.
2	The relationship with societal organizations is important for your enterprise	
3	The non-Government organizations (NGOs) are monitoring your firm environmental performance	

Environmental Performance(Jorge et al., 2015)

Details of items		Operational definition
1	My company minimizes the environmental impact of its activities	To measure the firm practices to control the environmental issues.
2	My company designs products and packaging that can be reused, repaired or recycled	
3	My company voluntarily exceeds legal environmental regulations	
4	My company makes investments to save energy	
5	My company reuses and recycles materials	
6	My company adopts measures for ecological design in products/services	
7	My company implements programs to use alternative energy	
8	My company implements programs to reduce water consumption	
9	My company regularly conducts environmental audits	

Data Analysis and Research Findings

The present study employed the partial least square structural equation modeling (PLS-SEM) to evaluate the data. The SmartPLS 3.0 employed to run the PLS-SEM. Furthermore, PLS-SEM examined into two step such as measurement model and structural model.

Measurement Model

This is about data reliability and validity. The reliability of data evaluates on behalf of Cronbach alpha, composite reliability and average variance extract (AVE). The values of Cronbach alpha, composite reliability should not less than 0.70 and AVE should not less than 0.50 as well. However, the present found the values of Cronbach alpha, composite reliability and AVE within the limit, hence, the reliability of the data is confirmed. The values of AVE and item loadings can see in figure 1 and table 2.

The validity of the data has checked to use the Fornell & Larcker criteria, which is comparing the square root of the AVE for each construct with the correlations between that construct and other constructs. However, the square root of the AVE of each construct surpassed the correlations between that construct and other construct, the result can be seen in table 2. Therefore, the discriminant validity of data was confirmed.

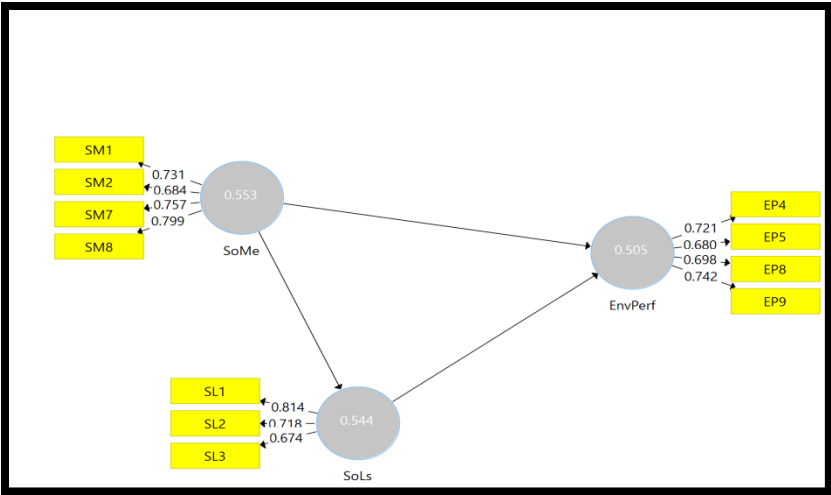


Figure 1: Measurement Model Presentation

Table 2. *Internal consistency of constructs*

Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
EnvPerf	0.687	0.803	0.505
SoLs	0.605	0.780	0.544
SoMe	0.735	0.832	0.553

Note: EnvPerf (Environmental Performance); SoLs (Social License); SoMe (Social Media)

Table 3. *Fornell & Larcker criteria for construct discriminant validity*

Constructs	EnvPerf	SoLs	SoMe
EnvPerf	0.711		
SoLs	0.409	0.737	
SoMe	0.571	0.507	0.744

Note: EnvPerf (Environmental Performance); SoLs (Social License); SoMe (Social Media)

Structural Model and Hypothesis testing

After the validation of measurement model, the study can evaluate the structural model to make the hypothesis acceptance or rejection decision. Although there are not specific criteria for model fitness, however the present study used the indices of SRMR, NFI and RMS Theta. The value of SRMR should be between 0 to 1; the value of NFI value should not more than 0.90. Moreover, the RMS theta value should be less than 0.12. However, the result can be found in table4. According to this result the current study has confirmed the general model fitness.

Furthermore, two criteria such as determinant of co-efficient (R^2) and effect size (f^2) has used to test the internal model fitness. The values 0.75, 0.50 and 0.25 respectively substantial, moderate and weak describe R^2 . Hence, the social media and social license contributed into environmental performance around 34%, which is moderate contribution. Moreover, the values of effect size such as 0.02, 0.15 and 0.35 respectively show small, medium and large effect size. Thus, the individual contribution found as social license counted 0.029 which small effect size and secondly the social media is recorder around 0.271, which is called medium effect size. The result can be seen in table 5.

The hypothesis testing was done through the path co-efficient. The bootstrapping has run on 5000 sub-samples on 0.50 significance level at 1.96 T-statistic value. However, the result of hypothesis testing can be seen in table 6 and 7 and figure 2.

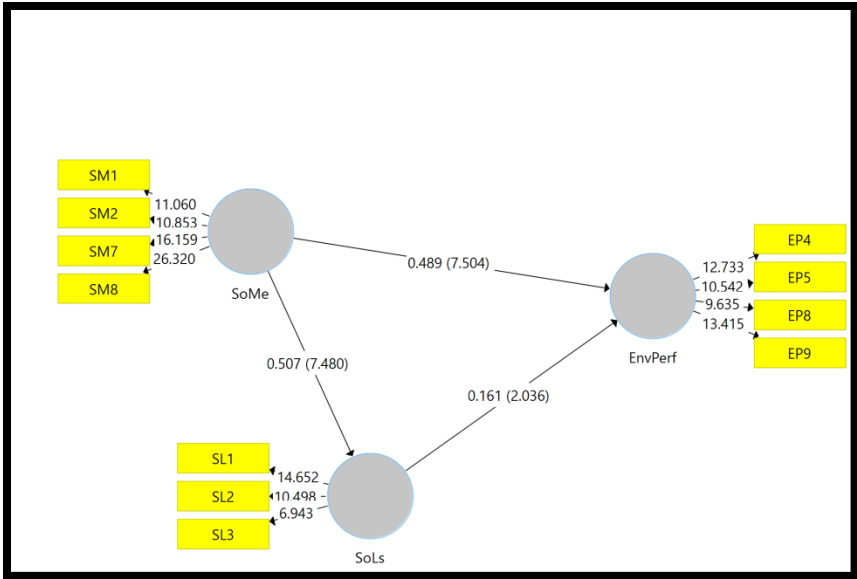


Figure 2: Structural Model Presentation

Table 4. Model fitness

Fitness Indices	Quantity	Desirable Value
SRMR	0.06	Less than 0.08
NFI	0.98	More than 0.90
rms Theta	0.10	Less than 0.12

Note: EnvPerf (Environmental Performance); SoLs (Social License); SoMe (Social Media)

Table 5. The result of determinant of co-efficient and effect size

Determinant of co-efficient (R^2)		Effect size (f^2)		
	R^2		EnvPerf	SoLs
EnvPerf	0.345	SoLs	0.029	
SoLs	0.258	SoMe	0.271	0.347

Note: EnvPerf (Environmental Performance); SoLs (Social License); SoMe (Social Media)

Table 6. Direct Relationship

Hypothesis	Beta	Standard Deviation	T Statistics	P Values
SoMe ->EnvPerf	0.571	0.051	11.259	0.000

Note: EnvPerf (Environmental Performance); SoLs (Social License); SoMe (Social Media)

Table 7. Mediation

Hypothesis	Beta	Standard Deviation	T Statistics	P Values
SoMe ->SoLs ->EnvPerf	0.081	0.042	1.964	0.049

Note: EnvPerf (Environmental Performance); SoLs (Social License); SoMe (Social Media)

PLS predict

According to Shmueli et al. (2019) that most of researchers to use the R2 and Q2 criteria to for in-sample fit. In other words, R2 and Q2 are employed for standard structural model evaluation, "PLSpredict offers a means to assess a model's out-of-sample predictive power" (Shmueli et al., 2019). However, PLSpredict is very important to assess the model practical

relevance. As the table 7 results shown that the majority of indicators RMS values in PLS-SEM are recorded smaller than values of RMS in LM, hence model has medium predictive power. The result of PLSpredict can see in table 8.

Table 8. *MV prediction Summary*

PLS	RMSE	MAE	MAPE	Q ² _predict
EP9	0.862	0.694	23.944	0.281
EP5	0.926	0.721	25.264	0.067
EP8	0.979	0.764	28.102	0.071
EP4	0.950	0.76	28.158	0.124
SL1	0.923	0.751	27.711	0.242
SL3	1.027	0.842	29.663	-0.014
SL2	0.920	0.751	25.136	0.089
LM	RMSE	MAE	MAPE	Q ² _predict
EP9	0.860	0.709	23.15	0.284
EP5	0.931	0.745	25.861	0.057
EP8	0.989	0.766	28.576	0.053
EP4	0.944	0.774	28.195	0.133
SL1	0.921	0.746	26.792	0.244
SL3	1.011	0.831	29.584	0.018
SL2	0.922	0.758	25.032	0.087

Results Discussion

The first hypothesis proposed to investigate the relationship between social media and environmental performance of the SMEs. The hypothesis accepts or rejects on the set criteria such as T-statistics should be more than 1.96 and P-value should be less than 0.50. Moreover, the beta values stating the direction of the relationship that is it positive or negative? Hence, the value of T-statistics and P-value found above the requirement and beta shows the positive relationship. Hence, the present study found the positive and significant relationship between social media and environmental performance of SMEs in leather industry of Pakistan, Thus, the H1 is accepted.

The result of second hypothesis which is about mediating role of social license between social media and environmental performance has found positive and significant. The values of T-statistics and P-value found above the set criteria. Hence, the hypothesis two (H2) is accepted. Moreover, the type of mediation declared on the basis of Zhao, Lynch Jr, and Chen (2010) criteria, according to this criteria, the complementary mediation has found.

Therefore, the current study answers the question “is the social license playing the mediating role between social media and environmental performance?” As present study results revealed the complementary mediating role of social license pressure between social media and SMEs environmental performance. On the behalf of the current study results, this study can interpret that the firms should not only focus on profit taking, they should also focus on people and natural environment as well. However, the current study is suggested to owner / manager of SMEs that they should work on effective implementation of social license inside the companies and they should consider the social license during decision making regarding environment management.

Conclusion

Based on findings, the current study concluded that the social media is complementary element for environmental performance. Moreover, the social license is playing vital mediatory role between social media and environmental performance of SMEs. In other words, social media and social license are influential factors to sustain the environment performance, specifically in leather industry of Pakistan. As the literature review suggested that leather industry is producing waste on daily basis which make reason for the unbalance in natural environment. As past studies stated that industrial wastage such as leather industry wastage in term of chemical and solid waste making unfriendly natural environment. Basically, the air pollution, water pollution and soil pollution are making cause for many diseases specifically different kind of cancer, this all kind of pollution increasing day by day due to industrial wastage specifically from leather industry where

they used poisonous chemical on daily basis. Hence, this study findings warranty to control the leather industry wastage which lead to friendly environment and friendly products.

Implications

In term of implications, the owner / manager is responsible to consider the stakeholder voice through social media and social license, they must consider these elements such as social media and social license to improve the industry environment performance. As unfriendly environment or in other words the pollution is the main cause of diseases and directly effecting the general public life span. Theoretical this study contributing in stockholder theory. Furthermore, this study validated the current study framework first time in the existing literature. This study significantly contributing into existing literature. Moreover, in term of methodological aspect the present study is the first study which consider the respondent of leather industry into consideration. Hence, this is the significant contribution into existing literature related to research methodology.

Limitations and future recommendations

In respect of limitation and future recommendation, this study limited to leather industry, the future studies should validate the current study framework in other industries, more specifically textile industry of Pakistan. More, the present study can be test in other country leather industry to verify the research framework. The current study tested the research framework on small sample size; hence, the future studies should take the large sample size such as more than one thousand respondents at least. Moreover, there are many factors are affecting on environmental performance, hence the future study can consider the other factors to enhance the current study research framework such as Government rule and regulations toward environment management and behaviour of top management of companies towards effective implementation of environment management practices to sustain the friendly natural environment.

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