

Vendor Evaluation

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Abstract

This paper describes a very simple & generic model of evaluating the overall performance of approved vendors in respect of an engineering industry. A product consists of thousands of parts and some parts need to be procured from outside vendors based on “Make or buy” decision. Thus manufacturing & vendor development are two sides of the same coin. The vendors of regular inventory are considered for evaluation. A poor performance by even a single vendor will have a telling impact on the production in the company. Hence vendor evaluation/rating assumes significance. This method takes into account five criteria such as Quality, Price, Delivery, Service & Support. The first three are objective in nature & last two are subjective in nature. The provision of negative marks is also indicated here. The overall performance rating is a numerical value. Based on this value, vendors are graded into three categories such as high, mediocre & poor performers. This gives an opportunity for the company management where to focus and also vendors will come to know where they stand & how to improve. This model is widely accepted in mechanical engineering industries. This will ultimately result in good vendor relations which is the need of the hour.

Keyword- Approved Vendor, Quality, Price, Delivery, Vendor Grading, Vendor Relations

I. INTRODUCTION

Vendor Evaluation or Vendor Rating in this context is evaluating the overall performance of an approved vendor based on the quality of his supplies, price, prompt delivery etc. The background of the paper is a Mechanical Engineering Industry. Any product consists of a large number of components. Manufacturing all these components in house is impossible. Here we apply “Make or Buy” decision. Those items which are economical to manufacture in house can be manufactured inside the organization, and those which are economical to source from outside can be procured from established vendors. Thus manufacturing and vendor development are the two sides of the same coin. The bible of the Purchase Manager is the “Approved Vendor List”. These vendors are performing at varying degrees. Consistent low performance of even a single vendor will adversely impact the company. This indicates the significance of vendor rating. The company should rate the vendors periodically in a transparent and scientific manner and inform the vendors the results promptly.

II. MAIN OBJECTIVES OF VENDOR EVALUATION

- 1) To identify the consistently nonperforming vendors.
- 2) Motivate performing vendors to perform still better.
- 3) Overall cost reduction.
- 4) Identifying right vendors for developing additional components with them.
- 5) To assign a comprehensive score for each vendor based on the weight age factor assigned to main criteria.

III. METHOD

There are several methods ranging from simple evaluation method to analytical hierarchical process are there. In this paper a simple method is explained which is widely used in industries & easily understandable to all.

IV. CRITERIA

The main criteria in a standard system are as follows.

- Quality
- Price
- Delivery (Time & Quantity)
- Service
- Support

Here quality, price & delivery are objective factors & the other two are subjective factors. Sub-criteria are not considered in this method. Only the approved vendors of regular inventory (inventory meant for production of products) are considered for evaluation.

V. EVALUATION PROCESS

$$1) \text{ Quality Rating} = \frac{q1w1 + q2w2 + q3w3}{Q} * WF_Q$$

Q – Total quantity inspected

q1 – Quantity accepted

q2 – Quantity accepted with deviation

q3 – Quantity accepted with rectification

w1 – Merit factor for the quantity accepted as such (= 1)

w2 – Demerit factor for deviation (0.5)

w3 – Demerit factor for rectification (0.4)

WF_Q – Weight age Factor for Quality

$$2) \text{ Price rating} = \frac{P_L}{P} * WF_P$$

P_L – Lowest of the prices quoted by the vendors

P – Price quoted by the vendor being rated

WF_P – Weight age factor for Price

$$3) \text{ Delivery Rating} = \frac{r1 + x1r2 + x2r3}{Q} * WF_D$$

r1 – Quantity supplied within the delivery period as per the purchase order.

r2 – Quantity supplied beyond delivery period but within 10% of the scheduled period.

r3 – Quantity supplied beyond 10% but within 25% of the scheduled delivery period.

Q- Quantity to be supplied within the delivery period as per the PO.

x1 – Weight age for r2 – 0.8

x2 – Weight age for r3 – 0.6

WF_D - Weight age Factor for Delivery

4) Service Rating – It is a subjective evaluation based on services provided by the vendor such as submission of inspection reports, preservation techniques like blackening etc.

5) Support Rating – It is a subjective evaluation of the advice & assistance provided by the vendor such as Value Engineering techniques.

By adding all these ratings, we can arrive at overall rating of the vendor. However, company can give negative marks in the following cases.

- Vendor not providing Vendor Identification Mark
- Vendor not following the shipping/Packaging instructions.
- Repeated mistakes in the invoice
- Abnormal rejection - Rejection of 20% or more due to same reasons three times in a row.
- Line/Assembly rejection of 1% or more by volume per quarter.

As per the normal industrial standards, the weight age factor for main criteria are 35, 30, 20, 10 & 5 based on the priority which varies from industry to industry. Highest weight age is given to the highest priority criterion. Sum of the weight age factors should be 100.

Quality Rating is done by QA department whereas Price Rating & Delivery Rating are done by Materials department (Purchase/Stores). This process is done once in a quarter & the vendors are apprised of their score promptly by the Purchase department. These ratings are calculated for each & every supply made by the vendor.

VI. GRADING OF VENDORS

The vendors are generally graded as follows.

Overall Rating – 90 to 100% - A grade

Overall Rating – 80 to 89% - B grade

Overall Rating – 70 – 79% - C grade

Sufficient incentives can be provided to A grade vendors to maintain the performance. Similarly ample support to be given to B grade & C grade vendors to jump to A grade.

This overall rating serves as a main parameter for selecting the “Best Vendor”.

VII. CONCLUSION

Any company will be procuring hundreds/thousands of items to manufacture the products of its business. Continuous supply of items will facilitate the smooth production and at the same time the level of inventory in the stores should be minimized. It is always risky to have a single vendor and better to have optimum number of vendors based on the consumption of the items. A strong vendor base is the bedrock of a powerful supply chain. Hence selecting quality vendors & maintaining them become a vital task for the companies. In an ongoing business which requires components/materials, vendor evaluation is based on long-term relationship between the company and the vendors. If this is to happen, there should be a sound and clear system of vendor evaluation. The score obtained through this process will help the vendors to know where they stand in terms of their performance and gives them an opportunity to rectify their deficiencies.

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