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## **Evaluating the impact of supplier engagement on supplier selection in chemical industry**

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**Abstract:** Supplier engagement promotes the ethical ways of working, operating which results into appropriate selection of supplier. In the competitive world the ethics in working, producing are lacking behind. Supplier engagement includes the practices like auditing the basics like human rights, environmental policies etc. which affect the human life directly. Effective supplier management will challenge and help in selecting the best supplier for long term business relationship.

**Keywords-** *Supplier engagement, supplier selection.*

### **Introduction**

In today's business environment organizations are working towards improving efficiency and effectiveness. Both marketing and procurement sections are under intense pressure to achieve their goals. Hence people are doubling their efforts and seeking ways to perform these critical functions better while reducing costs in the value-adding process to achieve more and more.

Here supplier plays very important role as far as procurement is concern as suppliers are critical to a company's success. But now a day's suppliers are being ignorant by the buyers just because the factor like Cost. This results into lack of attention towards sustainable relationship with suppliers. Hence the bonding between buyer and supplier is degrading, results into decrease in trust and partnership between them. In many cases suppliers are automatically blamed for problems that occur with product and services. Here the need for supplier engagement arises.

The importance and the need of the supplier engagement is very much visible to every industry now. Majorly the MNC's are focusing on to straighten the buyer-supplier relationship by conducting supplier engagement programs in the organization. To develop a successful relationship there has to be a perfect engagement of supplier. Supplier engagement is nothing but developing the meaningful relationships with suppliers, gaining assurance from them and driving more and more responsible business practices within the supply chain operations to deliver a secure and sustainable future.

Supplier engagement is based on the various factors like Price, quality, delivery reliability, and service etc. All these are the most important criteria used to screen potential suppliers and to move ahead with the relationship. There are also very important criteria like ethics, organizations policies, code of conducts, knowledge sharing, technology sharing etc.

Supplier engagement brings buyer and supplier's together, enabling buyer to enter into meaningful dialogue and work together to achieve common goals and commitments set for and set by both. Engagement means more than exchanging information or sharing policies. Basically it is all about having the right conversation with suppliers to achieve more.

To have perfect supplier engagement practice there is a necessity to make a right supplier selection. The aim of the supplier-selection process is to find the most suitable source or a small group of alternative sources. Thus, effort needs to be made to cultivate and maintain relationships with good suppliers. It is expected that relationships improve along with reliability of demand and supply, which leads to mutual understanding and agreement. Every company has to realize the importance of their relationship with suppliers and work continually to improve it. But there is ignorance from some enterprises as they do not realize the importance of establishing a good relationship with suppliers. If the supplier is not chosen carefully, products and services may not be delivered on time or in the correct quantity, or may be of inferior quality. Any of these may affect the organization's product or services and result into customer's dissatisfaction. At the time of supplier selection, suppliers are evaluated according to their capacity to deliver the required quality, quantity, price and post-sale services, such as timeliness of delivery. We can also select the suppliers by checking with their clients / customers as to their quality and reliability of supply. Right selection of supplier minimizes many problems. Hence to building and maintaining a good relationship with supplier is necessary for many organizations. On the other hands the companies like big MNC's find it difficult and time consuming as the number of supplier are more in their case.

Previously organizations were buying materials from one supplier only because of lack of alternate source. But this decision is not always of benefit to the company. It creates a monopoly in the market. Or, it can be that the quantity to be purchased is too small to be worth the effort of dividing it among suppliers, or because a provider has a good reputation and there is no other comparable competitor. However, healthy competition needs to exist to obtain the best from suppliers. Obtaining supplies from only one source could potentially lead to a monopoly as other suppliers in the market might disappear, which would impact on price, quality and service. Enterprises are now concerned about developing a network of suppliers, as they have realized the importance of good networks and developing long-term relationships. Organization has started developing the source for raw material throughout the world from various countries. Major reason behind is the changing economies of countries, environmental crises etc. (Ivey business journal on Buyer-supplier relationship in changing Romanian economy article "Supplier Selection Process: Relationships with supplier").

This study majorly emphasis on the factors which affects the supplier engagement and their impact on supplier selection. The necessary studies has been done through data collection from purchase managers of various chemical companies to prove that there is a great impact of supplier engagement on supplier selection and vice versa. The assessment parameters for the supplier engagement have been taken from Ecovadis. A company which gives rating for the suppliers on the basis of certain criteria like Environment policy, Safety policy, Business ethics, CSR etc which helps in selection a supplier as per the requirements and leads to the sustainable supply chain management.

## Literature Review

### How Supplier selection and buyer-supplier engagement impact the firm performance

Kannan, Vijay R; KeahChoon Tan in (2006) had studied the importance of supplier selection in buyer-supplier engagement and its impact on the buyer's performance. Selecting the right supplier and developing the infrastructure for successful relationship between buyer and supplier is very important. Also for a buyer creating an environment in which the relationship with a supplier can be a source of value added is equally important. Although traditional Supplier selection criteria such as price and delivery performance are important, buyers must go beyond operational selection criteria, explicitly considering a potential supplier's strategic orientation and commitment to meeting shared goals and objectives. If we consider supplier as a partner then it will help to increase the ability and opportunity of a firm to achieve a competitive edge.

*Study needs to further analyze to examine whether the model holds for specific industry or it is made with purchase perspective. The study doesn't explain how or why engagement and Supplier Selection drive relationship. Hence there is a further scope for study the role of buyer-supplier relationship in managing the supply chains.*

Vonderembse Mark A and Tracey Michael 1999 investigated the impact of supplier selection and involvement on firm's performance. They found that product quality and product performance dimensions of supplier selection criteria plus all of the dimensions of supplier involvement and supplier performance are positively correlated with manufacturing/ buyer's performance. When the suppliers are known that they will be judged on the well-defined criteria, they increase their level of efforts and attention towards performance enhancement. Raising the level of involvement may have a significant impact on performance. Good supplier selection criteria and involvement programs enhance communication and create an environment of trust that built fertile relationship with supplier.

*Study didn't focus on the supplier involvement programs and how it can develop and incorporate. The limited variables had considered while studying the subject.*

*Table 1: The Summary of the above mentioned studies has been tabulated below*

Author /Year/Journal	Area Of Study	Gaps in the Study
Buyer-Supplier engagement and its impact on firm's performance		
Mr. Vijay R. Kannan (USA) Utah State University July 2006 International Journal of Physical Distribution & Logistics Management.	The impact of Buyer-Supplier Engagement and Supplier Selection on improving relationship and Firm performance.	1) Presented in USA no reference to India. 2) Not specified whether the study covers a specific industry or it is made with purchase perspective 3) Not explained the role of buyer- supplier relationship in managing the supply chain.
Vonderembse Mark A and Tracey Michael 1999 Journal of Supply Chain Management	Selection criteria and supplier involvement enhances the supplier performance which can positively correlated with manufacturing/ buyer's performance.	Study didn't focus on the supplier involvement programs and how it can develop and incorporate. The limited variables had considered while studying the subject.

### The importance of Supplier Selection in Buyer-Supplier Engagement:

The article on Buyer-supplier relationship in changing Romanian economy says 'bigger the company the more likely that a policy has been developed and implemented in regard

to suppliers'. The aim of the supplier-selection process is to find the most suitable source or a small group of alternative sources. Thus, effort needs to be made to cultivate and maintain relationships with good suppliers. It is expected that relationships improve along with reliability of demand and supply, which leads to mutual understanding and agreement. Every company has to realize the importance of their relationship with suppliers and work continually to improve it. But there is ignorance from some enterprises as they do not realize the importance of establishing a good relationship with suppliers.

If the supplier is not chosen carefully, products and services may not be delivered on time or in the correct quantity, or may be of inferior quality. Any of these may affect the organization's product or services and result into customer's dissatisfaction. At the time of supplier selection, suppliers are evaluated according to their capacity to deliver the required quality, quantity, price and post-sale services, such as timeliness of delivery. We can also select the suppliers by checking with their clients / customers as to their quality and reliability of supply. Right selection of supplier minimizes many problems. Hence to building and maintaining a good relationship with supplier is necessary for many organizations. On the other hands the companies like big MNC's find it difficult and time consuming as the number of supplier are more in their case.

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The conclusion of prior work is that while price, quality, delivery reliability, and service are the most important criteria used to screen potential suppliers, the specific criteria used and their relative importance depends on the type and circumstances of the purchase. Moreover, while there is a tendency to focus on measurable criteria, subjective criteria such as technical capability, flexibility, and the willingness of a supplier to work in a collaborative manner, can be important in certain buying circumstances, for example, in the context of cooperative relationships. Based on prior evidence, we posit that the criteria used to select suppliers can positively and directly influence relationship success.

**The effect of supplier development on buyers purchasing performance:**

Cristobal Sanchez-Rodriguez, David Hemsworth, Angel R. Martinez-Lorente, (2005) put their efforts to analyze the effect of supplier development practices with different levels of implementation complexity on the firm's purchasing performance. Where they defined three supplier developments construct namely basic supplier development, moderate supplier development, and advanced supplier development. The study reveals how

involving suppliers in supplier development activities is important and may help buyers to increase their purchasing performance.

In the study they have used a single key informant. The study was a cross-sectional and descriptive sample of the manufacturing industry. Different levels of supplier development and performance requires a longitudinal study, or field experiment.

**Selection of Variables:**

The variables have been identified from the factors those affects supplier selection process and supplier engagement.

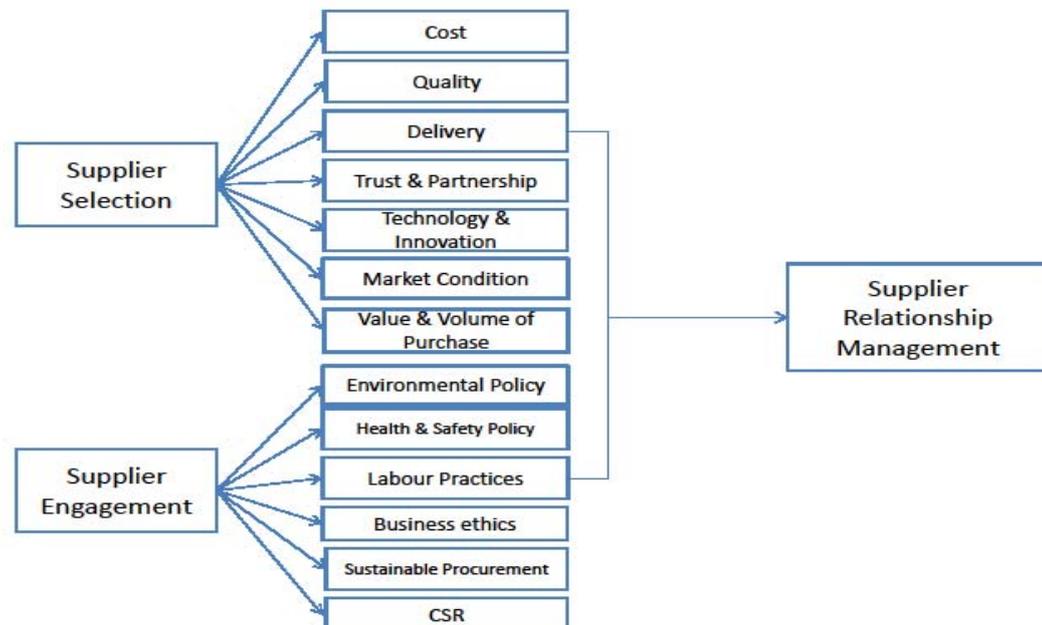
*Table2: Variable*

Dependent Variables	Independent Variables
Supplier Engagement	Cost, Quality
Supplier selection	Company Policy, Ethics, Rules and Regulations
Buyer–Supplier Relationship	Trust, Partnership
	Technology, Innovation
	Human Rights
	Health & Safety Policy

On the basis of these variables we have develop the below model. This model explains the assessment factors essential for supplier engagement affects the supplier selection process and ultimately have impact on supplier relationship management.

*Fig.1:Model.*

**Model for Supplier Engagement & Supplier Selection**



### **Objectives:**

1. To identify the Assessment factors which will help to boost the supplier engagement and action required to maintain the supplier relationship with right selection of supplier in this changing business environment.

*Identifying the factors for supplier engagement and analyzing them to develop supplier is very important for buyer-supplier relationship. In this changing business environment, the initial criteria to assess the supplier have been followed to choose a supplier who can deliver the best of its capability.*

2. To investigate the factors those affects the supplier selection and the relationship in between supplier and organization.

*There are some important factors need to be consider while studying supplier engagement. On the acceptance of the assessment measures the factors for supplier selection are considered. Physical factors like cost, quality and delivery are important while selecting the supplier on the other hand emotional factors like trust, commitment and partnership also important in supplier engagement. For better supplier engagement there has to be a blend of physical and emotional factors need to be taken into account.*

### **Hypothesis**

H1. Emotional and Physical factors play important role in supplier selection and building up relationship between buyer and supplier in chemicals industry.

H2. Assessment factors plays important role in engaging the supplier and ultimately have a impact on supplier selection.

### **Methodology**

#### **Research Design:**

The research is Descriptive type of research. The survey has been done at industry level that means from companies.

#### **Sample size:**

We have done deliberate sampling for this study. We have taken a sample size of 26 chemical companies from various sectors like Agro, Pharma, Dyes etc. to evaluate the result.

#### **Questionnaire:**

The questionnaire has been prepared on the basis of variables identified, Dependent and independent. Based on our qualitative study, we have firmed up our hypothesis and have created a questionnaire. This questionnaire has 5 points rating scale. The questions would be constructed around the hypothesis of the study.

#### **Data Collection Analysis:**

The data has been collected using Questionnaires, one to one interview with the people from Chemical industry. The data has analyzed using Excel and charts.

### **Findings**

Buyer always looks into various factors while selecting the supplier. We have categorized data for both physical and emotional factors which are very important while selecting the supplier. Surprisingly the analysis says ie. Fig .1 that both emotional and physical is equally important. Emotional factors like trust, partnership and interaction is as important as quality of the material, timely delivery, Information Sharing, technology & innovation.

All these parameters can be fulfill when the selected supplier has sustainable procurement system in their company, when they follows proper health and safety policies, there are no

ethical issues in the company, when they have audits & training programs for and quality improvement. Thus it confirms H1. Hence it proves that emotional and physical factors play an important role in supplier selection and building up a relationship between buyer and supplier in the chemicals industry.

The analysis in Table 2 indicates that the assessment parameters like Effective Waste Management system, Business Ethics issue (Like Anti-Corruption), Standards for Process improvement, Audits for Quality Improvement and CSR are the major factors to assess the supplier on the basis of these parameters a buyer can judge the ability and strength of the supplier. This helps a buyer to select a right supplier. Thus it confirms H2. Hence it proves that assessment factors play an important role in engaging the supplier and ultimately has an impact on supplier selection.

Fig. 2 Score for Factors of Supplier Selection.

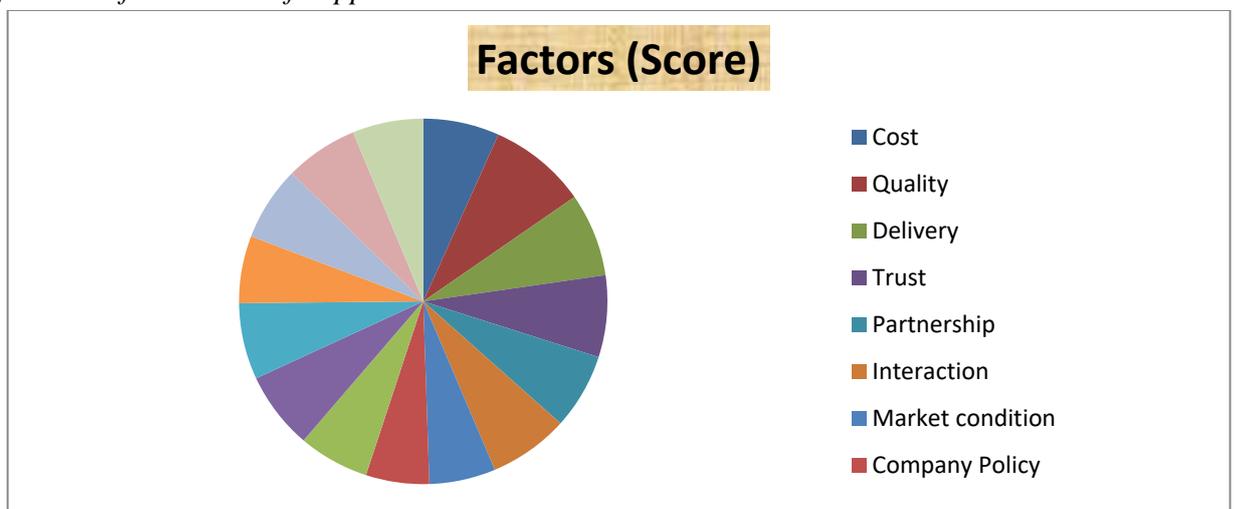
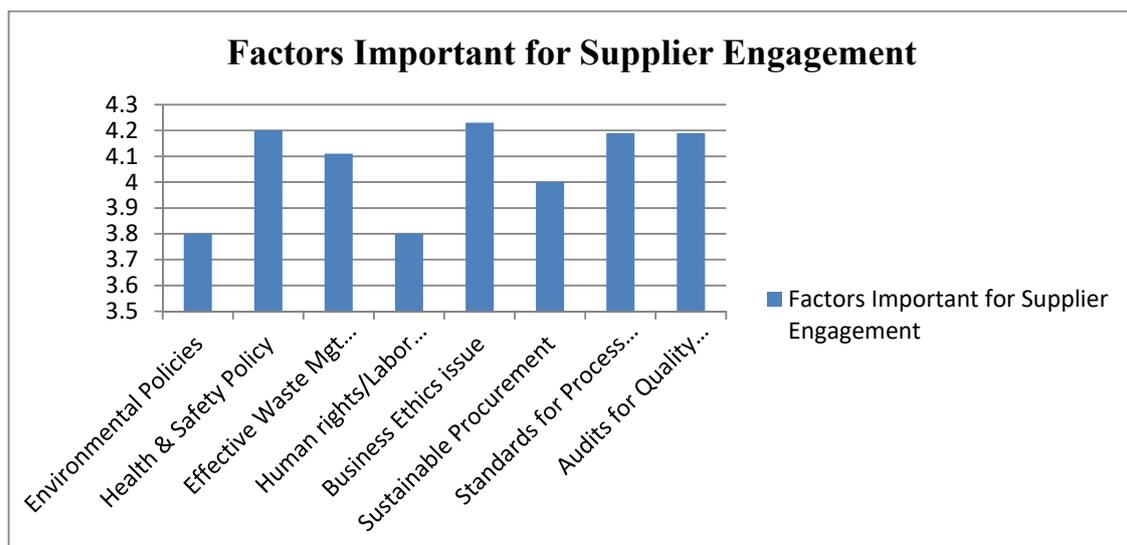


Fig. 3. Factors important for Supplier Engagement.



## Conclusion

The above analysis concludes that the factors which are important for supplier engagement are the foundation for judging a supplier's strengths. As it directly corresponds to the actual productivity a buyer can get from their suppliers. If supplier can fulfill the assessment criteria at the beginning of engagement then the factors which we consider for selection can be easily delivered by the supplier. This ultimately turns into a good supplier management. Ecovadis is a company which gives rating for the suppliers on the basis of certain criteria which leads to the sustainable supply chain management. Thus based on the confirmation of H1 & H2 the model of supplier selection and supplier engagement is validated.

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