



EFFECT OF SUSTAINABLE PRACTICES ON ORGNIZATIONAL PERFORMANCE: INNOVATIVE PERFORMANCE AS MEDIATOR

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ABSTRACT- Practitioners and researchers have been interested in corporate sustainability for the last decade. Organizational survival and competitive advantage depend on the successful adoption of sustainability practices. This research, which is based on institutional theory, seeks to improve understanding of the relationship between sustainable practices and organizational performance, both directly and indirectly through non-financial performance. A survey questionnaire was used to obtain data from the management staff of Pakistani telecommunication companies. Based on 211 participants' responses this study found that both sustainability practices (exploration and exploitation) have a positive and significant association with organizational economic success. The mediation analysis shows mediators (innovative performance) partially mediate the relationship between sustainability practices and organizational economic performance. This is the first study of its kind in Pakistan to validate sustainability practices on a massive scale.

Keywords: Sustainability Practices, Quality Performance, Innovative Performance, Organizational Performance, Banking Organizations.

I. INTRODUCTION

All businesses are needed to start and follow sustainability practices to survive (Delai and Takahasi, 2013). The majority of firms that implement sustainability green practices to communities, the environment, and concentrating economic and social benefits are known as Triple Bottom Line (Maletic et al., 2014a). Past researchers have studied sustainability and its related scopes for the past ten years, and they have yet to identify the term sustainability and explore the various sustainability dimensions. Maletic et al., (2017), Khattak et al., (2018), Maletic et al., (2016) discovered two possible dimensions that are sustainable exploration and sustainability exploitation approaches. The researcher's primary goal was to investigate these three approaches sustainable exploration (SEXP) and sustainability exploitation (SEXPL) in depth.

The primary goal of the sustainability exploration approach is to help businesses discover a long-term solution for developing competencies as well as innovative techniques for solving a problem. Secondly, the sustainability exploitation approach focused on enhancing efficiencies by incorporating product and procedure changes (Maletic et al., 2017). Hahn and Scheermesser, (2006) discussed that various organizations confronted problems while adopting sustainable approaches. However, a few major issues that organizations face include institutionalization, cultural barriers, and rules (Campbell, 2007). Likewise, they are aware of the challenges that the organization will face when implementing sustainable practices in their business (Wijethilake, 2017; Jamian et al., 2012). Although, a few researchers have found a strong connection between sustainability and innovative performance (Koo et al., 2015; Wagner, 2010; Wagner and Schaltegger, 2003) and a firm financial performance (Khattak et al., 2018; Weber, 2008). According to past studies, organizations can achieve their effective economic and sustainable benefits by implementing and implementing sustainability approaches (Khattak et al., 2018; Maletic et al., 2016). He and Wong (2004) studied the relationships between sustainability approaches and organizational performance and found that sustainability approaches are required for improving economic performance.

Similarly, Sustainability approaches have been found to have a positive impact on organizational performance in previous studies conducted by several researchers from various states or countries (e.g., Khattak et al., 2018; Matten and Moon, 2008; Maletic et al., 2017). Organizations today are adopting and implementing both sustainability dimensions to achieve long-term competitive benefits. The adaptations of both approaches (SEXP and SEXPL) are identified in a range of countries and organizations, depending

on the nature and structure of the organizations (Bansal, 2005). Researchers in the past have suggested that how firms can achieve sustainable development by implementing practices and plans for adopting sustainability (Bansal, 2005; Lozano, 2012).

This paper contributes to the emerging literature in at least three important ways. This study tries to empirically validate the approaches of Sustainability Exploration and Sustainability Exploitation in the context of country Pakistan. Secondly, brings a clear perspective on the relationship between sustainability approaches and the financial performance of organizations. Third, this study examined a possible mediator (innovative performance) in the relationship between both sustainability approaches (SEXP and SEXPI) and organizational performance.

II. THEORETICAL PERCEPTION OF THE RELATIONSHIP BETWEEN SUSTAINABILITY AND PERFORMANCE

Many business firms are now adopting a sustainability approaches mindset rehabilitated from diverse pollution and waste control to socio-economic and environmental effectiveness (Young and Tilley, 2006). Organizations achieve economic benefits by implementing these practices, which are related to social performance, which exploits important social impact or reduces the negative effect, and environmental performance, which minimizes waste and reduces resource utilization (e.g., Wagner and Schaltegger, 2006; Salzmann et al., 2005). However, the researchers' primary focus is on the matter of whether it "paying" to be both sustainable and green (Marcus and Fremeth, 2009; Siegel, 2009). Business organizations will not generally implement sustainability approaches because of a constitutional obligation, but as a commitment to sustainable development accords with their attention to satisfying basic stakeholders and have an impact on an organization's productivity and economic performance (Marcus and Fremeth, 2009).

Over the last decade, the relationship between environmental and economic performance has been received a lot of attention in the existing literature (Wagner & Schaltegger, 2004). The past studies have revealed that firms can get advantages from greening their process in terms of reduction of cost, increase productivity, economic, and innovative performance (Koo et al., 2014; Iraldo et al., 2009). According to Psomas et al. (2011), environmentally friendly management provides a variety of competitive advantages, ranging from internal performance to external marketing benefits. The triple bottom line performance benefits are associated with an organization's commitment to building competitive assets in their operating system using an environmental management system standard: financial, social, and market benefits (Prajogo et al., 2012). As a result, environmental sustainability could be seen to contribute to both economic results and financial benefits (Wagner, 2005). On the other hand, few empirical studies have found a negative link between environmental and financial performance (Wagner et al., 2002). The relationships between broader aspects of sustainability performance and economic performance have recently gained much attention in the literature (Wagner, 2010). For example, an empirical study by Chang and Kuo (2008) found that there may be a significant mutual causality between sustainability and profitability.

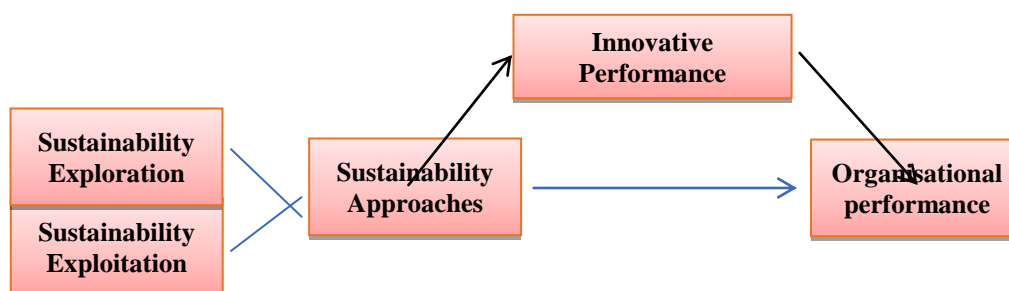


Figure 1: Conceptual work of the current research study

III. METHODOLOGY

3.1 Sample size and collection

The sample size of the current study was middle level employee of the telecommunication companies which operating in Pakistan. The data was collected from the selected participants through structured questionnaires. The questionnaire was sent in two phases in order to receive a response rate.

The respondents who were selected for a study sent a total of 650 questionnaires. Only 211 of them were returned, giving a response rate of 32.5%.

3.2 Respondents Profile of our study

Model Table No 1

Genders description	Participants	Percentage
<i>Customer Services Manager</i>	53	25.1%
<i>Individual Contributors staff</i>	77	36.5%
<i>Entry Level staff</i>	81	38.4%
Total	211	100% (N-211)

3.3 Mediation analysis

To examine the proposed mediator has any effect on the relationship between sustainability approaches and organizational performance; we followed the SPSS technique for examining the indirect effect in multiple mediation models proposed by Preacher and Hayes (2013).

3.4 Instruments

From a Pakistani context, this research paper is an attempt to validate the sustainability SEXP and SEXPI tools. The study scales were changed to meet the study's objectives. All of the items were classified on a five-point Likert scales, with 1 indicating strongly disagree and 5 indicating strongly agree. The scale of Maletic et al., (2016) was insured to examine the approaches of sustainability (SEXP and SEXPI) with fourteen items. Maletic et al., (2016) developed a four-item scale for measuring organizational performance. Likewise, for innovative Performance (IP), Maletic et al., (2014) three items scale were used.

3.5 Scale Reliability

Model Table No 2

Construct	Names	No of items	Alpha values
<i>Independent Variables</i>	Sustainability Exploration	8	.792
	Sustainability Exploitation	6	.773
<i>Dependent variable</i>	Organizational Performance	4	.813
<i>Mediating variable</i>	Innovative Performance	4	.743

Model table no 2 shows, scale reliability analysis that gives sufficient evidence about instruments reliability. According to the finding, the values of Cronbach Alpha of all study variables are above .7, which confirms the reliability of the instruments. However, the items used in this research are reliable.

So all of the constructs used in this research have good reliability values, to validate the content, convergent, and discriminant validity, we applied several econometric measures. A good reliability value does not confirm that the scale is valid. However, for the validation of the scale, all three types of validity analyses were conducted.

As there is no statistical technique available to test certain validity, subject matter experts, instrument construction experts, and previous literature were used to verify content validity (Hair et al., 2010). Convergent validity is measured using factor analysis. Thus, to confirm whether the measurement items coverage into a theoretical concept, exploratory factor analysis was conducted.

3.6 KMO and BTS tests

Model Table No3

Variables	Names	KMO values	BTS values
<i>Independent variables</i>	SEXP	0.853	$X^2(1030.69), p < .05$
	SEXPI	0.871	$X^2(675.45), p < .05$
<i>Dependent variable</i>	OP	0.790	$X^2(802.23), p < .05$
<i>Mediating variable</i>	IP	0.761	$X^2(223.16), p < .05$

The above model table no 3 shows that the sample of the current study is adequate based on the values of KMO of all the constructs is above .50. Likewise, the BTS values for all variables are significant, indicating that the alternative hypotheses are accepted. The exploratory factor analysis (EFA) was used to verify any cross-loading issues of the scale instruments. According to statistical findings, Factor loading values for all of the elements were above.60, (ranging from .65 to .90).

Confirmatory factor analysis (CFA) is also used to validate the sustainable approaches (exploitation and exploration) scales. In the following model table no 4, CFA's findings are summarized. The fit indices for both approaches of sustainability (exploration and exploitation) are satisfactory. The standardized loading values lies between 0.60 to 0.91 and also, all the study variable is significantly related to the constructs. The χ^2/df values are less than 2 and **GFI** and **AGFI** values are closer to .90. But the values of CFI are greater than 0.90 and RMSEA is below 0.05. However, all of these values show a good model-data fit.

3.7 CFA

Model Table No 4

Variables	Items	CMIN	DF	CMIN/DF	RMR	GFI	AGFI	CFI	RMSEA
SEXP	8	38.272	23	1.83	.043	.977	.879	.855	.038
SEXPI	6	103.238	59	1.82	.05	.892	.895	.936	.45
Recommended values (Hair et al., 2010)				≤2	≤.05	≤.9	≤.9	≤.9	≤.05

3.8 Regression Analysis

Model Table No 5

Variables	Values	Model
SEXP	.509	Values of t-3.77, p<.05
SEXI	.467	Values of t-3.51, p<.05
R2	.801	
R2 (adjusted)	.800	
F	683.46	
P overall	.000	

As per regression results, both sustainability exploration and exploitation have a significant and positive relationship with organizational performance ($\beta = .509$ and $.467$, respectively). Sustainability exploration has a high beta value, indicating that it leads more to explain variance in the dependent variable. R2 reports for 80% of the variation in the dependent variable. The high value of F and the significant value of p indicate its fitness and significance of the overall model.

3.9 Mediation Analysis

Model Table No 6, Coefficient

Part 1						
MV	IDV $M \rightarrow$	M $DV \rightarrow$	Direct effect	Indirect effect	Total effect	Sobel test
IP	.655 (p=.000)	.794 (p=.000)	.334 (p=.000)	.508	.678	Values of z=6.89, (p=.000)
Part 2						
MV	IDV $M \rightarrow$	M $\rightarrow V$	Direct effect	Indirect effect	Total effect	Sobel test
IP	.639 (p=.000)	.798 (p=.000)	.377 (p=.000)	.331	.666	Values of z=6.82, (p=.000)

The first portion of the table describes the mediation of possible mediators in the relationship between SEXP and organizational success. The second portion of the table explains the mediation of mediators on the relationship between SEXPI and organizational performance. According to the finding, the direct effect is significant of all the relationships. The z and p values of the mentioned relationship are significant;

indicating that the mediators are partially mediates the association between both Sustainability practices and organizational performance.

IV. RESULTS AND DISCUSSION

Past research study has contributed to a better understanding of sustainable practices (Khattak et al., 2018; Pujari, 2006; Maletic et al., 2016). Managers and researchers are working to carry out how to adapt sustainability practices. Based on a detailed study of both sustainability practices, it can be extended to a wide range, including productivity and innovation. In this era of fierce competition, an organization's sustainability practices hinge on the proper use of its existing capital while still exploring new abilities. Although no prior research was conducted to resolve the exploitation-exploration issue except Maletic et al., (2014 and 2016) within the framework of sustainability. The current study empirically examined and validated these two separate concepts within the sustainability framework. Previous studies were focused on the theoretical concepts that sustainability practices improve production and long-term success, but no empirical evidence was provided to back up that assertion (Wagner, 2010; Maletic, 2014a). However, few research studies examine whether implementing sustainability practices would lead to financial gains for businesses, although few studies have explicitly measured performance using a broader range of performance metrics.

However, the fact that our research study examines the ways through which both practices improve organizational performance (financially) also adds to the sustainability literature by highlighting the role of sustainability innovation (Maletic et al., 2016). Our study also found that IP mediates the relationship between sustainability practices and OEP. One possible cause is that innovation is mainly concerned with sustainability. Organizations must reinvent their goods and services to stay competitive. Our studies in the field of sustainability exploration practices reinforce the belief that implementing sustainability practices into product development will help businesses enhance their financial performance. According to Kuei and Lu (2013), TQM concepts must also be incorporated into sustainability management. As a result, organizations must incorporate sustainability-oriented practices into the product or system development level.

Practical Implications

Despite the values of sustainability exploration and exploitation practices, there is also a lot of confusion because practitioners and researchers still had mixed findings. In general, the research helps organizations in a range of aspects to effectively integrate and incorporate sustainability practices. Managers should recognize both sustainability practices, i.e. exploration and exploitation, to achieve superior output. In particular, an organization may incur substantial expenses for premature exploration and tangible effects of exploration may be anticipated after some time. On the other hand, focus entirely on exploitation, prevents organizations from generating learning and progression. To exploit the benefits of incorporating sustainability practices (SEXP and SEXPI) into their operations, businesses must consider the relationship between them, as well as the circumstances under which both or either of them can have a lesser or greater impact on innovative performance and financial benefits.

Future Research Study

The current research is confined in a few respects, so this creates opportunities for future researchers to analyze the phenomenon further. The current study relies on subjective assessments focused on managers' perceptions and does not take into account the potential flaws in perceptual data. As a result, future research studies should revalidate the study scale to tackle the concerns of generalizability. Despite the relationship between the variables studied in this research, future studies may investigate other aspects such as quality management-oriented organization culture and sustainability-oriented organization culture.

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