

INFLUENCE OF SUSTAINABLE MANAGEMENT PRACTICES, STRATEGIC ORIENTATION AND ORGANIZATIONAL CULTURE ON SUSTAINABILITY PERFORMANCE IN MANUFACTURING FIRMS

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ABSTRACT

The way businesses operate for the past years have changed drastically. Organizations have been increasingly acknowledging their role in fostering commitment to sustainability. It is an emerging trend in the current business environment wherein a number of dynamic companies welcomes the idea of thinking strategically and regard sustainability as a catalyst for new business models with the goal of coming up with a more systematic perspective in coping with sustainability issues. In line with corporate sustainability, this study looked into the influence of three independent variables namely, sustainable management practices, strategic orientation and organizational culture on sustainability performance. Quantitative research design was utilized and multiple regression analysis was employed to determine the combined influence of the predictor variables on sustainability performance. For the purpose of data collection, a survey questionnaire was administered among manufacturing firms operating in Region XII, Philippines to 417 regular employees performing key functions. Results showed that the combination of sustainable management practices, strategic orientation and organizational culture exhibited significant influence on sustainability performance of manufacturing firms. Out of the three independent variables, the best predictor that significantly contributed to the variations of sustainability performance is sustainable management practices followed by strategic orientation and then organizational culture.

Keywords: business administration, sustainability performance, multiple regression analysis, manufacturing firms, Philippines

INTRODUCTION

The way businesses operate for the past years have changed drastically. Companies are starting to realize they do not exist in a bubble as demonstrated by piling up of responsibility and disclosure. This can be traced following the Brundtland Report on Sustainable Development in 1987, wherein businesses around the world were encouraged to introduce sustainable programs, handle risks better and genuinely assimilate corporate values to enhance financial efficiency in reporting, promoting social welfare

and safeguarding natural environment. Due to these calls, several business organizations are beginning to raise awareness in utilizing more responsibly the available finite resources and have made them to rethink its measure of organizational performance to address global clout in business sustainability. The basic premise about companies operating without further hampering global resources for the coming generations has become a challenge to declare their position on sustainable development goals and to go beyond competitiveness and the bottom line. That is, it

represents the accomplishment of performance targets of a business enterprise outlining three sustainability metrics comprising economic performance, environmental performance and social performance (Elkington, 2013; McElroy & Thomas, 2015).

Sustainable business practices are a welcome development in all forms of business organizations as they acknowledge that having sustainable operations is quite a vital cause for concern. It describes the degree in which a business entity implements a set of viable initiatives in its internal operations, managing and collaborating with its suppliers and customers (Schuftan, 2013; Svensson et al., 2010). Consequently, the pressure for more responsible management will propel businesses to look for innovative and creative ways in dealing with environmental and social issues while maintaining financial viability (Lubin & Esty, 2010). Adhering to sustainability initiatives opens a window of opportunity for many leading corporations particularly in finding solutions to managing uncertainties, reducing expenditures, creating innovative and green products, and pushing profound internal systemic and cultural improvements.

On the other hand, sustainable strategic orientation refers to a company's alignment of its sustainability objectives and enthusiastic involvement in terms of decision making priorities (Engert et al., 2016; Zhou & Li, 2010). It mirrors the approaches of firms that concentrate on decreasing the manufacturing liability by applying environmentally sound methods and processes, supporting the notion of green products demanded by customers and ensuring that partners comply with the standards set by the company. Moreover, firms with strategic orientation ensure working towards greener business through the lens of economic success, ecological welfare and social candor (Aziz et al., 2018) which could potentially give boost to sustainability performance. Basically, its objective is to ensure sustainable development strategy in a competitively global market.

Meanwhile, organizational culture is oftentimes attributed as an essential driving force to improve business performance (Joseph &

Kibera, 2019; O'Reilly et al., 2014). It pertains how a company operates, how employees collaborate and what the corporate values are. In a study conducted by Übius and Alas (2009), it shows that more engaged employees in corporate social responsibility programs establish a more effective culture of social responsibility. Hence, it is critical for companies to reflect on its core values and the cultural characteristics that shape them, and adjust these to their strategies, structures and management systems, to achieve sustainable competitive advantage at the organizational level and push for the advancement of sustainability performance as well. However, little empirical work has been undertaken to investigate the link of organizational culture and sustainability performance.

Sustainability reporting as a concept has evolved immensely. In the Philippine setting, companies are becoming more mindful of the necessity of sustainability for corporate viability. Notable reforms in the country's sustainability reporting include: the introduction of a current CSR policy by the Investment Board for businesses registered under the 2007 Investment Priorities Plan, which demands these entities to adopt CSR programs to secure that the tax incentives they receive also benefit local communities; the Securities and Exchange Commission requests statements from public companies on their compliance with environmental legislations in their annual reports; the professional organization of accountants, the Philippine Institute of Certified Public Accountants, has set up a special committee regarded as "Sustainability Reporting and Assurance" that will provide specialized trainings to interested business firms, and the Management Association of the Philippines, which acknowledges yearly the "best annual report" among companies by reinforcing transparency in both financial and non-financial information reporting.

Although some leading business organizations have integrated corporate sustainability in their business models, many still carry out it as a token gesture. With the growing acceptance of sustainability reporting and

becoming more useful to various interested stakeholders, this study explores the impact of sustainable management practices, strategic orientation and organizational culture on the sustainability performance of manufacturing firms. To date, the broad topic on corporate social responsibility (CSR) is mostly available as research studies in the Philippines with very limited literature housing the three dimensions of sustainability performance. Anent to this, filling the loopholes between academic research and industry practice is crucially relevant. Hence, this topic deserves to be a meaningful subject of inquiry that needs more scholarly attention and makes an interesting contribution.

OBJECTIVES OF THE STUDY

This study focused on sustainability performance of manufacturing firms operating in Region XII, Philippines. Specifically, it sought to answer the following:

1. to evaluate the level of sustainability performance of manufacturing firms in terms of economic performance, environmental performance and social performance; and
2. to determine the extent of influence of three independent variables namely: sustainable management practices, strategic orientation and organizational culture on the dependent variable, sustainability performance, among manufacturing firms.

METHODOLOGY

A quantitative, non-experimental design was used in the study taking into its purpose and problem statement. In order to produce meaningful results, primary data were generated with the aid of a survey questionnaire in a 5-point Likert scale which was considered a reasonable choice. This survey instrument was sourced from various studies and was contextualized to suit local business environment setting. Most importantly, the structured questionnaire was screened and passed the Cronbach's Alpha

reliability test before its administration to the targeted respondents.

The study was conducted within Region XII, Philippines. The region, situated in south-central Mindanao, has five cities: General Santos, Kidapawan, Cotabato Koronadal and Tacurong. The administrative region also covers four provinces, to wit: Sultan Kudarat, Sarangani Province, South Cotabato and North Cotabato. In general, economic climate is decent in the region and businesses range from micro, small, medium-sized entities (MSMEs) to big companies. In particular, this study focused on manufacturing firms operating within the region which possess large-scale manufacturing activities.

Purposive sampling, a process by which the researcher chooses a sample based on the group's experience or knowledge, was applied in selecting the respondents. This sampling method is used when a researcher wants to get hold of a particular subset of individuals, as all participants are chosen because they fit a particular profile that would better facilitate the research undertaken (Etikan et al., 2016). A total of 417 respondents from 13 identified manufacturing firms participated in the study. Only those with regular positions, individuals performing key functions in the company qualified as respondents. It is expected that these participants were proficient by virtue of knowledge and experience with regard to specific phenomenon of interest under study.

Moreover, multiple regression analysis was employed as statistical tool to determine the predictive relationship of sustainability performance towards the independent variables sustainable management practices, strategic orientation and organizational culture.

RESULTS AND DISCUSSION

1. Level of sustainability performance of manufacturing firms in Region XII

1.1 Level of sustainability performance in terms of economic performance. Shown in Table 1 is the level of sustainability performance in terms of economic performance among



manufacturing firms in Region XII which generated an overall mean score of 4.07 (SD = .57) considered by respondents as *high*. This means that the overall response of the key personnel in manufacturing firms in terms of economic performance was oftentimes manifested. More specifically, strengthening overall market share and attaining improvement in return on investment (ROI) appeared to have a positive impact on economic performance. However, it was found to have the least impact in cost-effectively meeting customer expectations in support of green approaches. Nevertheless, a vast majority, five out of seven items, of manufacturers' key personnel responses categorized that the impact of sustainability performance with respect to economic measure was *high*. This supports the study of Arowoshegbe and Emmanuel (2016) who opined that the financial aspect of sustainability reporting concentrates on economic value and connects the company's business growth with economic development.

Table 1
Level of Economic Performance

Indicator	SD	Mean	Descriptive Level
Economic Performance			
1. accomplishment in decreasing cost of materials	0.71	4.02	High
2. having sustainability planning goals with overall cost reduction	0.79	3.94	High
3. achieving improvement of return on investment (ROI)	0.65	4.21	Very High
4. having strengthened firm's overall market share	0.60	4.32	Very High
5. attainment in improving profit growth	0.68	4.08	High
6. achievement of cost/benefit from materials recovery	0.73	4.05	High
7. cost-effectively meeting consumer requirements in support of green strategy	0.71	3.88	High
Overall Mean	0.57	4.07	High

1.2 Level of sustainability performance in terms of environmental performance. Environmental measure of sustainability performance has a positive impact among manufacturing firms in Region XII with scores ranging from $\bar{x} = 3.26$ (*moderate*) to $\bar{x} = 4.12$ (*high*) as presented in Table 2.

Table 2
Level of Environmental Performance

Indicator	SD	Mean	Descriptive Level
Environmental Performance			
1. achievement of corporate goals supporting environmental activities/groups	0.71	3.61	High
2. accomplishment of firm's corporate goal for reduction of air emissions	0.75	3.53	High
3. meeting corporate stipulations and criteria in overall reduction of solid wastes	0.67	4.04	High
4. attaining decrease in frequency of environmental accidents	0.66	4.12	High
5. having succeeded in reducing carbon footprint according to projections	0.89	3.26	Moderate
6. having succeeded in an overall improvement of environmental goals	0.85	3.57	High
7. achieving corporate environmental requirements in support of green strategy	0.85	3.59	High
Overall Mean	0.64	3.67	High

In particular, attainment towards reducing the frequency of ecological damage suggests having the most impact on environmental performance while the assessment of having succeeded in minimizing carbon footprints based on projections got the least impact. Nonetheless, a huge chunk, six out of the seven items, of manufacturers' key personnel responses



classified that the impact of sustainability performance in relation to environmental measure was *high*. This accentuates the study of Schroeder and DeNoble (2014) who pointed out that a sustainable and responsible business should mitigate the negative effects of environmental risks and makes effective use of renewable energy resources, consider the use of recyclable products and handle waste and other contaminants properly.

1.3 Level of sustainability performance in terms of social performance.

Exhibited in Table 3 is the level of sustainability performance in terms of social performance among manufacturing firms in Region XII which revealed an overall mean score of 3.79, rated by respondents as *high*.

Table 3
Level of Social Performance

Indicator	SD	Mean	Descriptive Level
Social Performance			
1. employing better practices to improve health and safety of community	0.76	3.84	High
2. lowering adverse impact of products/services on local community	0.82	3.59	High
3. having utilized socially-responsible logic benefitting employees/community	0.77	3.71	High
4. significantly improving position in the market	0.71	3.97	High
5. enhancing the firm's image and reputation in the community	0.78	4.05	High
6. achieving requirements focused on community during collaboration sessions	0.87	3.60	High
Overall Mean	0.69	3.79	High

This means that the overall response of the key personnel in manufacturing firms in terms of social performance was oftentimes demonstrated. Notably, enhancing the firm's image and reputation in the community came out to have the most impact. In general, all six items

of manufacturers' key personnel responses labeled that the impact of sustainability performance with respect to social measure was *high*. Greater variability in the scores assigned by the respondents (SD = .69) was also observed. The high social performance result of the study can be supported by the research work of Smith Orlitzky et al. (2017) who asserted that a very sustainable social company who wants to transform societies and achieve sustainable social growth will engage in closely monitoring the communities around them, establish unbarred communication networks and building robust partnerships.

2. Influence of Sustainable Management Practices, Strategic Orientation and Organizational Culture on Sustainability Performance

Table 4
The extent of Influence of Predictor Variables on Sustainability Performance

Independent Variables	Sustainability Performance (Dependent Variable)			
	β	<i>B</i>	<i>t</i>	<i>Sig</i>
Constant	0.1700	0.1351	1.26	0.209
Sustainable Management Practices	0.38152	0.05343	7.14	0.000
Strategic Orientation	0.34692	0.05304	6.54	0.000
Organizational Culture	0.22949	0.03984	5.76	0.000
<i>R</i>	0.700			
<i>R</i> ²	0.837			
<i>F</i>	307.69			
<i>p</i>	0.000			

**p*<.05

Table 4 displays a predictive analysis of the possible extent of influence among the three dependent variables to the dependent variable under study. As it can be deduced from the table, when sustainability performance was regressed on sustainable management practices, strategic orientation, and organizational culture, it generated an R^2 of 0.837 while F-value of this regression was measured at 307.69 with p-value (0.000). The computed R^2 value of 0.837 denotes that 83.7 per cent of the variance of sustainability performance was affected by these three independent variables and the remaining 16.3 per cent was attributed by outside factors not covered in the study. Therefore, the combination of sustainable management practices, strategic orientation and organizational culture, significantly influence the sustainability performance of manufacturing firms. Furthermore, the table shows that of the three independent variables, all of which exhibited significant influence with p-value (0.000) and sustainable management practices were the best predictor with the highest standardized beta of 0.38152, followed by strategic orientation with standardized beta of 0.34692 and organizational culture with the lowest standardized beta of 0.22949. This indicates that sustainable management practices had the highest degree of influence compared to strategic orientation and organizational culture and significantly contributed to the variations in sustainability performance. Suitably, with these significant results, the null hypothesis of no significant influence was rejected.

The influence of sustainable management practices to sustainability performance supported the research endeavor conducted by Maletič (2013) among organizations in four European countries wherein the results indicated that sustainable management practices greatly affect sustainability performance. This was in agreement also with the conclusion arrived by Abdul-Rashid et al. (2017) in their study among ISO certified manufacturing companies in Malaysia where green production mechanism has a huge impact in all areas of sustainability assessment. Interestingly, another study

validates the result conducted by Sapukotanage et al. (2018) among manufacturing firms in South Asia which revealed that sustainable practices lead to sustainability performance. Hence, it can be derived from the findings of this study that implementing sustainable management initiatives is vital for manufacturers if they wish to improve their sustainability performance.

The result on the influence between strategic orientation and sustainability performance supports the study of Aziz et al. (2018). They found out that strategic directives which revolve around financial, ecological and social aspects have a significant impact on sustainable development activities of publicly listed Malaysian companies; which ultimately led to better business outcomes. Hence, it was imperative that the seemingly separate dimensions of sustainability should be integrated in a logical and comprehensive manner into the stages of sustainable policy making of the firm. Further, acknowledging the three strategic thrusts of sustainability at the corporate level means nothing if it will not be cascaded into the entire organization. On the contrary, the results departs from the view of Hao and Song (2016) who argued that strategic orientation does not automatically lead to better performance. Perhaps, the mechanism of pursuing sustainable oriented strategies remains a challenge for some firms because of the overlapping elements of the measures of sustainability performance (Nelson, 2015). However, the research gap of strategic orientation in the field of corporate sustainability management has been addressed by Baumgartner and Rautler (2017) through the introduction of three dimensions of strategic management— strategy content, context and process; to clarify how it can help yield economic, environmental and social values to the firm. The authors accentuate that this discrepancy may be negated by defining specific sustainability opportunities, advantages, threats and trade-offs in order to capture the potential business and social values it will derive.

Finally, the findings of the study by Übüs and Alas (2009), which surveyed Estonian, Chinese, Japanese, Russian, Czech, Finnish,

German and Slovak business enterprises, can be attributed to the effect between organizational culture and sustainability. To be able to gain sustainable competitive advantage at the organizational level, organizations have to focus on the core values and cultural characteristics and match them with their policy, processes, and management systems.

CONCLUSIONS

The following notable conclusions were drawn from the study:

1. Results reveal that the level of sustainability performance among manufacturing firms in Region XII is high.
2. The combination of sustainable management practices, strategic orientation and organizational culture using multiple linear regression analysis confirmed that these variables significantly influence the sustainability performance of manufacturing firms. Specifically, the independent variable, sustainable management practices, has the strongest impact on sustainability performance, followed by strategic orientation and the least is organizational culture.

RECOMMENDATIONS

The researcher proposes the following recommendations, based on the results and conclusions of this study:

1. To utilize potential gains to be derived in executing corporate sustainability, management may ascertain that the identified sustainable management efforts and strategic thrusts blend together well. This may be accomplished by regularly evaluating management processes to ensure continuous alignment with the company's goals, purpose and development.
2. Although sustainability performance reporting differ from one entity or

industry to the other and vice versa, it is somehow feasible to combine measures across and within areas in order to create national, industrial and company-level indices. Hence, executives, managers, supervisors and departmental heads may need to ensure that all measures of performance are intertwined to the overarching triple bottom line objectives to further improve its sustainability performance.

3. Also, manufacturing firms may acknowledge the kind of organizational culture which suits them especially in creating effective and sustainable programs. Because sustainability is a transformative process of change that is unraveling, it becomes apparent that its transition requires openness to change and learning. As companies move to a relatively new and dynamic business paradigm, manufacturing organizations should take organizational learning seriously and assess their corporate culture before launching an extensive management change effort.
4. Lastly, for future research, a similar study may be pursued investigating other variables that affect sustainability performance with focus on leading firms, service-oriented firms and micro, small and medium enterprises (MSMEs).

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