
CenRaPS Journal of Social Sciences

International Indexed & Refereed

ISSN: 2687-2226 (Online)

http://journal.cenraps.org/



Original Article

https://doi.org/10.46291/cenraps.v2i3.42

CenRaPS

Journal of Social Sciences

Impact of Green Supply Chain Management on Economic and Organizational Performance of Food Industry in Sindh and Punjab

Muhammad Iqbal Ahmed Siddiqui*

Danish Ahmed Siddiqui**

* Karachi University Business School, University of Karachi, Email:

iamiqbal_ahmed@hotmail.com

** Lecturer, Karachi University Business School, University of Karachi

Key Words:

Green Supply Chain, Leadership, Institutional Pressure, Economic Performance, Organizational Performance, External Green Collaboration.

Abstract:

The aim of this study to investigate the impact of green supply chain practices from the management decision-making level to the implementation of the food industry. We hypothesized that positive Institutional and Leadership Pressures would lead to external and internal Green Practices, which would in turn makes the organizational as well as economic Performance better. Institutional performance seems to have a positive and significant effect on external green practices, however, affect negatively to internal practices. Leadership pressure also has a negative effect on external green collaborations. Both internal and external factors also seem to have a positive and significant effect on both organizational and economic performance. As expected, economic performance seems to affect organizational performance, moreover, external Green Collaboration also affect Internal Green Practices, positively. Organizations and decision-makers of the food industry are provided with detailed insight into implementing a green supply chain, from multiple perspectives of the organization, which may help the decision-makers in formulating the strategies. It is a novel attempt to assess the organizational and economic performance of the food industry in Pakistan, using a modified version of the Ahmed & Najmi model, as it shed light for the first time how institutions and leadership can influence the performance of food industry through green practices.

1. Introduction

Sustainability is one of the most important challenges in the 21st century (Dyllick & Hockerts, 2002). Organizations, employees, customers, consumers, and all the stake holders are concerned about the environmental, societal and cultural preservation. Hence organizations have been eager with their corporate social responsibilities, as the suppliers and customers are also aware regarding eco-friendly environment for the present and the future generations, (Green et al., 2012). This connects the idea of green supply chain with sustainability and will be discussed in detailed in the coming chapters. The supply chain must be environmentally friendly, which should not harm the society and the environment, and thus avoid wastage of material, intake of non-bio degradable material, harmful or toxic emission in the air or in the water, (Vachon & Klassen, 2007).

In the current time the organizations of all the industry are striving to maintain sustainability among its supply chain process. The organizations are striving hard to ensure the environmental sustainability, that their process which includes materials, wastage, end products are processed and delivered without damaging the environment, (Vachon & Klassen, 2007). To ensure the sustainability and the overall health of the environment, green supply chain is integrated in the process, (Green et al., 2012)(Vachon & Klassen, 2007). With reference to the sustainability and environmental issues in Pakistan, the Sindh government has taken notice and banned the single usage of plastic bags in Sindh on Sep 27, 2019, which was implemented from October 01, 2019 across the province.

Along with the sustainability issue, another issue which rose was the expired products being held and served by the elite restaurants, including the normal restaurants too. This has created a sense of responsibility among the other restaurant management to properly procure the edible products. It has also been identified previously that the issues lie in the performance of supply chain in the food industry of Pakistan. It is the inefficiency of the supply chain operations that the packaging gets delayed and hence the products become near to expiry. Whereas the customers demand is also increasing rapidly. The notification is regarding any sort of usage which includes banning of selling plastic bags as well, by tribune report. Though the notification has been implemented by the government and the manufacturing industry and other organizations are supporting this implementation in Sindh. This is to evaluate the impact of green supply chain over the organizational performance for a logical understanding. This is also to evaluate the institutional pressure for the green supply chain implementation over the economical and organizational performance in the food industry of Pakistan.

The organizational performance of food industry is interrelated with different factors, including the domains of Marketing, Supply Chain, production etc. The problem arises when the companies do not think that taking environmental friendly initiatives are important and as per them, it might cost them more than the benefit. (Gardas et al., 2019) The organizations do not pay heed to environmental concerns, which is the main reason why green supply chain management has not yet been implemented in major of the organizations. However, as per studies the organizational performance is highly correlated with Green supply chain management by improving the products quality and convincing the consumers of how the organization is thinking of the social responsibility, along with making profits. (Aldeehani et al., 2018)

2. Literature Review

2.1. Economic Performance

Economic performance of an organization is linked with the green supply chain practices. With reference to green supply chain management, economic performance is referred as the efficient performance of the operations by reduced wastage, discharge and energy consumption and increased productivity. Previous researches have discussed and argued the relation of green supply chain implementation and its effect on the economic performance of the organization. According to Rao and Holt (2005), green supply chain practices should be implemented as it directly effects the economic performance and also improves the economic performance of the organization. elimination and reduction of waste is the main focus of green supply chain management hence, another research by Klassen and McLaughlin (1996), found that the due to the implementation of green supply chain practices in the organization, the stock prices of the companies went higher, as a matter of appreciation towards those organization.

2.2. Organizational Performance

Organizational performance is a combination of economic, environmental, and operational performance, (Rao & Holt, 2005a). To increase the organizational performance the company and the operations of the business must focus of the elimination of the wastage of the materials purchased and used for operational activities, (Hervani et al., 2005). In a previous research done by (Khan & Qianli, 2017), suggested that the economic performance of an organization can be increased and better performed if the operational activities are sustainable. It helps an organization to lead in the various performances and eventually the organizational performance improves. (Lee et al., 2012), suggests that organizational performance improves when recognized by awards. The recognition and awards for an organization increases stock rates and stock demands in the stock exchange market of a county or the country listed in. effective organizational performance can lead cost saving for the company which can may provide the firm with a competitive advantage through economical and eventually provide customers' needs in different ways.

2.3. Institutional Pressure

Institutional pressure refers to the agencies, regulatory bodies, laws, standards, that the organization in different sectors needs to follow. It is the regulators that shapes the policies that the organizations need to adopt. It helps and motivates the organizations to shape and form new policies and strategies (Zhu et al., 2013). According to (Rothenberg, 2007), government agencies pressurizes the organizations to adopt the strategies instructed by them. Different organizations in different sectors in different countries tend to follow different standards and policies set by government agencies, other regulatory bodies and any other international standard of operations that the organizations tend to follow, (Fikru, 2014).

H1: Institutional pressure has a positive effect on firm's external green collaboration. H2: Institutional pressure has a positive effect on firm's internal green collaboration.

2.4. Leadership

Leadership is a key factor in organizations performance, (Delmas & Toffel, n.d.). It has also been studied, (Salarzadeh Jenatabadi et al., 2013) that leadership is the factor that drives the

organization and also in total quality management, and other internal issues of the organization. unlike other issues, leadership plays a key role in the implementation of green supply chain management practices in the organization. during the implementation of green supply chain, leadership has been found as an important element, (Dubey et al., 2015). Any new implementation or new strategy that is being implemented in an organization must be taken positively by the employees, and it is the leaders that builds acceptability among the employees, (Sinha & Karaszewski, 2010).

H3: Leadership has a positive effect on External green collaborations. H4: Leadership has a positive effect on Internal green collaborations.

2.5. External Green Collaboration

External green collaboration refers to the idea of relationship of the organization with the stakeholders outside the organization. the external collaboration includes the suppliers, customers, partners. Previous researches have emphasized on the external collaboration for effectiveness of the strategies, (Dubey et al., 2015; Rao & Holt, 2005b; Vachon & Klassen, 2007). Over the period of time, organizations are well aware about the importance of relationship with the external resources, and specially with the supply chain partners (Dyer et al., 1998; Gimenez and Ventura, 2005; Roehrich et al., 2017). The importance of relation with supply chain partners can be understood, as the operations are dependent on the suppliers.it also includes the external resources used, while focusing on the core competencies of the organization (Zhu et al., 2008).

H5: External green collaboration has a positive effect on firm's Internal green practices.H6: External green collaborations have a positive effect on organization performance.H7: External green collaborations have a positive effect on firm's Economic performance.

2.6. Internal Green Practice

Internal green practice refers to the processes that are being followed by the organization, its employees and the management. As soon as the organization decides to adopt the green practices, all the processes, strategies, must be aligned accordingly. The top management is required to support the implementation process, (Beamon, 1999). The implementation of green practices is adopted in the entire organization, but with specific to supply chain, the processes that must be integrated are green purchasing, green logistics, green distribution, green technology, eco-design etc. (Zsidisin & Hendrick, 1998). It also includes cooperation with the eternal resources, suppliers and customers. For better outcome of sustainable strategy, the entire organization must be aligned and must have a clear understanding for successful implementation (Rao & Holt, 2005b). For the adoption and implementation of a new strategy which is a new process flow, top management is the main support the key driver in the overall organization (Delmas & Toffel, n.d.).

H8: Internal green practices have a positive effect on firm's Organization performance.H9: Internal green practices have a positive effect on economic performance.

2.7. Relationship between Economic Performance and Organizational Performance

The economic performance of an organization refers to the minimization of costs in terms of cost saving by the organization or the firm. The firm that adopts the green supply chain strategy

in its processes enjoys the minimum consumption of goods, materials, minimum wastage, minimum consumption of energy and hence it improves the firm's economic performance (Zhu et al., 2008; Zailani et al., 2012). While improved economic performance leads to improved and enhanced organizational performance as a whole (Darnall et al., 2008; Vijayvargy et al., 2017).

Previous researches have also supported the relation between firm's economic performance with organizational performance.

O10: Economic performance has a positive effect on firm's improved Organization performance.

3. Research Methodology

3.1. Research Population

In this research, the population is the executive staff of food manufacturing organizations in Sindh and Punjab. Furthermore, it is modified with only the supply chain, procurement and operations department that looks after the inventory and also the finance department because it has key role in evaluating economic performance of the organization.

3.2. Sampling Technique

There are mainly two kinds of sampling techniques, probability and non- probability technique. The probability also known as representative sampling refers is applied when the population is known to the researcher. The non -probability technique, which is also known as judgmental sampling, is applied when the population is not known. This research is based upon probability sampling technique because the population is clearly defined in the research. Furthermore, the actual technique used while collecting the data was random sampling from different institutions.

3.3. Sample Size

The sample size of the research is 300 from the total population. As per the instructions of the supervisor, a sample size of 150 from Sindh and a sample size of 150 from Punjab has been collected.

3.4. Research Instrument

The research instrument was structured questionnaire. The questionnaire consisted of two basic parts, demographics which were followed by the main constructs of institutional pressure, leadership, external green collaboration, internal green practice, organizational performance economic performance. The first part of the instrument consisted seven basic questions, and the second phase had 36 items for all the variables including independent and dependent. These statements were measured on five-point Likert scale according to the importance of the individual respondents in which 1 represented "strongly disagree" to 5 "strongly agree" (Saunders et al., 2009). The items which are used to examine the constructs are based on literature review and have been validated in previous studies. The constructs of each variable have been adopted from different sources and has been merged together in this study.

4. Data Analysis: Result and Discussion

4.1. Demographic Profile

The below table reveals the outlook of the data received of demographic profile of the respondents of the questionnaire. The demographic profile in the questionnaire included gender, age, working experience, job title and the state that they work in.

Table 4.1			
Valid Survey Cases	Number	Percentage	
Gender			
Male	258	86%	
Female	42	14%	
Age			
21 - 30	248	83%	
31 - 40	47	16%	
41 - 50	3	1%	
51 - 60	2	1%	
Other	0%	0%	
Working Experience			
01 - 10 Years	245	82%	
11 - 20 Years	52	17%	
21 - 30 Years	1	0%	
Other	2	1%	
Designation			
Officer	149	50%	
Senior Officer	74	25%	
Manager	56	19%	
Senior Manager	12	4%	
Other	9	3%	
Province			
Sindh	150	50%	
Punjab	150	50%	

The above table represents an overall profile of the respondents of the sample size of this research. The majority of the respondents are the male (86%, rest (14%)) are the female respondents in this research. Out of which the majority of the respondent lie between the ages of 21 - 30 (83%), rest the age distribution is distributed are 16% of the age between 31 - 40, and 1% of the remaining age groups. The majority of the response of work experience of years collected was from the 1 - 10 years of experience which is 82% of the entire sample size, rest was 17% for the years of 11 - 20 years of work experience. This also depicts that the retention of the employees in this industry is lie between 1 - 10 years. Due to officer position is more approachable and are more in the organizations than the senior positions, hence the data also shows that 50% were the office, 25% were senior officer, 19% were managers and 4% were senior managers. The distribution of respondents was evenly distributed as 50% from Sindh and 50% from Punjab.

4.2 Descriptive Statistics4.3. Structural Equation Modeling (SEM)

Variables and Factors		Questions	Mean	Standard deviation	Outer Loadin g	T Stats	P Values
	1	Environmental audit for suppliers' internal management	0.915	0.016	0.916	58.395	0.000
External Green	2	Suppliers' ISO14000 certification	0.828	0.020	0.829	40.743	0.000
Collaboration	3	Second-tier supplier environmentally friendly practice evaluation	0.658	0.067	0.661	9.884	0.000
	4	We as a company should share the responsibility for the environmental impacts of our suppliers	0.594	0.060	0.596	9.918	0.000
	5	We have the capabilities in purchasing to improve the environmental performance of our suppliers	0.635	0.061	0.639	10.404	0.000
	1	Decrease in the cost of materials purchasing	0.631	0.064	0.641	10.017	0.000
	2	Decrease in cost for energy consumption	0.611	0.068	0.619	9.041	0.000
	3	Decrease in the fee for waste treatment	0.610	0.072	0.606	8.394	0.000
Economic	4	Decrease in the fee for waste discharge	0.917	0.014	0.917	66.295	0.000
Performance	5	Decrease in fine for environmental accidents	0.651	0.057	0.650	11.480	0.000
	6	Increase of operational cost	-0.688	0.039	-0.692	17.922	0.000
	7	Increase of training cost	0.226	0.119	0.225	1.894	0.059
	8	Increase of costs for purchasing	-0.362	0.068	-0.357	5.263	0.000
	1	Commitment of GSCM from senior managers	0.503	0.068	0.504	7.377	0.000
	2	Support for GSCM from mid-level managers	0.550	0.079	0.574	7.288	0.000
Internal Green 3 Practices 4		Cross-functional cooperation for environmental improvements	0.346	0.093	0.338	3.639	0.000
		Total quality environmental management	0.751	0.035	0.749	21.399	0.000
	5	Environmental compliance and auditing programs	0.872	0.033	0.879	26.443	0.000
	6 ISO 14001 certification		0.841	0.017	0.841	50.248	0.000
	7	Environmental Management Systems exist	0.572	0.094	0.599	6.349	0.000
Institutional Pressure	1	Is government regulation become the barrier for the firm	0.929	0.012	0.931	75.624	0.000
	2	Central government environmental regulation	0.934	0.012	0.935	75.993	0.000
	3	Regional environmental regulations	0.901	0.026	0.902	35.060	0.000
Leadership	1	Our top management supports a long-term quality improvement process	1.000	0.000	1.000		
	1	Average return on investment over the past three years	0.875	0.025	0.875	34.428	0.000
Organizational	2	Average profit over the past three years	0.925 0.945	0.011	0.927	83.164	0.000
Performance	3	Profit growth over the past three years		0.010	0.947	95.192	0.000
2		Average return on sales over the past three years	0.742	0.033	0.740	22.470	0.000
	5	Average market share growth over the past three years	0.895	0.021	0.898	42.657	0.000
	6	Average sales volume growth over the past three years	0.703	0.040	0.709	17.584	0.000
	7	Average sales (in Rupees) growth over the past three years	0.929	0.008	0.929	123.424	0.000

Structural equation modelling is used to analyze the structural relation of the variable of the model. It is the improved version and a combination of regression analysis, factor analysis. Structure equation modelling helps to test multiple variables, decedent, moderator, mediator

along with the independent variables to test in one time, while previous analysis used to test one relation at one time. Hence structure equation modelling is considered to be more preferable when running the hypothesis, (Hair Jr, Hult, Ringle, & Sarstedt, 2016; Wetzels, Odekerken-Schröder, & Van Oppen, 2009; Wong, 2013).

4.4. Outer Model Measurement

4.4.1. Convergent Validity

Convergent validity is related to measure the relationship of the two constructs between them that has been related theoretically and in the research framework, (Mehmood, & Najmi, 2017; Ahmed & Omar, 2018). It is also referred as whether the variables are correlated to each other statistically, Campbell and Fiske (1959). It is the test of correlation of different variables or measures in the research. Although it is also quite rare that the variables are completely correlated. To understand the convergent validity of the variables of this study, the table below reveals the result of composite reliability and Average Variance Extracted.

Constructs	Composite Reliability	AVE
Economic Performance	0.581	0.385
External Green Collaboration	0.854	0.545
Institutional Pressure	0.945	0.852
Internal Green Practices	0.837	0.442
Leadership	1.000	1.000
Organizational Performance	0.954	0.749

The threshold value should be above 0.60 (Henseler et al., 2009). The above table shows the composite reliability and average variance extracted as stated by Hair et al., 2013. The composite reliability should be 0.60 and above, while the table shows the results, economic performance is the only under 0.60. whereas the AVE should be greater than 0.50 and in the above provided results, economic performance and internal green practices fail to achieve the results (Hair et al 2013; Fornell and Larker, 1981).

4.5. Discriminant Validity

The discriminant validity is referred as the test of variables which are unrelated to each other in the research, (Najmi & Ahmed, 2017). In another words, discriminant validity is said to be individual or separate variables of the underpinned by the theory (Bagozzi 1981; Campbell and Fiske 1959; Fornell and Larcker1981). Te test cretria of discriminant validity in which the variable is considered to be independent from the other variable must be higher than 0.1 (Gefen and Straub, 2005).

Constructs	Items	EP	EGC	IP	IGP	LP	OP
	EGC 1	0.722	0.916	0.093	0.665	0.053	0.397
	EGC 2	0.748	0.829	0.060	0.740	-0.251	0.403
External Green Collaboration	EGC 3	0.420	0.661	0.402	0.265	-0.176	0.369
Conaboration	EGC 4	0.426	0.596	0.514	0.362	-0.099	0.410
	EGC 5	0.403	0.639	-0.148	0.649	0.109	0.169
	EP 1	0.641	0.335	-0.245	0.513	-0.052	0.367
	EP 2	0.619	0.428	-0.330	0.585	0.010	0.190
	EP 3	0.606	0.353	0.207	0.125	-0.222	0.068
Economic	EP 4	0.917	0.793	0.078	0.703	-0.052	0.564
Performance	EP 5	0.650	0.591	0.335	0.407	-0.447	0.153
	EP 6	-0.692	-0.434	-0.203	-0.254	0.021	-0.626
	EP 7	0.225	0.408	0.299	0.132	-0.466	0.056
	EP 8	-0.357	-0.242	-0.135	-0.268	0.320	0.007
	IGP 1	0.303	0.334	0.004	0.504	0.116	0.261
	IGP 2	0.135	0.217	-0.037	0.574	0.529	0.516
Internal Green	IGP 3	0.280	0.335	0.039	0.338	-0.532	-0.173
Practice	IGP 4	0.535	0.696	-0.155	0.749	-0.291	0.084
Tractice	IGP 5	0.571	0.613	-0.242	0.879	0.119	0.221
	IGP 6	0.733	0.735	0.132	0.841	-0.085	0.578
	IGP 7	0.006	0.168	-0.492	0.599	0.363	0.068
Institutional	IP 1	0.091	0.231	0.931	-0.116	-0.312	0.182
Pressure	IP 2	0.075	0.180	0.935	-0.166	0.088	0.304
Tressure	IP 3	0.146	0.205	0.902	-0.007	0.087	0.403
Leadership	LP 1	-0.230	-0.107	-0.069	0.004	1.000	0.284
Organizational Performance	OP 1	0.503	0.460	0.417	0.292	0.034	0.875
	OP 2	0.438	0.463	0.293	0.303	0.388	0.927
	OP 3	0.454	0.468	0.315	0.377	0.376	0.947
	OP 4	0.507	0.292	0.356	0.209	-0.239	0.740
	OP 5	0.327	0.348	0.127	0.371	0.565	0.898
	OP 6	0.094	0.216	0.098	0.229	0.778	0.709
	OP 7	0.539	0.511	0.149	0.534	0.275	0.929

The above table depicts the result of discriminant validity through the square root of average variance extracted, which is highlighted with bold in the diagonal line. The bolded items are the absolute value of the constructs in the same row and column in regards to their correlations with them. The bolded items are the highest in the row and column, hence proving that the discriminant validity. Therefore, the study confirms that the Fornell and Larcker criterion for discriminant validity has been validated through the statistically test.

Constructs	EP	EGC	IP	IGP	LP	OP
Economic Performance	0.621					
External Green Collaboration	0.769	0.738				
Institutional Pressure	0.109	0.223	0.923			
Internal Green Practices	0.660	0.753	-0.112	0.665		
Leadership	-0.230	-0.107	-0.069	0.004	1.000	
Organizational Performance	0.513	0.478	0.308	0.394	0.284	0.866

4.6. Model Fit Measures

The fitness of the model in SEM-PLS is defined by various measures such as standardised rootmean-square residual (SRMR), and the exact model fits like d_ULS and d_G, Normed Fit Index (NFI), and χ^2 (Chi-square). The model fit measures consisting the measured value of both saturated model as well as the estimated model is reported in above Table. The saturated model assesses the correlation between all constructs. The estimated model, on the other hand, takes model structure into account and is based on total effect scheme.

Fit Summary						
	Saturated Model	Estimated Model				
SRMR	0.195	0.203				
d_ULS	18.918	20.470				
d_G	16.949	17.077				
Chi-Square	12605.246	12741.982				
NFI	0.283	0.275				

Regression

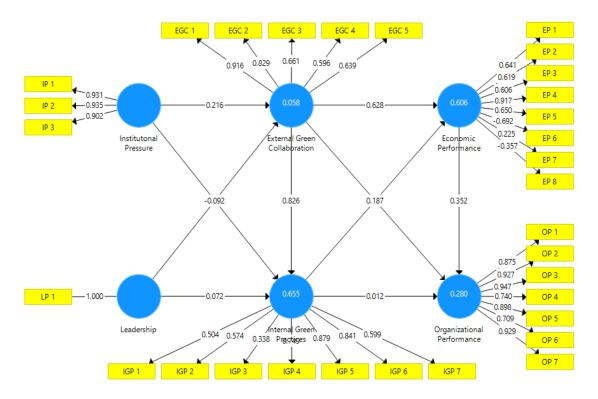
Variables	R	R Square
v ar lables	Square	Adjusted
Economic Performance	0.606	0.604
External Green Collaboration	0.058	0.052
Internal Green Practices	0.655	0.652
Organizational Performance	0.280	0.273

The above table shows the result of regression. Regression analysis basically shows the impact of the data. The result of regression analysis of economic performance, organizational performance, external green collaboration, and internal green practice is shown in the above table. The value of R-Square is considered acceptable when the it is higher than 26%, Cohen j (1988). The above table reveals acceptable relevancy of the independent variables on the dependent variables on the structural model. Economic performance has been positively influenced by all the independent variables through 26.6%. also, internal green practices also showcase that it has positive predictive relevance by the other independent variables through 65.5%. similarly, organizational performance also reveals that the predictive relevance of 28% accumulating other independent variables. Only external green collaboration is the lowest of all, with a 5% including all the other variables.

5. The Structural Model (Inner Model) And Hypotheses Testing

The structural model helps to understand and analyses the complex relations of the variables, Marko Sarstedt & Jun-Hwa Cheah (2019). The structural model was also tested and run on the SmartPLS 3.2.3 (Ringle, Wende and Becker, 2015). The structural model was run through bootstrapping (Efronand Tibshirani, 1968, Haenlien and Kaplan, 2004). The snapshot of the result after running the test is attached below along with the interpretation of the results.

In PLS-SEM, bootstrapping is one of the key strides, which gives the data of constancy of factor guesstimate. Sub-tests are drawn everywhere from the first example including substitution, in this process (Hair, Matthews, Matthews, & Sarstedt, 2017). Bootstrapping provides the information of stability of coefficient estimate. In this process, a large number of sub-samples are drawn from the original sample with replacement (Hair et al. 2016). After running the bootstrap routine, SmartPLS shows the t-values for structural model estimates derived from the bootstrapping procedure. The results of path coefficients for all the hypothesis are shown in the following table. The t-value greater than 1.96 (p < .005) shows that the relationship is significant at 95% confidence level ($\alpha = 0.05$). Paths showing whether the relationship between measured and latent variables are significant or not. The path diagram showed in figure 2.



	Estimate	Mean	Standard	Т	Р	Results
	s	(M)	Deviation	Statistics	Values	
						Accepte
EP -> OP	0.352	0.363	0.089	3.935	0	d
						Accepte
EGC -> EP	0.628	0.63	0.066	9.565	0	d
EGC ->						Accepte
IGP	0.826	0.827	0.023	35.796	0	d

EGC ->OP	0.198	0.193	0.126	1.574	0.116	Rejected
						Accepte
IP -> EGC	0.216	0.216	0.091	2.373	0.018	d
						Accepte
IP -> IGP	-0.291	-0.28	0.039	7.558	0	d
						Accepte
IGP -> EP	0.187	0.191	0.068	2.734	0.006	d
IGP -> OP	0.012	0.009	0.113	0.109	0.913	Rejected
LP -> EGC	-0.092	-0.09	0.055	1.677	0.094	Rejected
LP -> IGP	0.072	0.062	0.046	1.562	0.119	Rejected

The results revealed that the economic performance has significant impact on organizational performance ($\beta = 0.352$, p < 0.001), whereas external green collaboration has statistically significant impact on economic performance ($\beta = 0.628$, p < 0.05). moving on to external green collaboration has significant impact on internal green practices ($\beta = 0.826$, p < 0.05), while external green collaboration also has statistically significant impact on organizational performance ($\beta = 0.198$, p < 0.05). Institutional pressure has significant impact on external green collaboration ($\beta = 0.216$, p < 0.05), while on the other hand institutional pressure has insignificant impact on internal green practices ($\beta = -0.291$, p < 0.05). Internal green practices also have statistically significant impact on economic performance ($\beta = 0.187$, p < 0.05), but the impact of internal green practices is insignificant on organizational performance ($\beta = -0.092$, p < 0.05). The Leadership has insignificant impact on external green collaboration ($\beta = -0.092$, p < 0.05), including the impact of leadership is insignificant on internal green practice ($\beta = 0.072$, p < 0.05)

6. Mediation Analysis

According to the recommendation of Williams, Vandenberg, and Edwards (2009) the intervention or mediation impact can be culminated when the product of the way between Exogenous variable and the mediator (named as path a) and the way between mediator and endogenous variable (named as path b) are significant statistically. (Base ppr). Thus, mediation analysis is used to evaluate the cause and effect relationship between an independent and dependent variable through the involvement of third illustrative mediator variable (Hair et al., 2016). The approach of bootstrapping is appropriate for mediation investigation in the light of fact that it makes no supposition about the sampling division of statistics and can be applied to little sample sizes (Hair et al., 2016).In PLS- SEM ,to draw the mediation analysis the initial step is to evaluate the direct or immediate impact of independent variables on the endogenous variable, which ought to be significant if mediator is not involved (Zhao, Lynch & Chen, 2010). Below is the table of Specific Indirect Effects showing the mediating effects result.

Specific multicet Effects	
Mediating Relations	P Values
IP ->EGC ->EP	0.021
EGC->IGP->EP	0.009
IP->IGP->EP	0.013
IP->EGC->IGP	0.021
IP->EGC->EP->OP	0.036
EGC->EP->OP	0.000

Specific Indirect Effects

Results suggested that EGC, as well as IGP have a positive mediation effect on the IP and EP relationship. Institutional pressure affects organizational performance through enhancing ECG, which in turn also enhancing economic performance. ECG also affect economic performance through internal Green SC (IGP)

7. Conclusion

The results have revealed that economic performance has a positive effect on organizational performance. Which shows that the better the economic performance of the firm is the better the organization performs. Also, external green collaboration has positive relation with internal green practices economic performance and organizational performance. Hence, we get an idea that through external green collaboration, it will increase and also provide efficiency to the organization. Theoretically previous studies have also supported the relation between these variables and has been an important element. It also provides the organization with positive and increased outcome. It has been verified with the help of this study that the economic performance and external green collaboration provides efficiency to the performance of the organization. organization performance was evaluated on multiple constructs. The constructs include profits over the years, return on investment, sales, average profit, market share growth, sales volume. Hence these shows that while we implement the green supply chain management the return on investment, growth, sales volume, market share etc. increases. And hence it can be said that the overall efficiency of the organization increases.

Institutional pressure has a positive relation with external green collaboration but does not possess a relation with internal green practices. According to this institutional pressure may have a positive impact externally but does not possess a relation for the internal environment. this may be since to achieve goals; the employees must be free of any external body's pressures. Moving on to internal green practices it has a direct relation with economic performance but does not possess a relation with organizational performance. This is mainly due to the fact that the organizational performance has multiple other elements which has major impact of the outcome of organizational performance. In another way, there are many elements that have impact on the organizational performance, but internal green practices do not have a higher impact on it. Lastly leadership also does not have positive relation with external green collaboration and internal green practice. This proves that leadership does not have direct influence over either of the main elements of green supply chain management.

The variables that does not possess a positive relation is mainly because a variable does not have only one variable impacting it. There are multiple elements of supply chain management

which includes cooperation with customers, green logistics, eco design, external green collaboration, internal green practices, and many others. All of these mentioned elements create green supply chain, and every element has different impact on organizational performance or on economic performance. Hence over all green supply chain management does have impact but its sub variables may vary the impact. Similarly, the leadership and institutional pressure has multiple co elements that influence external green collaboration and internal green practices, which may vary accordingly.

8. Limitation, and Suggestion for Future Research

The general objective of this study was to find the impact of impact of green supply chain on economic and organizational performance. Previously the studies have been conducted on impact of green supply chain on organizational performance, and separate study for impact of green supply chain on economic performance. This study focuses on the impact on both the variables together, economic and organizational performance of the independent variable of green supply chain. There are two elements of managerial (Institutional Pressure, Leadership) and two element of green supply chain are (External Green Collaboration, Internal Green Practice) in this study. There are other factors also which are included in the managerial implementation, green supply chain and performance evaluation of the organization, but this study focuses on these six specific factors.

This study contributes in the theoretical and practical world. Theoretically it shows the relationship between the cooperation with suppliers, green purchasing, green logistics, cooperation with customers with organizational performance. This study contributes that overall cooperation with suppliers, green purchasing, green logistics, cooperation with customers has a positive relation with organizational performance among the employees. This study provides empirical contribution too. It shows the importance of cooperation with suppliers, green logistics, cooperation with customers on organizational performance. This also shows which of the three factors positively influences the satisfaction level of organizational performance, and the policy makers and employers can actually focus the important factors while implementing.

This study contributes that overall, the managerial elements of leadership and institutional pressure, and elements of green supply chain management has a positive relation on the economic ad organizational performance among the executive staff of the food manufacturing organizations. This study also shows that the factor of green supply chain, that were Internal green practices and external green collaboration has a positive impact on the overall performance of economic and organizational performances.

Hence the result of this study covers the relations of multiple elements in the food industry located in Sindh and Punjab regions. Previously the elements that was used to test the implementation had different element to analyze the outcome of the green supply chain which was modified to organizational performance. This results also shows that the implementation of green supply chain management increases the organizational performance which covers and provides a significant study in the food industry. The policy makers and management can focus the important factors while implementing green supply chain in their operations. This study also provides a clear image how important the strategic side, which is the institutional pressure and leadership, which helps n implementing the green supply chain.

References

Ahmed, W., Ahmed, W., & Najmi, A. (2018). Developing and analyzing framework for understanding the effects of GSCM on green and economic performance: Perspective of a developing country. *Management of Environmental Quality: An International Journal*, 29(4), 740–758. https://doi.org/10.1108/MEQ-11-2017-0140

Beamon, B. M. (1999). Measuring supply chain performance. *International Journal of Operations & Production Management*, *19*(3), 275–292. https://doi.org/10.1108/01443579910249714

Burki, A. A., & Khan, M. A. (2008). *Milk supply chain and efficiency of smallholder dairy producers in Pakistan*. Lahore University of Management Sciences.

Byrne, P. M., & Deeb, A. (1993). LOGISTICS MUST MEET THE" GREEN" CHALLENGE. *Transportation & Distribution*.

Carter, C. R., & Rogers, D. S. (2008). A framework of sustainable supply chain management: Moving toward new theory. *International Journal of Physical Distribution & Logistics Management*, *38*(5), 360–387.

Chan, H. K., He, H., & Wang, W. Y. C. (2012). Green marketing and its impact on supply chain management in industrial markets. *Industrial Marketing Management*, *41*(4), 557–562. https://doi.org/10.1016/j.indmarman.2012.04.002

Chin, T. A., Tat, H. H., & Sulaiman, Z. (2015). Green Supply Chain Management, Environmental Collaboration and Sustainability Performance. *Procedia CIRP*, *26*, 695–699. https://doi.org/10.1016/j.procir.2014.07.035

Croxton, K. L., Garcia-Dastugue, S. J., Lambert, D. M., & Rogers, D. S. (2001). The supply chain management processes. *The International Journal of Logistics Management*, *12*(2), 13–36.

Delmas, M. A., & Toffel, M. W. (n.d.). *Institutional Pressures and Organizational Characteristics: Implications for Environmental Strategy*. 29.

Dubey, R., Gunasekaran, A., & Samar Ali, S. (2015). Exploring the relationship between leadership, operational practices, institutional pressures and environmental performance: A framework for green supply chain. *International Journal of Production Economics*, *160*, 120–132. https://doi.org/10.1016/j.ijpe.2014.10.001

Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment*, *11*(2), 130–141. https://doi.org/10.1002/bse.323

Economy, E. C. (2007). The Great Leap Backward-The Costs of China's Environmental Crisis. *Foreign Aff.*, *86*, 38.

Fikru, M. G. (2014). International certification in developing countries: The role of internal and external institutional pressure. *Journal of Environmental Management*, *144*, 286–296. https://doi.org/10.1016/j.jenvman.2014.05.030 Green, K. W., Zelbst, P. J., Meacham, J., & Bhadauria, V. S. (2012). Green supply chain management practices: Impact on performance. *Supply Chain Management: An International Journal*, *17*(3), 290–305. https://doi.org/10.1108/13598541211227126

Hakim, C. (2000). *Research design: Successful designs for social and economic research*. Psychology Press.

Hervani, A. A., Helms, M. M., & Sarkis, J. (2005). Performance measurement for green supply chain management. *Benchmarking: An International Journal*, *12*(4), 330–353. https://doi.org/10.1108/14635770510609015

Jayaram, J., & Tan, K.-C. (2010). Supply chain integration with third-party logistics providers. *International Journal of Production Economics*, *125*(2), 262–271.

Kanji, G. K., & Wong, A. (1999). Business excellence model for supply chain management. *Total Quality Management*, *10*(8), 1147–1168.

Khan, S. A. R., & Qianli, D. (2017). Impact of green supply chain management practices on firms' performance: An empirical study from the perspective of Pakistan. *Environmental Science and Pollution Research*, 24(20), 16829–16844. https://doi.org/10.1007/s11356-017-9172-5

Lee, S. M., Tae Kim, S., & Choi, D. (2012). Green supply chain management and organizational performance. *Industrial Management & Data Systems*, *112*(8), 1148–1180. https://doi.org/10.1108/02635571211264609

Majumdar, S. K., & Marcus, A. A. (2001). Rules versus discretion: The productivity consequences of flexible regulation. *Academy of Management Journal*, 44(1), 170–179.

Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., & Zacharia, Z. G. (2001). Defining supply chain management. *Journal of Business Logistics*, 22(2), 1–25.

Rao, P., & Holt, D. (2005a). Do green supply chains lead to competitiveness and economic performance? *International Journal of Operations & Production Management*, 25(9), 898–916. https://doi.org/10.1108/01443570510613956

Rao, P., & Holt, D. (2005b). Do green supply chains lead to competitiveness and economic performance? *International Journal of Operations & Production Management*, 25(9), 898–916. https://doi.org/10.1108/01443570510613956

Rothenberg, S. (2007). Environmental managers as institutional entrepreneurs: The influence of institutional and technical pressures on waste management. *Journal of Business Research*, 60(7), 749–757. https://doi.org/10.1016/j.jbusres.2007.02.017

Rugman, A. M., & Verbeke, A. (1998). Corporate strategies and environmental regulations: An organizing framework. *Strategic Management Journal*, *19*(4), 363–375.

Salarzadeh Jenatabadi, H., Huang, H., Ismail, N. A., Satar, N. B. M., & Mohamed Radzi, C. W. J. bt W. (2013). Impact of Economic Performance in Organizational Capacity, Capability: A Case Study in Airline Industry. *International Journal of Business and Management*, 8(17), p112. https://doi.org/10.5539/ijbm.v8n17p112

Saunders, M. N. K., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th ed). Prentice Hall.

Sharif, A. M., & Irani, Z. (2012). Supply chain leadership. *International Journal of Production Economics*, *140*(1), 57–68.

Sinha, M., & Karaszewski, R. (2010). Leadership in global business environment through a vision creation process. *The TQM Journal*.

Vachon, S., & Klassen, R. D. (2007). Supply chain management and environmental technologies: The role of integration. *International Journal of Production Research*, 45(2), 401–423.

Vanalle, R. M., Ganga, G. M. D., Godinho Filho, M., & Lucato, W. C. (2017). Green supply chain management: An investigation of pressures, practices, and performance within the Brazilian automotive supply chain. *Journal of Cleaner Production*, *151*, 250–259.

Younus, T. (2019). Analysing the Impact of Supply Chain Practice and Preceding Cooperative Behaviour on Supply Chain Performance Efficiency: A Study on Pakistan Food Industry. 03(04), 19.

Zailani, S., Jeyaraman, K., Vengadasan, G., & Premkumar, R. (2012). Sustainable supply chain management (SSCM) in Malaysia: A survey. *International Journal of Production Economics*, *140*(1), 330–340.

Zhu, Q., Cordeiro, J., & Sarkis, J. (2013). Institutional pressures, dynamic capabilities and environmental management systems: Investigating the ISO 9000 – Environmental management system implementation linkage. *Journal of Environmental Management*, *114*, 232–242. https://doi.org/10.1016/j.jenvman.2012.10.006

Zsidisin, G. A., & Hendrick, T. E. (1998). Purchasing's involvement in environmental issues: A multi-country perspective. *Industrial Management & Data Systems*.