

DEVELOPING FRAMEWORK FOR SUPPLIER PERFORMANCE EVALUATION IN A GAMING COMPANY BY USING WEIGHETD POINT SYSTEM

CHANDRAKANT MAHAJAN, SACHIN JAIN, HARIMOHAN SONI

¹ M. TECH SCHOLAR, ² ASSISTANT PROFESSOR, ³ ASSISTANT PROFESSORS
DEPARTMENT OF MECHANICAL ENGINEERING
BANSAL INSTITUTE OF SCIENCE AND TECHNOLOGY, BHOPAL

Abstract - Companies cannot function in isolation and rely solely on their own performance to be successful in. Today's competitive business environment. They are also strongly reliant on the performance of other supply chain actors, particularly suppliers. as a result, there is a greater requirement for supplier performance evaluation; analyze and ensure that suppliers execute at the level expected by the buying organization This thesis was completed as a case study at Company X Purchasing department. Company X is a pioneer in the German video game industry. The purchasing department at Company X wants to reduce their supplier database and to evaluate the supplier performances to get the better knowledge of the suppliers. today a great amount of data exists in various department of the business, but it does not reach the purchasing department for various reasons. Therefore, this master thesis aims at carrying out pre-study of a supplier performance evaluation to investigate what KPI's and other measurement that should be used for selection and performance measurement of the suppliers

Index Terms - : Purchasing process, Purchase order, supplier Base analysis ,Kraljic Matrix, SRM (supplier Relationship Management) ,Supplier selection, PDAC cycle , KPI (Key performance Indicator) supplier performance Rating system, RACI Matrix

I. INTRODUCTION

In an integrated supply chain, purchasing is critical, as performance of supplier can have a substantial effect on the remaining supply chain, including quality of product, on time delivery, and B2B client relationships, among other things. The focus of this thesis is on measuring the supplier performance from a supply chain perspective. Due to the data protection law the name of the company is denoted as X. While Company X has not implemented any formal Autonomous process to evaluate the performance of the suppliers, the purpose of thesis intends to design a framework and propose an implementation method to carry the supplier performance evaluation. This thesis is centered on qualitative as well as quantitative research because it provided the most useful information for this research. Because the goal of this study was to develop a practical output that would promote learning within the case organization, it contained methodological aspects from action-based research (Saunders et al, 2016). Qualitative research allowed fora thorough examination of the situation and the examination of the research questions from a variety of perspectives. For the qualitative research, semi structured interviews where planned. Semi structured interviews have the advantage of not limiting participants responses to predefined questions or confirming their responses to particular predefined questions.

AIM– This master thesis aims at carrying. out pre- study of a supplier performance evaluation to probe what KPI's and other dimension that should be used for selection and performance dimension of the suppliers

PURPOSE- The purpose of thesis intends to design a frame and propose an imple- mentation system to carry the supplier performance evaluation • compass of thesis- The systems process begins with creating a system of evaluation and ends with the process of enforcing the system without any thorough testing

Supplier Performance Evaluation still you cannot survive it”-(Garvin, 1993) •" The process of resolving, “ If you can not measure it. Necessity of Measuring Supplier Performance Enhance the act perceptibility

- Find and remove secret waste and cost motorists in the force chain
 - use the force base
 - Align customer and temporary trade practices
 - Minimize threat
- Ameliorate temporary conduct

Research Framework

The Thesis framework is shown in Figure 1. The report has written according to this framework i.e., all the activities involved in each step. This will help the reader to get the clear overview of the research process. It involves suggesting a suitable performance measure along with the future recommendations for the improvement

Step 1 – Theoretical Framework The first step involves reading the literature and collecting the information about supplier performance evaluation and selection tools, Importance of SRM etc.

Step 2 – Current situation analysis- The current situation analysis is done by conducting interviews with manager and discussion with the procurement team. It involves collecting of information regarding current strategy of the case company, current supplier performance measure and efficiency of SRM system.

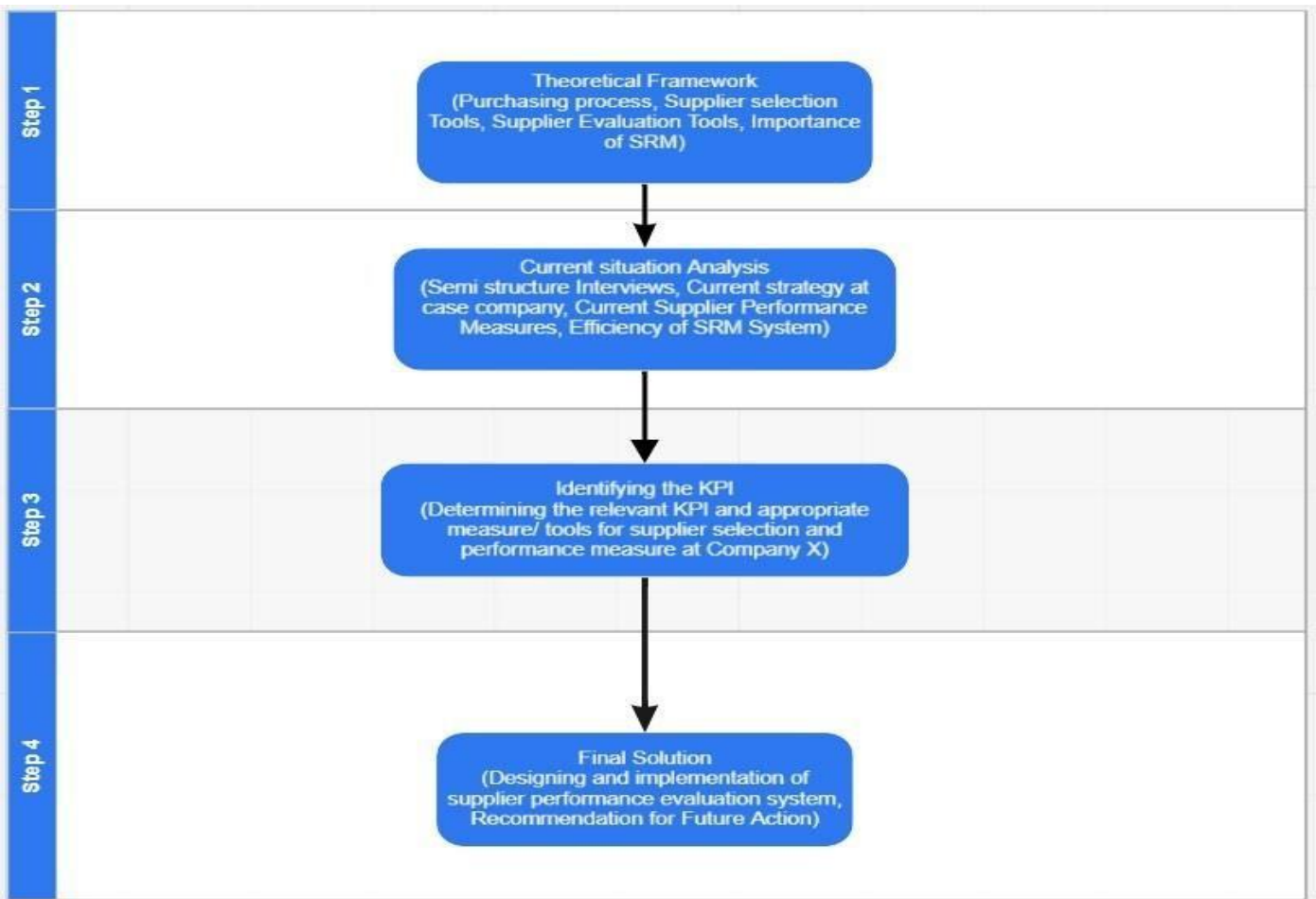


Figure 1- Thesis Framework (Source- Own representation)

Step 3 – Identifying the KPI This step involves conducting the survey and interviews with the managers from different studios of case company. The selection of the important KPI that align with the strategy and goals of the company is done based on the result of survey and the interviews.

Step 4 Final solution This step involves the process of designing and implementing the supplier performance evaluation system in Company X

Supplier Performance Evaluation Tools

The following are the most common supplier measuring strategies utilized in such surveys:

I. Categorical system - A method of rating providers on an ordinal scale, such as excellent, very good, satisfactory, or bad. As this method is most commonly utilized by the small businesses since it takes few resources and is reasonably simple to deploy. Furthermore, it needs the least quantity of supplier information. However, because the lower cost cannot be achieved without compromising the quality of the output, the system is regarded as the least accurate among the three measuring strategies mentioned. This system's major focus is on a single substantial difference between subjective assessments (Monczka et. al 2023 4th edition).

II. Weighted-point system - A strategy in which different performance categories are awarded weights based on their value. The supplier's scores may be quantified once the weights for each category have been applied. At last, the sourcing firm calculates a total score, which is essentially the total of all the weighted scores. This system has a greater level of dependability while maintaining a low cost of deployment. This technique also has the advantages of being flexible, enabling you to adjust the weights allocated to each criteria and comparing various suppliers based on their total weighted scores (Monczka et al. 2023 4th edition).

III. Cost-based system - A method of measuring performance by using overall costs of doing business with a certain provider. The system is costly and complex to execute, but it produces the most accurate results of the three mentioned in this thesis. The most difficult aspect of this system is detecting and tracking the expenses associated with non-performance by suppliers (Monczka et. al 2023 4th edition)

II. LITERATURE SURVEY

The literature is drawn from a variety of sources. Scientific publications, the internet, and books were used to conduct the literature review. Scientific publications and the internet are also used to acquire additional information from case

Aki Jääskeläinen. 2020 "The relational outcomes of performance management in buyer- supplier relationships", International Journal of Production Economics, presents the definitions of the main constructs of this study. The definition of the construct "supplier's provision of operative performance information" relies on the study by Cousins et al. (2008) dealing with operational performance measurement with the exclusion of more studied cost dimension.

According to Fink (2019), "A research literature review is a systematic, explicit, and reproducible method for identifying, and synthesizing the existing body of completed and recorded work produced by researchers, scholars, and practitioners" (Fink 1998). Hart (2003) describes literature review as, "the selection of available documents on the topic, which contains information, ideas, data and evidence. This selection is written from a particular standpoint to fulfill certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research is being proposed

Assadej Vanichchinchai 2019 The SCM originated in the area of logistics or physical transactions at the operational level. Since then it has evolved to emphasize partnerships with external business partners at the strategic level. Consequently, flows of information and material as well as relationship among business partners are included in most SCM definitions and frameworks. For instance, Talib extensively reviewed SCM literature and identified six major SCM practices from 40 practices.

"S. Hassim, M. A. Fauzi, Z. Yusof, I. R. Endut, A. R. M. Ridzuan. 2018 A current scenario in the procurement process", AIP Publishing, Supply Chain Management The world economy gained new characteristics and with the advancement of globalization, new possibilities have been raised and covered the most important processes of socio-economic development of the world, helping to accelerate the economic growth and modernization. In the past decades, the concept of supply chain management and strategic sourcing was one of the fastest growing area of management.

A survey to over 100 manufacturing companies (AMR Research Survey, 2006) listed the common indicators that were used to evaluate suppliers – statistical process control, supplier on-time delivery, KPIs/performance of key production assets, scrap and rework, average cycle times, inventory levels, variable manufacturing costs, products/mix profitability, supplier quality (raw materials), finished goods quality, demand variance, manufacturing line scheduling visibility, transportation schedules and cost, manufacturing line capacity visibility (Gordon, 2008).

III. OBJECTIVES OF THESIS

Enhance the performance visibility

Key Performance Indicators (KPIs): Define clear and relevant KPIs that align with your organization's goals. These should be measurable, specific, and time-bound, allowing you to track progress and identify areas that need improvement.

Real-Time Monitoring: Implement systems and tools that provide real-time monitoring of critical metrics. This allows you to identify performance issues as they occur, enabling timely intervention and corrective actions.

Find and eliminate hidden waste and cost drivers in the supply chain

Continuous Improvement: Embrace a culture of continuous improvement within your supply chain. Encourage employees to identify and eliminate waste in their respective areas of work. Implement mechanisms such as suggestion systems, Kaizen events, and regular process reviews to drive ongoing improvement efforts.

Utilize the supply base

Supplier Segmentation: Categorize your suppliers based on criteria such as strategic importance, performance, and criticality. This segmentation allows you to prioritize resources and efforts based on the supplier's value to your organization.

Supplier Relationship Management: Foster strong and collaborative relationships with key suppliers. Regularly communicate with them, share information, and involve them in decision-making processes. Establish clear expectations and performance metrics to drive mutual accountability and continuous improvement.

Minimize risk

Supplier Evaluation and Selection: Thoroughly evaluate and select suppliers based on their financial stability, operational capabilities, track record, and risk management practices. Consider diversifying your supplier base to reduce dependency on a single source and mitigate the risk of disruptions.

IV. METHODOLOGY

A Qualitative as well as Quantitative type of investigation that contributes to the study's goal of gaining an in-depth understanding of the suppliers' performance. Because these results must be determined for a single organization, generalization of findings is not possible. As a result, qualitative research is more appropriate than quantitative research (Eriksson & Kovalainen, 2008).

In terms of the research's practical approach, just one case study is undertaken. A single case study allows you to concentrate solely on the subject matter at hand. As a result, all components of the research may be simply adapted to the Company X. Conducting a single instance is adequate because there is no intention of generalizing or comparing examples.

Data Source

The information included in this master's thesis is derived from both primary and secondary sources. Experiments, observations, surveys, and interviews can all be used to acquire primary data for a specific situation (Ghauri & Grønhaug, 2005). Secondary data was gathered through a thorough literature assessment that included academic journals, books, and carefully selected research papers

Interviews

The interviews were conducted in a semi-structured format, with essential questions to collect all the important data while allowing the interviewee to freely contribute and convey significant information regarding the topics. Several interviews and conversations with various types of respondents make up the empirical portion. Interviews were done in order to collect a wide range of data.

Data Collection and Current Situation Analysis

To Analyze the current situation a questionnaire has been design to discuss with the manager of the case company as well as the managers from the different studios to collect the data and select the best way to carry out the supplier performance evaluation. 5

Procurement managers of different studios with several years of experience have been asked via telephonic interview to finalize the process of Supplier performance evaluation for the case company






V. RESULT & DISCUSSION

SELECTION OF IMPORTANT KPI'S
(SURVEY RESULT)

SR NO.	KPI'S	LESS IMPORTANT	IMPORTANT	VERY IMPORTANT
1	PRICE COMPETITIVENESS	0%	36%	63.4%
2	QUALITY	9.1%	18.2%	72.7%
3	SUPPLIER LEAD TIME	0%	54.5%	45.5%
4	OPTIMUM NUMBER OF SUPPLIERS (FOR EACH PRODUCT)	0%	30%	70%
5	PO CYCLE TIME	9.1%	54.5%	36.4%
6	FAVORABLE TERMS AND CONDITIONS OF VENDOR	0%	27.3%	72.7%
7	SPEND UNDER MANAGEMENT	0%	63.6%	36.4%
8	SUPPLIER COMPLIANCE RATE	10%	10%	80%
9	SUPPLIER DEFECT RATE	9.1%	36.4%	54.5%
10	SUPPLIER REJECTION RATE (ORDER REJECTION)	18.2%	18.2%	63.6%
11	CERTIFICATION OF SUPPLIER (ISO CERTIFICATION)	20%	50%	30%
12	EMERGENCY PURCHASE RATIO	9.1%	63.6%	27.3%
13	PO AND INVOICE ACCURACY	0%	27.3%	72.7%
14	EXTRA COST (TRANSPORT OR SHIPMENT COST)	9.1%	45.5%	45.5%
15	INTERNAL CLIENT SATISFACTION	0%	9.1%	90.9%
16	TOTAL CO2 EMISSION (FROM GOODS PROCURED FROM SUPPLIER)	0%	63.6%	36.4%

Supplier Evaluation Form
(DISCUSSION)

Company X SUPPLIER EVALUATION FORM

CRITERIA CHECKLIST *Vendor spend must be above 10K Euros. *Rate the vendor from 1-5	Assessment Date			1- Unsatisfactory	
	Company X Appraiser			2- Marginal	
	Catalogue			3- Satisfactory	
				4- Very Good	
				5- Outstanding	
1. Quality	VENDOR1	VENDOR2	VENDOR3	BASIS FOR SCORE	
Compliance on deliveries	4	3	2	Products are always delivered within timeframe	
Overall Quality of the Product	2	2	5	Deliverables are at the right level of quality	
Overall Quality of Invoices and Quotation	4	1	3	Invoices are error free and always accurate	
Overall Response Time to email or request	2	2	5	Always give quick responses and provide information within deadlines	
Quality of Support Service	4	3	5	The Supplier is proactive and efficient in his communication on deliveries	
Total number of complaints	2	3	5	The Supplier has very less or no complaints	
Average Score	3	2	4		
2. Cost	VENDOR1	VENDOR2	VENDOR3	BASIS FOR SCORE	
Competitiveness on the offer	2	5	3	The supplier provides best prices in the market	

Cost transparency	2	5	5	The Supplier fulfills the costbreakdown grid asked by Company
Capacity for additionnal discounts	2	5	5	The supplier provides additional discounts or provide goodwill gesture atthe end of the year
Transport/ Shipment Cost	2	5	3	The supplier has very less or no shipment cost
Average Score	2	5	4	

3. Customer Satisfaction	VENDOR1	VENDOR2	VENDOR3	BASIS FOR SCORE
Before Sales Service	2	3	5	The answer (quotation) isgood and detailed
After Sales Service	2	3	2	Customer Support answersquickly and efficiently
Commercial Relationsof the Supplier with Company	2	3	2	The Supplier is opened toproposals submitted by Procurement team (Costreduction, framework agreement)
Communication of theSupplier with Procurement	2	3	2	The communication is wellestablished between the supplier and Procurement
Communication of theSupplier with the internal client	2	3	2	The communication is wellestablished between the supplier and internal client
Creativity & Innovation	2	3	5	Demonstrates pro-actively acreative sense, which can lead to bringing innovation for Company OR Actively contributes to creativity insuggested solutions
Average Score	2	3	3	

4. Compliance	VENDOR1	VENDOR2	VENDOR3	BASIS FOR SCORE
Abusive practicestowards Company	1	5	5	The supplier has not demonstrated any abusive practices (eg - breach ofcontract)
Capacity of the Supplier to get compliant with Company X Procurement process	1	5	2	The supplier has respected the procurement process and has been proactive on it
Capacity of theSupplier to be proactive on its progress plan	1	5	2	Willingness to have a contract OR The supplier ispro-active on the progress plan improvement
Average Score	1	5	3	

5. Environmental Performance	VENDOR1	VENDOR2	VENDOR3	BASIS FOR SCORE
Location distance	2	2	2	Supplier is located near tothe studio
Environmental Consciousness	2	2	2	Suppliers take various measures to reduce the CO2emission OR supplier has the
Potential for environmental cooperation	2	5	1	Supplier has the potential and open for mutual projects focusing on lowering environmental impact.
Average Score	2	2	2	

6. Terms &Conditions	VENDOR1	VENDOR2	VENDOR3	BASIS FOR SCORE
Detailed Buyer Duties	4	5	2	Buyer duties are favorable
Terms & Conditions	2	5	2	Terms & conditions arefavorable
Average Score	3	5	2	

CRITERIA SCORES	WEIGHT	VENDOR1 WEIGHTED SCORE	VENDOR2 WEIGHTED SCORE	VENDOR 3 WEIGHTED SCORE	NOTES
1. Quality	0,20	0,60	0,47	0,83	
2. Cost	0,20	0,40	1,00	0,80	
3. CustomerSatisfaction	0,20	0,40	0,60	0,60	
4. Compliance	0,20	0,20	1,00	0,60	
5. Environmental Performance	0,15	0,30	0,30	0,30	
6. Terms &Conditions	0,05	0,15	0,25	0,10	
Total Score	1,00	2,05	3,62	3,23	

VI. PHASES OF IMPLEMENTATION

- Step 1 – Approval from the Company X Manager and the top management is necessary to ensure that the project align with the company strategy.
- Step 2 – Introduce the new process to the team and the suppliers that are to be evaluated for – Training the team / buyers. Convey the expectations of company X from the suppliers. Collecting the important information that are needed to carry out this evaluation. Selecting the Appraiser / Evaluator for each category of Suppliers. Buyer who is handling the request/ purchasing process of specific category is selected as the evaluator.
- Step 3 – Collection of important data needed for evaluating the supplier on the Important KPI mention in the template. There might be some data that are not recorded before which should be track for getting the overall evaluation of the suppliers.
- Step 4 – Evaluation of the top 3/5/10 suppliers for every 6/12 months depend upon the category of suppliers.
- Step 5 – Keeping the records / uploading the evaluation form to the Software X that are used as the supplier database of Company X.
- Step 6 – Sharing the evaluation results and Improvement plans with the suppliers.
- Step 7 – Follow up on the planned activity.

VII.CONCLUSION

As per the thesis title ‘Developing Framework for Supplier Performance Evaluation in the Gaming Company X’ a complete design and implementation process has been developed including the implementation plan, process flow and the risk involved in the process. The KPI’s used in the process has been selected by carrying out the interviews and survey with the team and managers from different studios to ensure that it align with the company goals and strategy. The evaluation method has been chosen keeping in mind the available resources with the company X. The final selection of the method and idea of designing a supplier evaluation scorecard came from the discussion and interviews with the managers. The questionnaire has been prepared before to know the process of carrying the supplier performance evaluation. The process for measuring the supplier’s issues related to the delivery of products and services has also been developed to act as a source for rating the KPI related to Quality. Company X was not tracking the issues faced by the buyer with the supplier which would cause to occur again in future. By tracking this, the procurement team will be aware of the issues and the process of resolving it in future. The supplier may be blacklisted if the company faces frequently the similar issues related to products and services. Company X buyers do the CSR analysis of the top 20 suppliers to evaluate the vendor performance and to identify the critical vendors. In CSR analysis country, product and annual business amount are the 3 major factor that affecting the risk with the particular supplier for e.g., if the supplier is located in India i.e., outside of Germany it will show high risk. CSR analysis did not measure the actual performance of the supplier related to cost, quality, customer satisfaction etc.

FUTURE RECOMMENDATION

There is much scope of improvement in this system further. A dashboard can be created further on the actual evaluation of the suppliers to get the better visual overview of all KPI’s that are included as well as not included in the evaluation form. The others KPI that can be included in the dashboard are Supplier Lead time, PO/ Invoice accuracy, emergency purchase ratio, contract with the supplier etc. Company X buyers also faces issues from the incorrect Invoices from the suppliers. A process of measuring the issues related to the Invoices from the suppliers should be design and implemented. Company X has a specific software which are used to process and store of all the Quotations, PO, Invoices and delivery receipts etc. Furthermore, the setup and implementation of this system would necessitate a shift in workload, communication, and effort. The employees may demonstrate opposition to the previous working system and refuse to change. That is the symptom in which change and transition management, which tries to support, coach, and manage human workers through dramatic change, may be useful.

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