



INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE AND MANAGEMENT

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- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio," Ohio State University.

Contributions to books

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

Journal and other articles

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

Conference papers

- Chandel K.S. (2009): "Ethics in Commerce Education." Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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- Kumar S. (2006): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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- Kelkar V. (2009): Towards a New Natural Gas Policy, Economic and Political Weekly, Viewed on February 17, 2011 <http://epw.in/epw/user/viewabstract.jsp>

SELECTION OF SUPPLIER EVALUATION CRITERIA: FROM THE PERSPECTIVE OF TRIPLE BOTTOM LINE THEORY AND APPLICATION OF FACTOR COMPARISON METHOD

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ABSTRACT

“Supply chains compete with each other not the organizations”, told by many supply chain experts. It goes without saying that suppliers are the heart of supply chain. So Supplier selection is one of the key tasks of supply chain management. Supplier selection also must be directed in the line of sustainability means looking beyond profit lines i.e. including human and environmental factors. The industry is increasingly exhibiting concerns over sustainability, driven by messages from different platforms of world, current legislation system. They are also exhibiting seriousness in implementation of those systems and concerned about public interest too. This factor forced to change many countries future government policy, current production operations practices, and created new business models. Supplier selection is always a vital responsibility and exercise of management and becomes more complex when we emphasis on sustainability. Supplier selection in triple bottom line theory means going beyond operational parameters of supplier selection. The environmental and social parameters also should be included along with operational parameters. Factor comparison method is a value engineering tool used in this paper to assess the relative weight between factors of supplier selection in a scientific manner. This paper provides a background to better understand the required criteria's of supplier evaluation in the sustainable era. It also defines how much weightage is to be provided to which factor.

KEYWORDS

Supplier Selection, Triple Bottom Line, Factor comparison method, Sustainability

INTRODUCTION

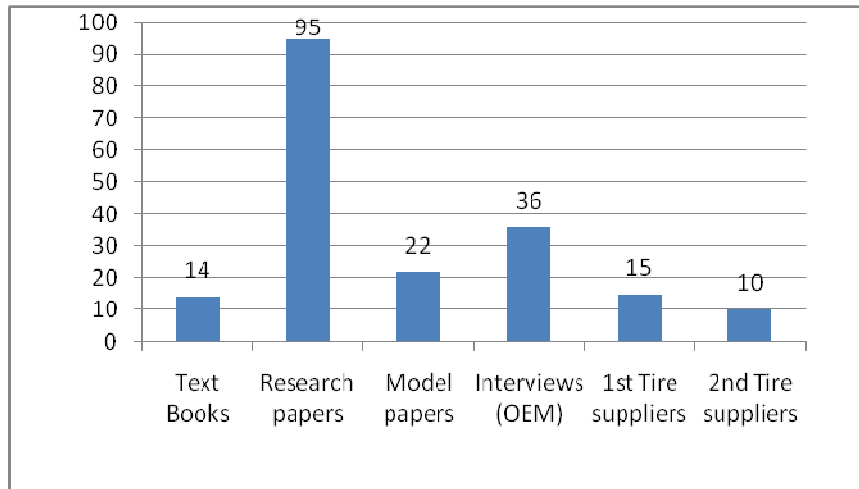
Supplier evaluation is one of the most interesting and most talked about subjects in the area of organizational strategic planning among senior executives and entrepreneurs around the globe. Today's High-technology market poses a greater challenge to both customers and vendors. Most of the research papers given emphasis on cost, quality, delivery or related aspects. But the current changing world is equally concerned about safety and environment too. The combination of profit, safety and environment leads to sustainable business practice. By analyzing the role of original equipment manufacturer (OEM) and supplier, it is very clear that for each activity of the supplier or downstream of supply chain OEM is ultimately responsible. They just cannot excuse themselves with the plea that they are not manufacturing. So they must ensure the safety of the persons working with supplier, they must review the methods or processes used at supplier's end used to make end products for the OEM from environmental point of view. This will leads to formulate supplier evaluation criteria beyond profit parameters.

Only formulating the criteria for supply chain really does not help any organization. During formulation stage the experts rather experts of the supply chain or purchasing, they express many criteria's of evaluation, without going into the practical aspect or scientific calculation methods. Factor comparison method is one of the scientific as well as democratic ways to assign values to each category of criteria. Of course it is a very detailed workout, but it is worth as supplier evaluation practically done once in a year and fine tune years after year.

This function having more relevance in current days as most of the forum of management and across globe is now talking how OEM should be more responsible to the activities carried out at our suppliers. Each activity of our stakeholders impacting the people, safety, environment and natural resources is being observed. Many organizations in this world and also in Indian started reporting the corporate sustainability report to give a feel to the entire community that they cares about people and environment while doing business. Only profit is not the only objective of business, all should understand that safety & environment are long run profit making process.

RESEARCH METHODOLOGIES

This papers created based on the following resources: (1) Text books on supplier relationship management, SCM ; (2) Published Research Papers; (3) Model Papers; (4) Interviews with OEM buyers (5) Interaction with 1st tire and 2nd tire suppliers. Fig. 1 shows the assignments of the sources.



TRIPLE BOTTOM LINE THEORY (SUSTAINABILITY)

The term "Triple Bottom Line" (3BL) has become increasingly fashionable in management, consulting, investing, and NGO circles over the last few years. The idea behind the 3BL paradigm is that a corporation's ultimate success or health can and should be measured not just by the traditional financial bottom line, but also by its social/ethical and environmental performance. (Wayne Norman and Chris MacDonald, 2003)

Triple Bottom Line is coined by John Elkington, head of the consulting firm SustainAbility, who first coined the phrase in 1994. Elkington was referring to three dimensions of accounting – economic, environmental, and social. A number of different terms express the same concept. Global Reporting Initiative named this as "Sustainability Reporting"; Japan uses "CSR Reporting"; KPMG called it "Corporate Responsibility Reporting" and GE called it as "Corporate Citizenship Reporting."

While going through Google search on these terms, we found that the term "Triple Bottom Line" is the most frequently appearing, with 634,000 hits. "Corporate Sustainability" got 8,620,000 hits, "CSR Reporting" got 46,900,000 hits, as on 10th of August 2010. Further little deep we have found that articles on the above subjects in various forums are also very high in nature. Articles on "Triple Bottom Line" published around 262,000; corporate social responsibility around 4790,000 and articles on corporate sustainability is 18600,000. This gives a feel how much the current society, corporate; researchers and writers are concerned about sustainability and a better world for each of us. Sustainability is increasingly discussed by policy makers (President's Council on Sustainable Development, 1996; American Chamber of Commerce of Europe, 2004), the popular press (Anon., 2001) and journals in various technical fields.

Wikipedia defines triple bottom line (TBL) as people, planet, profit or "the three pillars" captures an expanded spectrum of values and criteria for measuring organizational economic, ecological and social aspects. TBL demands that a company should be responsible to the stakeholders rather than shareholders. Stakeholders mean anyone who is influenced, either directly or indirectly, by the actions of the firm. The idea behind the 3BL paradigm is that a corporation's ultimate success or health can and should be measured not just by the traditional financial bottom line, but also by its social/ethical and environmental performance.

As defined by Brundtland Commission (World Commission on Environment and Development, 1987). Sustainability means development that meets the needs of the present without compromising the ability of future generations to meet their needs. The concept of "save the earth and make money too" (Tierney, 2002) may involve some difficult decisions where more holistic accounting concepts are used and where the system boundaries for analysis are extended beyond the perimeter fence of the factory i.e. moving towards society and environment.

In short, 3BL advocates believe that social and environmental performance can be measured in fairly objective ways, and that firms should use these results in order to improve their social and environmental performance. Moreover, they should report these results as a matter of principle, and in using and reporting on these additional "bottom lines" firms can expect to do better by their financial bottom line in the long run.¹

Sustainability is generally defined as using resources to meet the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987; Daly and Cobb, 1994). Lots of different interpretations and questions moving around all these sustainability issue and we need to be very clear regarding the following raised questions by many of us.

These questions are:

- How much resources and of what type our future generations will require?
- What level of pollutants can be released without having a negative effect on future generations?
- How to identify depletable resources for the future?
- Can we will able to replace depletable resources?
- Can existing technology will able to match the difference of resources in other way?
- What are the forces will drive sustainability?
- Should we need to change our way of living?
- How our corporate world will enforce sustainability?

SUPPLIER EVALUATION & SELECTION

¹ Wayne Norman and Chris MacDonald : Getting to the Bottom of "Triple Bottom Line" In Press, Business Ethics Quarterly, 2003)

Supplier selection and evaluation is one of the most critical activities in purchasing or procurement process (O. Bayazit, B. Karpak, , 2006). This evaluation process consists of 4 stages i.e., defining objective, formulating the selection criteria, qualifying the suitable alternatives, and final selection. To qualify the prospective suppliers, the effective defining of selection criteria is necessary (C. A. Weber, J. R. Current, and W. C. Benton, 1991) (C. Droge, R. Germain, and J. R. Stock, 1991) Beyond the high significance on the product cost and partners relationship, it has considerable impacts on the buyer's corporate competencies (J. Sarkis and S. Talluri, 2002) (S. H. Ha and R. Krishnan, 2008)

Depending upon the nature of business and complexity of organizations numerous factors are considered and evaluated by the management for its suppliers and supply chains. Supplier management needs a careful balance when we are opting for product or service. This also becomes more complex when we take the service or product within the premises of the organization and outside of the organization. Supplier selection and management is applicable from the birth stage to end of the product life means start to end of the product life cycle.

Within supply chain management the supplier selection decision is one of the critical issues faced by operations and purchasing managers to help organizations maintain a strategically competitive position (Chen, Lin, & Huang, 2006). Current business practices around the globe i.e. globalization, off soaring etc making the supplier selection more complex. This complexity effects largely to the SCM designers and operational managers. Suppliers have to be in line with the OEM's objectives and more over in the same direction of quality, delivery and price. During designing the supply chain the OEM organization not only seeing the price or delivery, they are more concerned and relates with suppliers skill with innovative supply chain management practice and especially suppliers those who are having focus on social and environmental concerns (sustainability). These strategic and sustainability factors play a vital role for the long-term resiliency of a supply chain (Ciliberti, Pontrandolfo, & Scozzi, 2008; Seuring et al., 2008; Zhu, Sarkis, & Lai, 2008).

SUPPLIER SELECTION MODELS

While reviewing the literature we can very well observe initial research work in supplier relationship management and evaluation parameters primarily emphasized on cost factors and operational issues. Different evaluation models for supplier selection have been proposed over the past many years. Methodologies are typically include weighted linear model approaches, mixed integer programming, the analytical hierarchy process, linear and goal programming models, matrix methods, clustering methods, total cost of ownership, human judgment models, principal component analysis, interpretive structural modeling, statistical analysis, discrete choice analysis experiments, and neural networks/case based reasoning approaches and rough set theory model.

SUSTAINABILITY AND SUPPLIER SELECTION

The interaction between sustainability and supply chains is the critical next step from recent examinations of operations and the environment (Corbett and Kleindorfer, 2003) and operations and sustainability (Kleindorfer et al., 2005). While important contributions have been made in relation to environmental operations and policy, strategy, finance, product design, supplier relations and post-consumer product management it is critical to move forward to the systemic issues that exist at the intersection of sustainability, environmental management and supply chains.²

Sustainable supplier selection processes demands beyond the boundary of operational requirements. When we are discussing supplier selection from the perspective of corporate social responsibility then the need for considering supplier relationships from a sustainable and strategic perspective has become even more apparent (Ciliberti et al., 2008); Presley, et al., 2007; Seuring and Mueller, 2008). One of the most fundamental and important decisions made by buyers and organizations is selecting the criteria of supplier selection. The level of complexity increases when supplier performance, organization's objective, ethics, social and environmental responsibilities of the OEM organization needs to be balanced.

Most of the supplier selection researches lack of environmental and social sustainability parameters. Although scarce, the environmental consideration in supplier selection research is emerging while more general sustainability issues, incorporating other social sustainability dimensions are quite scarce (Hutchins & Sutherland, 2008). The objective behind including environmental and social angles to the supplier selection criteria is to maintain and improve corporate legitimacy and reputations of the organizations.

Many authors are currently addressing supplier selection issues from environmental aspects (Handfield et al., 2002, Humphreys et al., 2003, Sarkis, 2006). Still we need to incorporate social factors like social equity and employee health. In past supplier selection from environmental aspects is closely associated with conformance to environmental regulations only. Also to some extent the health aspect is a forced measure from government agencies and from NGO groups.

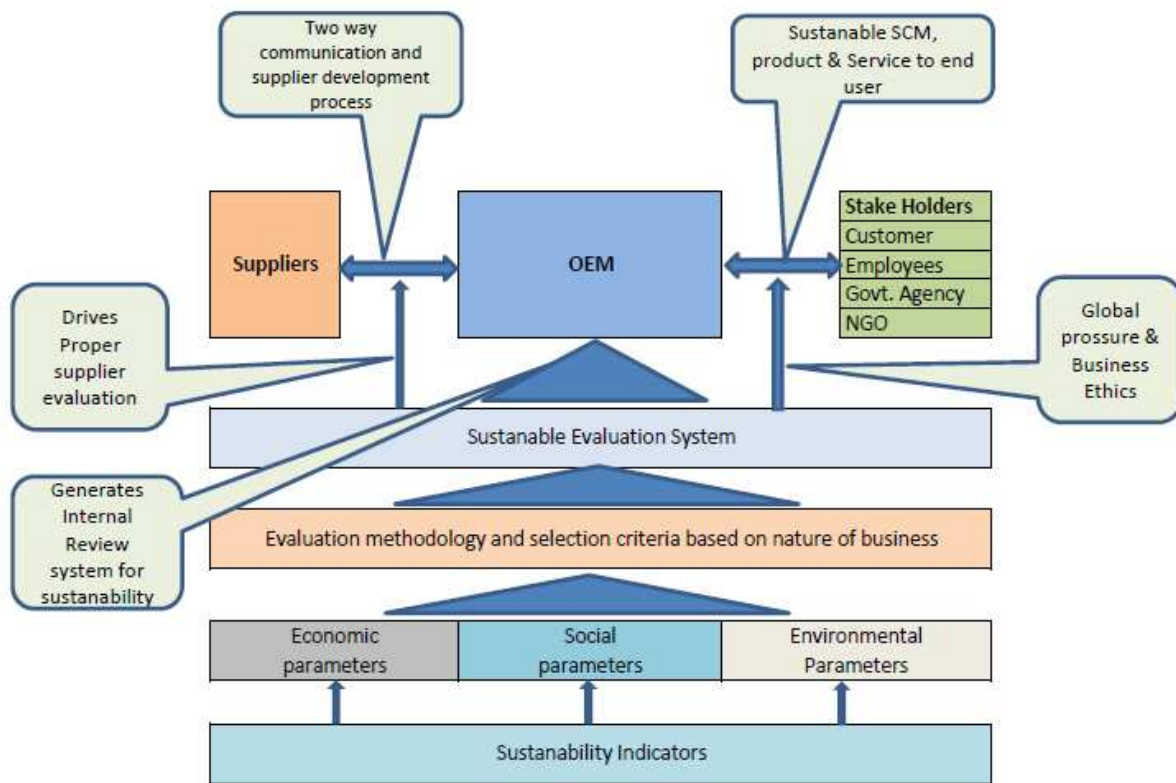
Sustainable development and sustainability is frequently interpreted as a synthesis of economic, environmental and social development, a triple-bottom-line approach (Gauthier 2005). Even though environmental considerations in supplier selection decisions have existed, a more systematic inclusion of other sustainability factors is needed. The previous dual concerns of economic and environmental aspects in supplier selection need to be expanded into a triad that involves social factors, i.e. human rights abuses, child labor, and irresponsible investment. Globally, companies are increasingly acknowledging the importance of social issues like human rights, labor and corruption (Rivoli 2003). Consequently, consideration of both environmental and social factors needs to be at the forefront of companies' supplier selection agenda.³

Focused on supplier selection, Noci (1997) identifies four environmental categories including "green competencies", "current environmental efficiency", "supplier's green image" and "net life cycle cost". Enarsson (1998) proposes a fishbone diagram based instrument similar to ones used in quality assessment within companies for the evaluation of suppliers from an environmental viewpoint. Four main factors have been identified: "the supplier as a company", "the supplier's processes", "the product itself" and "transportation". By consolidating several studies, Humphreys et al. (2003) proposes seven environmental categories. The category "environmental costs (pollutant effects)" and "environmental costs (improvement)" are grouped together under the title "quantitative environmental criteria". The other five categories named "management competencies", "green image", "design for environment", "environmental management systems", and "environmental competencies" are in a separate group termed "qualitative environmental criteria". Kongar (2005) introduces environmental consciousness indicators such as

² Jonathan D. Linton a,*, Robert Klassen b, Vaidyanathan Jayaraman c- Sustainable supply chains: An introduction - *Journal of Operations Management* 25 (2007) 1075–1082

³ Chunguang Bai a, Joseph Sarkis b, _ Integrating sustainability into supplier selection with grey system and rough set methodologies : *Int. J. Production Economics* 124 (2010) 252–264

“recyclability of goods”, “decreased amount of hazardous substances” and “compatibility with health and safety regulations” into the supplier evaluation process.⁴



(Fig 1 - Source: Created by Authors through Literature review and working experience)

The above figure tries to elaborate how a sustainable system created for original equipment manufacturer (OEM) company. Basically sustainable system not only concerned about own existence, it is more concern about the stake holders and the world in totality. The system starts with sustainable indicators means based on which the system should operate or who are the driving parameters based on which the system will be formed. In this particular case of sustainability we need to take economic parameters, social parameters and environmental parameters. Based on this the methodology developed to evaluate the suppliers depending upon the nature of business. One this exercise is complete the organization gets the sustainable evaluation system. When the buying organization starts the exercise to evaluate the potential sustainable suppliers then many unseen un forecasted situations arrives which slowly gets resolved. In this process a two way communication and supplier development process initiated from Triple bottom line angle. Not only the supplier gets the benefit of this process the OEM as well as the stake holders are also beneficiary of the system. Organization always in the review process of self development, social development and environment concerned mode. This ultimately helps the society, employee and by enlarge the community.

Environmental and social factors considered during supplier selection from many perspectives. It may be organizational issue; it may be regional issue and may be an issue of the country’s legal and environmental policy. These factors are subjected to audit from the organizational quality policy or integrated management system point of view. Only framing such factors not the end of showing concerned on sustainability. The organizations have to implement this and must be supplemented with periodic audits. This is nothing but measuring performances of the factors implemented in the system. Environmental performance is in reference to resource consumption and pollution production. Similarly social dimensions may be viewed from internal social criteria and external social criteria perspectives (Gauthier, 2005). Internal social attributes refer to employment practices such as labor sources, gender diversity and occupational health and safety at work. External social criteria regard the relationship with contractual stakeholders like suppliers, customers & NGOs.

The tables sited here are given elaborates the three parameters which are supposed to be considered during supplier evaluation. Table-1 explaining the economical aspects, Table-2 explains the environmental aspects and Table-3 explains the social aspects. The sources are written against each table.

Table 1

Business and economic supplier selection attributes.	
Strategic performance measures	Organizational factors

⁴ Orhan Feyzioğlu and Gülçin Bıyıkçıoğlu: Evaluation of Green Suppliers Considering Decision Criteria Dependencies, 2010

Cost Low initial price Compliance with cost analysis system Cost reduction activities Compliance with sectoral price behavior Quality Conformance quality Consistent delivery Quality philosophy Prompt response Time Delivery speed Product development time Partnership formation time Flexibility (FY) Product volume changes Short set-up time Conflict resolution Service capability Innovativeness (IS) New launch of products New use of technologies	Culture Feeling of trust Management attitude/outlook for the future Strategic fit Top management compatibility Compatibility among levels and functions Suppliers organizational structure and personnel Technology Technological compatibility Assessment of future manufacturing capabilities Suppliers speed in development Suppliers design capability Technical capability Current manufacturing facilities/capabilities Relationship Long-term relationship Relationship closeness Communication openness Reputation for integrity
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Source: Based on Sarkis and Talluri (2002) and Chan (2003), Chunguang Bai a, Joseph Sarkis (2010)

Table 2

Environmental metrics in supplier selection decision.

Categories	Factors	Sub-factors
Environmental practices	Pollution controls	Remediation End-of-pipe controls
	Pollution prevention	Product adaptation Process adaptation
Environmental performance	Environmental management system	Establishment of environmental commitment and policy Identification of environmental aspects Planning of environmental objectives
		Assignment of environmental responsibility Checking and evaluation of environmental activities
	Resource consumption	Consumption of energy

	Pollution production	Consumption of raw material Consumption of water Production of polluting agents Production of toxic products Production of waste
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Sources: Gauthier (2005); Klassen and Whybark(1999); Dou andSarkis(2010). Chunguang Bai a, JosephSarkis (2010)

Table 3

Social metrics in supplier selection decision.

Categories	Factors	Sub-factors	
Internal social criteria	Employment practices	Disciplinary and security practices Employee contracts Equity labor sources Diversity Discrimination Flexible working arrangements Job opportunities Employment compensation Research and development Career development	
	Health and safety	Health and safety incidents Health and safety practices	
External social criteria	Local communities influence	Health Education Housing Service infrastructure Mobility infrastructure Regulatory and public services Supporting educational institutions Sensory stimuli Security Cultural properties Economic welfare and growth Social cohesion Social pathologies Grants and donations Supporting community projects	
		Contractual stakeholders influence	Procurement standard Partnership screens and standards Consumers education
		Other stakeholders influence	Decision influence potential

	Stakeholder empowerment
	Collective audience
	Selected audience
	Stakeholder engagement

Sources: Gauthier (2005), Presley et al.(2007), and Labuschagne et al.(2005). Chunguang Bai, Joseph Sarkis (2010)

FACTOR COMPARISON METHOD

This method is one of the most popular methods used in value engineering. This method helps in working out the rating of the factors used for any evaluation system. The key aspect of the method is it is very systematic and simple to use. Moreover this tool compares within each factor and discusses the relative importance with each other. Depending upon the nature of condition the weightage of each factor derived from this method.

The very reason of selecting this tool for supplier selection is to derive the individual weight of each factor used in supplier evaluation in a scientific manner. Only deciding or proposing the evaluation factors is not enough. A valid procedure must be followed to know the proper relative importance between factors used in the evaluation process. This may differ from case to case depending upon the nature of business and scenario.

Though this tool or method can be applied to many fields, we are elaborating the steps to be followed keeping supplier selection in mind. However in the end one general example is explained to have a better idea of the readers.

STEPS TO BE FOLLOWED

1. Select a team or representatives who all are having functional knowledge in purchasing and commercials. They also should carry well cross functional knowledge. As we are talking here sustainability, so some team members also should carry environmental and social laws prevailing for the law of land. This team should not restrict themselves to organizational financial benefits.
2. List down the criteria based on which evaluation will be carried out. Please remember that the criteria must satisfy all economical, environment and social aspects (differs from situation to situation)
3. To identify each criteria mention one alphabet against each criteria

Exp:

- A Cost
- B Delivery
- C Cost
- D Management
- E Less pollution
- F Social equity
- Etc...etc...

4. One matrix has to be drawn for comparison of each criterion with other criteria as shown below.

	B	C	D	E	F	G	H	I
A								
B								
C								
D								
E								
F								
G								
H								

Factor "A" will be compared with factor "B". If the team will feel "A" is having more relevance with comparison to "B", then "A" will put the 1st box 1st line. Similarly each factor will be compared with "A" for the 1st line and the more relevant factor will be written against each box. For the 2nd line all factors will be compared with factor "B" and so on. At the end all boxes will be filled with any of the alphabet mentioned earlier during against each criteria.

5. The next step is to establish relative degree of importance between each factor. Means when factor "A" is compared with factor "B" it may resulted in "A" is relatively important than "B". But the team also has to mention at what degree the relative importance is.

For this a three point scale is used.

Relative Importance	Points
---------------------	--------

Major Difference	3
Medium Difference	2
Minor Difference	1
No Difference	0

If factor A is having major difference with factor B then in the box "A3" will be written. If Factor A will have no difference with factor C then corresponding box will be written as 0. Accordingly the 1st line will look like

A3	0	A1	A2	A3	G1	H2	A3
----	---	----	----	----	----	----	----

(shown as Example basis)

6. After applying this point rating the total boxes are to be filled as per the decisions made by the team of experts. The final table will look line (shown as Example basis)

	B	C	D	E	F	G	H	I
A	A3	0	A1	A2	A3	G1	H2	A3
	B	B1	D2	B3	F2	B2	0	B1
		C	C3	E1	F2	C1	0	I2
			D	D3	0	D1	H1	D2
				E	E1	0	H3	E2
					F	G1	0	F1
						G	H1	I3
							H	H2

The final table will look line (shown as Example basis)

7. In the last step scores for each factor to be summed both for row wise and column wise. The scores are to be arranged either in ascending or descending order and to be reflected against each factor.

Identity	Factor	Score/Weightage	Relative Wt. considering 100% in total
A	Mentioned against "A"	H1	= H1/(sum of H1:H8)*100
C	Mentioned against "C"	H2	= H2/(sum of H1:H8)*100
D	Mentioned against "D"	H3	= H3/(sum of H1:H8)*100
E	Mentioned against "E"	H4	= H4/(sum of H1:H8)*100
B	Mentioned against "B"	H5	= H5/(sum of H1:H8)*100
G	Mentioned against "G"	H6	= H6/(sum of H1:H8)*100
F	Mentioned against "F"	H7	= H7/(sum of H1:H8)*100
I	Mentioned against "I"	H8	= H8/(sum of H1:H8)*100

The sum of A, B,C,D,E,F,G,H,I to be summed and to be sorted out in score/weightage column. If we will refer to be previous figure then the sum of A will be 12 (i.e. A3+A1+A2+A3+A3) in the 1st line. Usually in evaluation or weighted average method we take 100% as the total weightage. So we can calculate in terms of 100% by using the above formula shown in the last column.

Example

Now we will see an example of selecting a safety shoe used in the industry in factor comparison method. This example is derived from an value engineering book “Getting More at Less Cost” by G Jagannathan⁵

STEP-1

Team formed comprise of departments from Production, Procurement, Safety, Personal & Industrial Relation (P&IR) and Union representatives.

Step- 2 & 3

Listing down the factors for evaluation along with identification to each factor.

Identity	Criteria
A	Safety
B	Durability
C	Reliability
D	Comfort
E	Availability
F	Cost
G	Acceptability

Step- 4 & 5

Comparing safety with all other factors along with degree of relative importance the 1st line of matrix will be

	B	C	D	E	F	G
A	A3	0	A2	A2	A2	A2

Step- 6

Comparing all factors with all factors and putting degree of relative importance we can observe a matrix like below.

	B	C	D	E	F	G
A	A3	0	A2	A2	A2	A2
B		C2	0	E1	B3	B2
C			D1	0	C1	C2
D				D1	D1	D2
E					E1	E2
F						F2

Step-7

Summing up the score and calculating the relative weightage with respect to 100%.

⁵ G Jagannathan is a certified value specialist. He is having rich experience in value engineering field in TATA STEEL, Jamshedpur. This book was published in 1992 by Tata McGraw Hill Publication. Though this concept of factor comparison not used in supplier evaluation criteria by him, but it inspire directions to write this paper.

Identity	Factor	Score/ Weightage	Relative Wt. considering 100% in total (Rounding up)	
A	Safety	10	=10/30*100	33%
B	Durability	5	=5/30*100	17%
D	Comfort	5	=5/30*100	17%
C	Reliability	4	=4/30*100	13%
E	Availability	3	=3/30*100	10%
F	Cost	2	=2/30*100	7%
G	Acceptability	1	=1/30*100	3%

LIMITATIONS & SCOPE FOR FURTHER RESEARCH

We strongly believe the concept of value engineering (Application of Factor analysis) to evaluate relative importance the supplier with a provision of some practical and theoretical insights is a good contribution to the supplier selection decision, we still have some limitations and concerns which will guide to further research opportunities. One of the primary limitations of the paper is that we have introduced a conceptual model and illustrative of example, rather than a real world application. If we will go through a real world application then practical problems will be surface out and to counter those problems, further investigations or review of models can be carried out. Secondly the team formation and taking a accurate call is also will be problematic in practical cases as many experts from all many fields will have diversifying conclusions. How to address this issue with this model is also needs to be looked at. Further in this model it may so happen one factor will have zero value depending upon situation, but from practical aspect this may not be true. In those cases improved factor comparison method need to be applied which is little more complex that factor comparison method.

The methodology applied here for sustainable supplier evaluation is almost from the buyer's or buying organizations perspective. We also need to go deep into the supplier perspective of evaluation, and then only sustainable supplier evaluation will have real meaning. What is the supplier organization needs to be a sustainable supplier that has to be reviewed in many ways. These will provide insights into which attributes suppliers need to focus on to become a preferred supplier.

CONCLUSION

Current global business practices and market demand always forced the organizations to focus on their core competencies and outsource many of their business processes from outside suppliers. In past, this activity was only viewed from economical perspective. Now the environmental as well as social concerned by almost all countries and business houses forced the organizations to select green suppliers who are serious and effective. Government is also making very tight policies for environmental and social aspects. So the role of management becomes more complex while selecting suppliers from all three factors i.e. economical, social and environmental. We call it sustainable supplier.

We need to cross the boundaries of operational Excellency and profit lines. While doing business we also need to address the social issues and environmental issues. The day has come where the world is not looking who is making how large top or bottom line, all now observing how the organization is serving to the nation, world and the community associated with them. This attitude in corporate policy makers will create a better world to live and let live the future generations to come.

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