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Impact of Environmental, Social and Governance Factors on Company Success in Selected Coal Companies in Shanxi Coking Coal Group: Basis of a Strategic Business Model

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ABSTRACT

This research investigated the environmental, social and governance (ESG) practices of selective coal companies in Shanxi, China, including the primary factors that impact company success, particularly contributions to the betterment of environment, the well-being of social communities and governance with respect to sustainability. A self-crafted survey questionnaire was floated to five selected subsidiaries of Shanxi Coking Coal Group, a topnotcher coal producer in the Chinese coal industry. The researcher gathered data on the degree of implementation of ESG management practices. Applying descriptive and inferential statistics enabled the researcher to weigh the ESG factors that impacted on their "company success" and from the results, designed an operational model for the Shanxi coal subsidiaries. The findings of the study showed that addressing environmental issues was not a priority concern among the Shanxi coal subsidiaries even though the government imposed draconian measures. Meanwhile from the multiple regression results, the research yielded significant environmental, social, and governance variables that impact company success, namely, efficient use of water, employee rewards and recognition and generous compensation. In addition, statistical results yielded a Business Strategy Model that can serve as a conceptual framework for coal companies implementing ESG practices for sustainable development. The model can be used for further research.

KEYWORDS

ESG practices; company success; coal industry; social and environmental issues; governance; ESG Business Strategy Model.

INTRODUCTION

"Company success," is a most desired business outcome, but nowadays has more measurements to be weighed. Businesses pursue entrepreneurial ventures with the end goal of achieving sustainability (Chang et al, 2022). Sustainability is the capability of an existing business to support and maintain its business goals and objectives. While sustainability comes in different forms like social, economic, environmental, and human, most businesses focus on financial sustainability (Chen et al.,2022). To be financially sustainable is to be able to earn revenues and make a profit. In achieving financial sustainability, any company will then be in a better position to achieve sustainability in the other four aspects of business. Thus, the challenge to survive and be sustainable is compelling.

All around the global business environment, the reality of borderless boundaries exists, and hyper-competition cannot be overemphasized (Damtoft et al, 2024). Small businesses

compete with small businesses; medium-scale businesses compete against medium-scale businesses, as well as large businesses do. With this is the proliferation of multinationals and conglomerates that continuously attempt to implement takeovers through mergers and acquisitions. In other words, competition is all over, whether domestic or internationally. It is a fiercely competitive business world.

According to International Energy Agency (2020), in line with this business reality is the unexpectedly fast-paced growth and development in technology. From the slow growth of the world economy beginning with the first industrial revolution (coal) from 1760 to 1830, the second industrial revolution (gas) lasted from the middle of the 19th century to early 20th century. In the 3rd (electronics) and 4th industrial revolutions, significant technological advancements in automation and later in digital technology and the Internet hastened the pace of conducting business. Processes then became more efficient, convenient, and cost-effective. Better products were being developed although work and people displacements were unpleasant and painful outcomes.

Particularly, the 4th (Internet/renewable energy) industrial revolution introduced high-capacity connectivity, virtual reality systems, among others. Today, the 5th industrial revolution proposed concepts on the environment and human-centeredness in the context of creating a balance between "humanness" and digitization. Just as the global society was ready to espouse this, the 6th industrial revolution began focusing on the varied facets of manipulating artificial intelligence. This is another aspect of doing business where company success is highly vulnerable. Digitization has become a major factor in company success.

With technology is the globalization of products. Global markets present unique product propositions that satisfy prevailing consumer lifestyles, needs, wants, and demands. Modes of delivering consumer goods and services have likewise evolved. The level of importance of goods and services has also developed from simple to complex, from priority to least concern, and from relevance to insignificance.

Firstly, an example is the reality of the environment (Mironova et al, 2023). Never has the environment reached a high degree of consideration. How is the environment affecting the way companies are conducting their businesses? What steps are companies taking to help in the preservation of the environment? Secondly, how can businesses adapt to the demands of their employees? Are there reward systems in place? What company culture exists? How do they address diversity of cultures? Finally, are the employees' content enough to be able to deliver their respective tasks? Thirdly, how do companies manage themselves to ensure profitability? Do they practice ethical practices? Are they compliant with existing laws and regulations whether within the country or externally?

Since "sustainability" has been a niche concern of economic and social development, the environmental, social and governance (ESG) factors involved are increasingly becoming a vital part of investment and operational decisions worldwide (McGill, 2024). China, the global second largest economy per its nominal GDP data, has been inevitably embedding the concept of ESG as an emerging global trend, which is now in the ascendant in the country, more particularly the central government seeks to be an enabler to green its economy and improve social equality, namely "initiate new quality productive forces" (Xinhua News, 2024).

Given the mentality "sustainable development," China claimed it ambition to reach peak carbon by 2030 and become carbon neutral by 2060, which requires companies to start transitioning to a lower-carbon business model (Cheng et al, 2024). This ambitious goal requires significant changes in its coal industry, which is a major contributor to its carbon emissions since the country is the world's largest coal consumer and producer.

Consequently, to green wash the corporate image by addressing the economic and social concern and transitioning to renewable energy would be pivotal to the China coal companies.

Shanxi Coking Coal Group Co. Ltd. is top 1 coal producer nationwide in China meanwhile the researcher luckily was born in Shanxi province bearing a nickname "coal capital". Hence, he decided to investigate the company success of the selective subsidiaries of Shanxi Coking Coal Group amid their ESG practice management.

After establishing the reason or research gap of this study, this paper was therefore being conducted to determine how existing environmental, social and governance (ESG) variables did contribute or impact company success in the context of hyper-competition and technology advancements under the China unique institutional environment (Shen et al. 2023), that is why the gap was contextual. It was clearly stated in the form of questions mentioned earlier to emphasize the need to study the global environment. Furthermore, this research gap was empirical since this study zoomed in on the first-hand data deduced from the selective coal companies belonging to Shanxi Coking Corp. Later, the researcher would figure out a strategic business model on company success while considering the ESG factors.

LITERATURE REVIEW

ESG engagement provides a framework that enables stakeholders to understand how an organization is managing risks and opportunities related to environmental, social, and governance criteria (sometimes called ESG factors). United Nations – Who Cares Wins: Connecting Financial Markets to a Changing World, which is a systematic approach identifying, assessing, and integrating the economic, environmental, and social impacts of a business. ESG principles takes the holistic view that sustainability extends beyond just environmental issues. Adopting ESG principles indicates that corporate strategy focuses on the three pillars of the environmental, social, and governance. ESG frameworks standardize and systematize the reporting and disclosure of ESG metrics for setting goals, determining policies, implementing strategies and more. On some occasions, they could identify risks resulting in a negative impact on a company, industry or across industries.

Figure 1. Environmental, Social, and Governance Theoretical Framework

In this figure, the theoretical framework includes environmental, social, and

governance constructs. In the environmental construct, the composites are climate change, pollution and waste, resource and land use, ecological footprint, and biodiversity Climate Bonds Initiative (2022). Specifically, the environmental construct refers to the variable that deals with the surroundings. Given the fast pace in global growth and development, the environment brings about atmospheric, water, and land transformations that create impacts on humankind.

The social construct includes health and safety, product and consumer responsibility, community impact, diversity and inclusion, and labor and human rights. With the changes in governments and leadership, detrimental is the focus on physical well-being, consumer focus and service, as well as development of respect of the humanity of peoples, as well as respect for diverse cultures, religions, traditions, and aspirations. Lastly, business ethics, tax transparency, risk management, anti-corruption and bribery, leadership and corporate governance constitute the governance construct. For the governance construct, changes in social mindset, lifestyles, social relationships, and ethical standards present the need for strategies that can contribute to social well-being and healthy relationships.

Using these constructs, the ESG framework guides companies in determining its ability to be sustainable and achieve the company success in the ESG context aligned with the Principles for Responsible Investment, a United Nations-supported international network. According to ESG investing official training manual issued by CFA Institute UK, as exemplified in their sustainability reports, the ESG framework helps companies together with its investors and other stakeholders to monitor high-level progress and track key elements, which impose a significant impact on the business. It can provide intelligence to informed decision making, which is especially helpful for the companies that are committed to sustainability. As a benefit in using an ESG framework, companies can study the ESG market, trim their investment portfolio for continuous improvement and create a long-term sustainable business. It enables companies to focus on their strengths and take advantage of emerging trends that characterize this current period.

The research paradigm as shown in Figure 2 presents a cause and correlation operational framework of the study. It shows the interrelationships among a set of input variables, namely, ESG and demographic variables. The ESG variables can be considered as audit elements and not optional elements. These elements are environment, social and governance. However, the elements under each of the three were conceptualized by the researcher.

The independent variables shown in Figure 2 as predicators in the hypotheses including Ho_1, Ho_2 and Ho_3 are the ESG variables, environmental, social and governance. Specifically, environmental variables include water efficiency, energy efficiency, carbon emissions, environmental management system, climate change, pollution, land and resources, natural resources depletion, environmental waste management, and environmental responsibility.

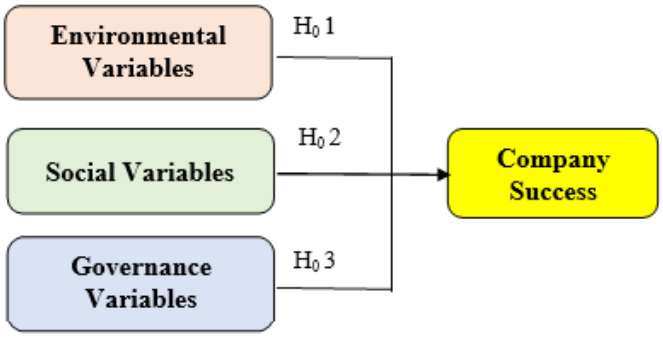

Figure 2. Conceptual Framework

Social variables include fair labor standards, equal opportunities, freedom to associate, working conditions, health and safety, diversity of cultures, socially responsible organization, company culture, rewards, and recognition, and healthy, working relationship.

Governance variables include compliance to company rules and regulations, fair and morally correct business ethics, bribery and corruption, leadership and corporate governance, efficiency and pro-activity, strategic risk management, operational procedures and policies, tax transparency, regular audit, and generous compensation. The dependent variable is company success that includes clean, green, healthy, and wholesome community, highly motivated, involved, and productive employees and reduced costs and sustainability.

Research Questions

As coal mining companies continue to compete, the need to achieve company success is more important than ever. These companies need to focus on specific management areas like environmental, social and governance practices. The research assessed the degree of implementation of these ESG variables, and the level of the company success achieved with respect to providing a clean, green, healthy, and wholesome community, highly motivated, involved, and productive employees, and reduced costs and sustainability of the companies. Similarly, the research determined the impact of these ESG management practices in attaining company success and from the findings of the study, design an ESG framework (model).

Hypotheses

The researcher poses the following hypotheses:

Ho_1. Environmental variables do not significantly impact to the company success of the respondents' respective coal companies in terms of clean, green, healthy, and wholesome community, highly motivated, involved, and productive employees, and reduced costs and sustainability.

Ho_2. Social variables do not significantly impact to the company success of the respondents' respective coal companies in terms of clean, green, healthy, and wholesome community, highly motivated, involved, and productive employees, and reduced costs and sustainability.

Ho_3. Governance variables do not significantly impact to the company success of the respondents' respective coal companies in terms of clean, green, healthy, and wholesome community, highly motivated, involved, and productive employees, and reduced costs and sustainability.

RESEARCH METHODS

This study used a descriptive-quantitative research design. Quantitative research was used to test theoretical hypotheses and theories by measuring variables and relationships. The research locale of this study is Shanxi Province, a landlocked province located at the north of the People's Republic of China. Taiyuan is the largest city and capital city of Shanxi Province. Shanxi is China's leading producer of coal, one-third of the total coal deposits of the country. The researcher included five (5) coal subsidiaries of Shanxi Coking Coal Group (SCCG) as the study participants. SCCG is one of top oligarchs in China even world coal industry and a state-own company. These companies include SCCG Foreign Trade Co. Ltd., SCCG International Development Co. Ltd., SCCG Logistics and Shipping Co.,

SCCG Huaxing Energy and Technology Co. Ltd, and Shanxi Coke Group Foreign Trade Co. Ltd. With 1317 as the population size, the computed sample size is 306 respondents across all five (5) coal companies. In this research, the investigation used a researcher-made instrument where the researcher discriminated validity and reliability testing (Cronbach Alpha = 0.909). Multiple regression analysis was used after testing normality, homoscedasticity, and multicollinearity.

RESULTS AND DISCUSSION

In terms of degree of implementation of the ESG variables, the arrived average mean for the environmental variables is 3.25 with standard deviation of 0.75513; for the implementation of social variables, the average mean is 3.52 where the standard deviation is 0.59023. Lastly for the implementation of the governance variables, the average mean is 3.56 (s=0.55321). With respect to the success achieved by the respective coal companies included in this study, the company success with an average mean of 3.52 and standard deviation of 0.59023, was strongly agreed upon by respondents and broken down in three areas: environmental success (clean, green, healthy, and wholesome community, mean = 3.49, s = 0.63883), social success (highly motivated, involved, and productive employees, mean = 3.58, s = 0.63405), and governance success (reduced costs and sustainability, mean = 3.61, s = 0.51376).

Regarding the extent to which the environmental, social, and governance practice variables have significantly impacted the company success of the coal companies per the respondents' responses, the following data results were gathered. With respect to the environmental variables, the beta regression coefficients for CS1 are: "The Company uses water efficiently." (E1: β= 0.230, p = .001) and "The company is an environmentally responsible citizen of the country" (E10: β= 0.213, p = .002)) are significant; for CS2, "The Company uses water efficiently." (E1: β= 0.217, p = .002), "The company ensures, irresponsible, natural resources depletion." (E8: β= -0.196, p = .015), "Environmental waste management is effectively implemented by the company." (E9: β= 0.200, p = .004) and "The company is an environmentally responsible citizen of the country" (E10: β= 0.312, p<.001)) are significant; and for CS3, "The company uses water efficiently." (E1: β= 0.188, p = .011), "The company has a strategy to deal with climate change." (E5: β= 0.270, p = .003); "The company ensures, irresponsible, natural resources depletion." (E8: β= -0.171, p = .047), "Environmental waste management is effectively implemented by the company." (E9: β= 0.178, p = .016) and "The company is an environmentally responsible citizen of the country." (E10: β= 0.145, p = .042) are significant.

With respect to the social variables, the Beta regression coefficients for CS1 are: "The Company practices fair labor standards." (S1: β= -.183, p = .016), "Every employee is fairly incentivized in terms of rewards and recognition." (S9: β= 0.203, p = .008), and "There is a healthy, working relationship between management and the employees." (S10: β= 0.206, p = .000) are significant; for CS2, "The company's culture is motivating and nurturing." (S8: β= 0.197, p = .003), and "Every employee is fairly incentivized in terms of rewards and recognition." (S9: β= 0.204, p = .004) are significant; and for CS3, "The company is a socially responsible organization that helps the community" (S7: β= 0.170, p = .019), and "Every employee is fairly incentivized in terms of rewards and recognition." (S9: β= 0.175, p = .018) are significant.

With respect to the governance variables, the beta regression coefficients for CS1 are: "The company does not practice bribery and corruption in the conduct of his business." (G3: β= 0.240, p = .002) is significant; for CS2, "The company espouses and practices fair and morally correct business ethics." (G2: β= 0.259, p p<.001); "The management of the

company is efficient and proactive." (G5: β=0.189, p = .008); "The company practices strategic risk management to ensure sustainability." (G6: β=0.133, p =.034); "The company is regularly audited to ensure its sustainability." (G9: β= 0.156, p =.015); "The company is generous in compensating employees who are hard-working, committed, and with a sense of belonging." (G10: β= 0.220, p<.001) are significant; and for CS3, "The Company is generous in compensating employees who are hard-working, committed, and with a sense of belonging." (G10: β= 0. 284, p<.001) is significant.

CONCLUSION

Business Strategy Model

Based on the multiple regression results on the impact of environmental, social, and governance variables on company success, the researcher arrived at this business model. This resulting business strategy model illustrates the specific environmental, social, and governance variables that significantly impact success of coal companies and yield the positive beta coefficients that were included in this research. They are identified key drivers in the business strategy working for the improvement to company success, which can be translated in such practical implication to a company that successfully contribute to building a clean, green, healthy, and wholesome community, foster a workforce that is highly motivated, engaged, and productive, and reduce costs but also achieve long-term sustainability benefiting both the organization and the broader community through good governance practices.

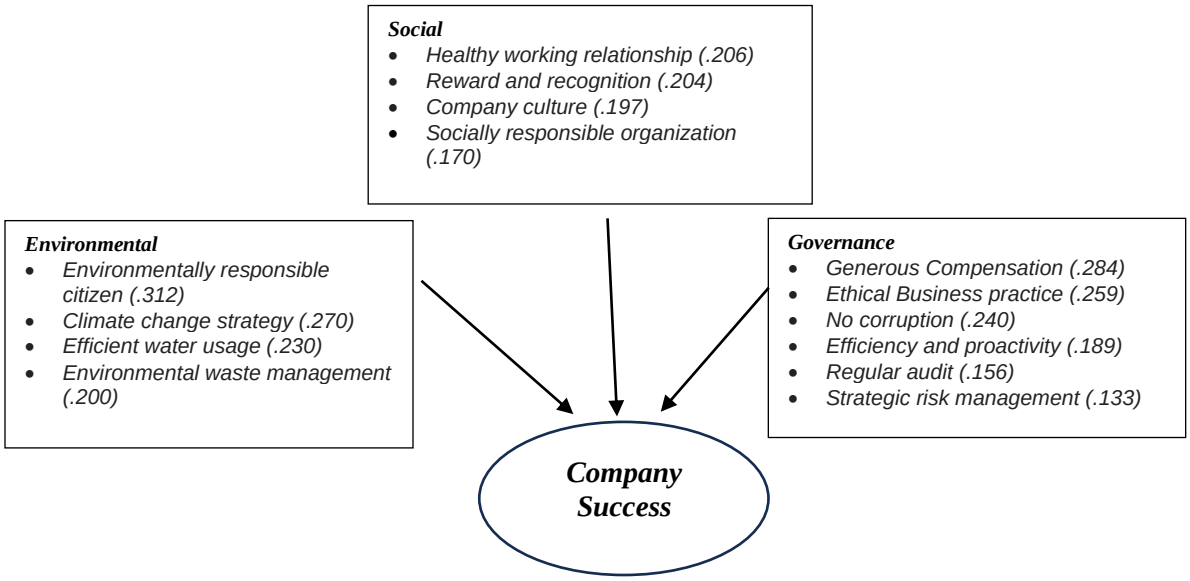

Figure 3. Business Strategy Model (BSM)

In other words, in the resulting framework, other variables were not included anymore since they were not significant. This means that it is either they are not that important to the company, or they may have been successfully doing it. It is to be noted that it does not mean that if the elements are proven significant, it does not only imply that the element has been addressed successfully but the other elements are still not. If some of the elements have been addressed and the others are not, it means that those significant elements contribute to the success of the company since they are proved to be statistically significant. The others may still contribute to company success but may not be statistically significant.

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