IOSR Journal of Economics and Finance (IOSR-JEF)
e-ISSN: 2321-5933, p-ISSN: 2321-5925.Volume 11, Issue 4 Ser. VI (Jul. – Aug. 2020), PP 01-06
www.iosrjournals.org

Small and Medium Sized Enterprises Key Performance Indicators

Mr. Yadavalli. Srinivasarao[1], Dr. T. Narayana Reddy[2], Dr. N. Giri Babu[3].
[1]*Research Scholar, Department of Management, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu, Andhra Pradesh, India[1],*
[2]*Associate Professor, Dept. Of Management, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu, Andhra Pradesh, India[2].*
[3]*Associate Professor, Dept. Of Management Studies, Sri Venkateswara College of Engineering and Technology, Chittoor, Andhra Pradesh, India[3].*

Abstract
The important role of SMEs in the economic growth of the developing countries has drawn the attention of politicians but remains largely unexplored. Research has shown that business performance is dictated not only by the outstanding features of size and age, as well as by certain businesses – particular factors such as debt, potential growth prospects, product and operational advancement, and organizational changes. The performance of any entity can be calculated in various ways. Quantifiable metrics are key performance indicators known as KPI which help policymakers assess and evaluate progress towards organizational objectives. KPI varies between industries. Therefore, to assess the company's success it is important to know which and how components of the system contribute to its overall performance from its internal structure.

Keywords: *TQM, Output Assessment, Business Performance, Small and Medium-Sized Enterprises, Key Performance Indicators.*

Date of Submission: 26-07-2020 Date of Acceptance: 09-08-2020

I. Introduction

For many decades, primary performance metrics have played a significant role in the management of companies in different economic sectors. Over time, the number and importance of indices has increased significantly. The promoters and drivers were in particular from the financial sector and the manufacturing sector. This huge increase of key indicators in all different business processes has resulted in an extremely significant use of key indicators for their providers and short and mid-suppliers(Alfred Tiber, 2018).

A wide variety of significant indicators and extremely developed indicator systems is evident. Others are used in many sectors, while others only exist in one or a few particular industries. And there are commonalities in all KPIs; they are often aimed at effectively selling the product, company or business unit systematically for the long run and are closely connecting the corporate plan with the operating units to achieve that goal.

The performance monitoring system is a critical component of total quality management. Standard performance assessment types include process assessments (inputs, outputs) and quality indicators Sillanpää, V (2011).

Total quality management is a comprehensive strategy consisting of concepts and practices aimed at enhancing the quality of goods and services in SMEs by persistent and efficient setting and achieving of the requirements of the consumers.Provable indicators decided in advance that represent the essential success factors of SMEs are key performance indicators. These are the means by which the efficiency of every SMEs, consulting firm and its branches, facilities and workforce is regularly evaluated.

In the past, the Key performance indicator has concentrated primarily on financial metrics, for example revenue growth, income, cash flow and investment return in order to assess economic results of the firms Chan‘s, Y.C.L. (2004), but these indicators are not related to plans and thus may clash with goals. Trebuna, P, Lut (2011) and Bang, H., Ross S., ReioJr, T.G. D.M (2012). (2012) has also been identified the relationship between employee engagement, work satisfaction and corporate dedication as an indicator of employee success.More precisely, the writers Chlpekova and Koltnerova (2013) are committed to managers' success, and suggest team members or supervisors have a direct impact on quantifiable metrics of working efficiency. Their duties and skills are mainly based on achieving the necessary quality of the target output volume.

In measuring organization performance, a balance of financial and non-financial metrics must be used. Thus, financial and non-financial metrics for the success of SMEs can be Aggarwal. R.K et al (2012).

Measuring financial indicators is fairly straightforward since they are clearly defined and can easily be derived from statistics in the financial reports. This is more difficult to follow up non-financial metrics, while some criteria can be used as a basis for formulating them.

Key Performance Indicators

However, non-financial metrics have gained growing attention from SMEs to provide managers with additional details. There are a number of variables in the past relating to competition advantages: technology, human resources potential benefits, performance and productivity, value of goods, advertising, economic growth, business networks, energy, infrastructures, projects, profitability, expenditure and financial, raw materials, development and service, marketing and distribution.

More than ever, conventional performance management, mostly focused on financial management, has reached its limit, with the recent movement in the world to encourage modern nontraditional metrics, approaches based on non-financial, tactical and sometimes qualitative measures, methods and models Zamecnik. R., Rajnoha. R. (2015). This is because this conventional approach, which primarily focuses on financial metrics, does not adapt to changes in the technical and competitive climate, which often results in false and unreliable internal accounting details.

Notwithstanding SMEs' increasing interest in non-financial performance measures, there is little knowledge about the use of non-financial performance measures in SMEs manufacturing.

A research by Mohamed Basheik and Abdel – Maksoud (2005) concluded that performance metrics for "on-time delivery" and "capacity and use" are positive and substantially related to modern production technology and competitive issues.

Cambon et al. (2005), defines three primary output assessment methods, which can be separated essentially:

a) An approach based on results;
b) Enforcement – Strategy based;
c) An approach focused on the process.

In the first, results-based approach to performance assessment, so-called lagging indicators (also called outcome and negative indicators) are applied. Although leading indicators (also known as constructive, optimistic or predictive indicators) are used for the two remaining strategies. Leading indicators (included as pro-active performance indicators) are also referred to as functional outcome measures for evaluate the success of internal system processes. Operational performance metrics provide data on the progress of each management system method. Therefore, these metrics provide feedback on the status of change within the management system when measured over time and help to predict future scheduling and position. Examples of these measures are as follows: the number of workstations that have completed or revised a risk analysis, the percentage of qualified workers in one period, the ratio of security checks on machinery and plant relative to the schedule. Monitoring the importance of these metrics gives an indication of how a certain program works at the store level, as opposed to Conceptual performance measurement output.

Two simple approaches are possible to construct a relatively small set of KPI on the grounds of a higher total collection of participant indicators: aggregation and selection.

Aggregation involves in deciding the significance of a higher-level performance indicator in order to collectively and synthetically represent the results of all related indicators (sub-indicators). These collective measures are commonly called standardized indicators, aggregate indicators or combined ones. The aggregation of the indicators is generally possible using calculation methods: arithmetically, geometrically or harmonically, while the average arithmetic, often also called linear, is the easiest and perhaps most extensively accepted method for the management sector Zamecnik. Rajnoha. R. (2015).

For such cases with such a huge proportion with KPIs, a decision-making challenge occurs in which issues remain: which KPI must be chosen from a particular set or how to prioritize such measures.

SMEs will take several steps before picking the correct KPI, including:

A. Good description of business processes;
B. Setting process requirements;
C. Qualitative and quantitative performance measurement;
D. To assess variances and to change procedures to meet their short-term goals.

When choosing KPI, it is crucial to confine them to the factors necessary for the SME to achieve its objectives. It is also necessary to maintain the number of KPIs low just to concentrate everyone on obtaining a certain KPI. In situations where the SME main performance measure is 'increased satisfaction of customers' KPI may be based differently in various departments: manufacturing has a KPI of 'number of units rejected for quality assurance,' while sales have a KPI of 'minutes before the sales representative responds.' Sales and

manufacturing performance in achieving its respective KPI divisions would enable the SME to reach its overall KPI.

For instance, to track progress on KPI calls, the Customer Service Department must calculate how many calls it receives and how long it takes for every call to respond. Therefore the Customer Service Director will measure the first minute's percentage of customer calls and continue to boost the KPI. Through making every Customer Service agent list their own calls and inform their boss at the end of the day, we will calculate the number of calls. We may have a customer service team tracking the number of calls transferred.

The simplest option, and the most costly, is to buy a software system, which involves the number of incoming calls, calculates how long it takes to answer each one of the calls, records who replied to the call and calculates the length of the call. These measures are present, accurate, total and unbiased. This set helps the manager to measure the first minute amount of customer calls answered. It also offers more metrics that allow it to quickly improve the percentage of calls replied to. Understanding the call length helps the manager to determine if there are adequate workers to accomplish the objective.

Understanding which customer services respond most to calls determines the experience of the manager that can be expressed with other customer support. Within this context, the KPI can be used to identify future performance goals, drive change and growth, explain and assess historical results. For example, May et al (2013) evaluated latest advances on climate producing manufacturing performance measures in designed to steer research gaps and manufactured products for equipment evaluation in literature.

Key performance indicators for SMEs (Examples)

Business process	• Product (defect, scrap, rework,waste etc.) • order to delivery responsetimes • manufacturing cycletime • sales (production) peremployee • inventoryturns • reinvestmentindicators • health and safetyperformance	Efficiency	• cycle time from request todelivery • average cycle time from requestto delivery • volume of tasks perstaff • number of staffinvolved • number ofalerts • customer ratings ofservice • number of customercomplaints 8 .number of processerrors • number of human errors • time allocated foradministration, management,training
Customer	• the status of existingcustomers • new customers theyacquired • customerfidelity • segmenting customers byprofitability ordemographics • waiting time for customerorders	Control performance	• number of control loops inmanual mode/total number of controlloops • variance of control error(set-point- measured value) • setting time after a set-pointchange
Maintenance	• maintenance time/producedoutput over a time period • number of alarms over a timeperiod	Equipment	• heat transfer rate of heatexchangers • number of valve openings for a valve or total valve opening traveldistance • vibration amplitude of anequipment • employee suggestions/ employee competence measures/employeemorale
Personnel	• accident/incident rate per number of man hoursworked • considerate contractorsscore	Financial	• cashflows • productprofitability • return onsales • return oncapital • return onequity
Process	• Progressagainstschedule (daysbehindor aheadofscheduleexpressesas %) • % of required reports delivered ontime • number of defects at 1 month post practicalcompletion • average process overduetime • percentage of overdueprocesses • average processage • percentage of processes where the actual number of assigned resourcesis less thanplanned • number of assignedresources • sum of costs of"killed"/stopped active	Environmental	• energy consumption(MWh/m^2/year) (gas, electricity, heat, oil, biomass,etc) • % by weight, of constructionwaste sent forrecycling • Hours of industryactivities • percentage use of recyclablematerials • amount of pollutantdischarge

Innovation process	• number of identified unmetneeds • number of ideas bystaff • the number of new competenciesfor innovation • number of managers havingtraining in the methods and tools ofinnovation • number of patents per year per employee • number of awards,publications • the higher rate ofproductivity • number of improvedproducts, processes • lifetime of an innovativeproduct • number of products launched inthe lastyear	Competitor	• deliveryperformance • priceperformance • qualityperformance • proportion of newproducts • new-product development cycletime
Quality	• cycle time from request todelivery • call length – the time to answer acall • numberofescalations-howmany bad • numberofreminders–howmany atrisk • number of alerts – overallsummary • customer ratings of service –customer satisfaction • number of customer complaints–problems	Market and customer	• share of market • responsetime • warranties, claims,returns • market/channel/customerprofitability • customer satisfaction or dissatisfactionindices

More specifically, a KIP is an element of information gathered periodically to track SME or device efficiency at any stage (such as manufacturing machine or factory or unit) generating outputs (products or services) using different kinds of resources. KPI may be used during the design phase to monitor the effectiveness of alternative technologies or production processes with the trade-offs for the same resource consumption by quantities and costs. The following KPIs (Table 1) are illustrations, many more of them are naturally possible (this is a list from which to learn).

Van der Stede et al. (2006) concluded that, regardless of policy, SMEs with broader performance metrics, both quantitative and discretionary non-financial metrics, have increased overall results and have showed that non - monetary interventions are greater than financial assistance measures for SMEs to build and execute their new initiatives. In the family of non-financial measures, consumers' rates of adoption are higher than other non-financial measures.

David Parmenter (2016) said that: "There are many businesses that routinely measure various KPIs, but I can prove they don't alter, increase and control the calculation and never have key performance metrics." When managers attempt to quantify and calculate everything, they can quantify / calculate it, even though they don't understand precisely what and why they assess. It is useless to make the impact that something is done and also is done in this field at present. The boss would also pay heed to this:

- The less KPI, the greater,
- Every KPI must have a simple and straightforward definition,
- The optimal effects of KPI drivers

For order to obtain higher relative performance by KPI, SMEs need to meet their anticipated goal with stronger productivity and quality than their competitors (Fig.1). Quality and efficiency are two main dimensions of success – Neely et al. (2002) underlines that "efficacy refers to the degree to which stakeholder needs are fulfilled, whereas efficiency tests how the capabilities of the business are efficiently used to achieve a certain level of stakeholder satisfaction." Internal considerations include funding for SMEs, capacity building, strategic goal development, internal process management and innovation and performance management. External factors Including customer impacts; strategic relationships; global competitors; and legislation. Each aspect in a company will influence the output of the business. Each factor integrates with another factor.

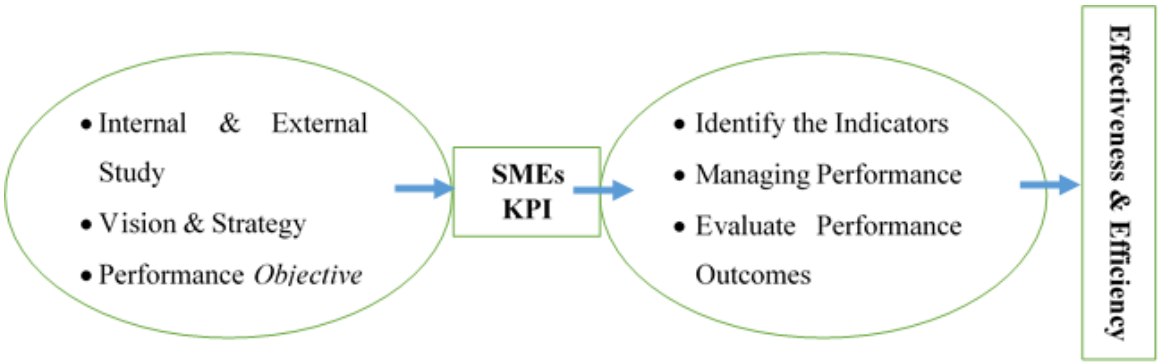

Figure 1: Measurement of KPI, Neely et al. (2002).

A performance normality test should be implemented in order to evaluate performance metrics, which helps to visualize the performance cause and effect. The action of the boss is very important to enforce performance improvements effectively and the engagement of all employees in choosing KPI becomes even more significant. This is not ideal that the decision was taken by just managers. Around the same time, customer feedback allows a SMEs to easily recognize performance problems. For good teamwork, internally and externally interaction is very critical. Salva M. (2015) et al.

James Harrington (2016) notes that the KPI is extracted from the SMEs success expectations. A variety of primary performance metrics can be calculated for each performance goal.In the olden days, SMEs have been somewhat hesitant to adopt high quality proposals, either because of their extreme managerial involvement in daily entrepreneurship activities which prioritization on sales strategies and market expansion but also because the implementation of complete quality management is less satisfied. While SMEs are typically linked to a lack of competences and capital, strong competition has forced them to follow more and more official quality system strategies as they believe that high levels of profitability and competitiveness are shown by complete quality-orientated firms. Large businesses have thousands of processes, but on a few key metrics can create efficient control systems. For a smaller, less complicated organization, this would be even simpler. The disparity between small, medium-sized and larger businesses may often be significant: for example, while small companies tend to feel disadvantaged by the lack of available capital for larger corporations, they are less complex. It will give them the benefit to be more versatile and adaptable, with KPI that represents the success of SMEs. SMEs have less levels of management, less lateral distinction, less and less complicated procedures, less and less skilled workers. However, the advantages of versatility and simplicity are offset by an incomprehension of maximum quality governance and the need to return quickly. The measurement systems should be designed to improve internal processes and satisfaction of customers. Improvement is everybody's duty in SMEs, every day, all the time.

In today's environment, KPIs are important for organizing and executing, information acquisition, accountability and management decision-making. Productivity, price, time and intangible assets are essential non-financial KPIs. Nonetheless, a SME can only obtain holistic knowledge about market problems if both financial and non-financial KPI are considered. Furthermore, critical features are observable, indisputable, clear and equivalent for good KPI.

Therefore, KPI must satisfy such basic requirements:

- ✓ The KPI must've been able to calculate the level of consumer needs quantitatively;
- ✓ No space for ambiguity or exploitation should be left by KPI;
- ✓ The origin of informed decisions will be the KPI.

II. Conclusions

The literary quest for the sample was built on the current pair of keywords in the title, keywords or abstract.

peer – reviewed papers on small and medium-sized business performance measurement systems covering the fifteenth – year-end period from January 2001 to October 2015: 'KPI,' 'SMEs,' 'Performance Measurement,' 'small business,' 'mediate company' etc.

In recent years, the cornerstone of the economy, small and medium-sized businesses, have been a major focus of most authors' research work. Taking into account the question of productivity, designed to measure and enhancing the operations of SMEs were and still are the main research and a challenge for all companies and managers.

Quality measurement is a category of technologies developed by small and medium-sized companies to assess company efficiency.

Key performance indicators are vital for the observing of industry performance. KPI can calculate various aspects of activity, such as energy, material, operation and control, maintenance, etc.

Quality management behavior on the basis of the KPI can be created, prioritized and enforced.
Performance indicators can be described as parameters which are intended to quantify process or function changes. Simple, usable and clear metrics must be identified. They can be used to identify inadequate performance and potential for improvement.
KPI is an important method of management as it transforms complex metrics into a simple metric that allows policy makers to evaluate the existing situation and appropriate extent.
The core tenets for the expansion of the KPI have been defined:
a) Genuinely representative of the key objective's success;
b) To be verified that the results are not misrepresented;
c) Useful and timely for influencing decisions;
d) Related to systems that allow input of decision-making information.
In order for the KPI to be impactful, however, it needs to be enforceable to report the performance measures to the SME.

References

[1]. Alfred Tiber (2018), Key Performance Indicators for SMEs in Producing Industry Academic. Journal of Economic Studies, 4(4), pp. 134 – 141.
[2]. Sillanpaa. V (2011), Performance measurement in welfare services: a survey of Finnish organizations. Measuring Business Excellence, 15 (4), pp. 62-70.
[3]. Chan. Y.C.L. (2004), Performance measurement and adoption of balanced scorecards: a survey of municipal governments in the U.S.A. and Canada. International Journal of Public Sector Management, 17 (3), pp. 204–221.
[4]. Trebuna. P (2011), Human resource management in industrial engineering, The Technical University of Kosice, Kosice.
[5]. Lut. D.M (2012), Connection between Job Motivation, Job Satisfaction and Work Performance in Romanian Trade Enterprises. Economics and Applied Informatics, 18 (3), pp. 45- 50.
[6]. Bang. H., Ross S., ReioJr, T.G. (2012), from motivation to organizational commitment of volunteers in non-profit sport organizations:The role of job satisfaction. Journal of Management Development, 32(1), pp. 96-112.
[7]. Chlpekova. A., Koltnerova. K. (2013), Education of first-line managers aimed at developing competency – the training of production employees in the workplace". Efficiency and Responsibility in Education, Czech University of Life Sciences Prague, pp. 218-225.
[8]. Aggarwal. R.K., Evans. M.E., Nanda. D. (2012), Nonprofit boards: Size, performance and managerial incentives. Journal of Accounting and economics, 53 (1), pp. 466-487.
[9]. Zamecnik. R., Rajnoha. R. (2015), Strategic business performance management on the base of controlling and managerial information support, 4th World Conference on Business, Economics and Management, Czech Republic, Procedia Economics and Finance 26, pp. 769- 776.
[10]. Mohamed Basheikh. A., Abdel-Maksoud. A. (2005), Operational Performance Use and Contemporary Management Practices Deployed in Manufacturing Firms: The Case of Kingdom of Saudi Arabia. Available at http://www.researchgate.net/publication/2650 74191.
[11]. Ahmad. K. (2012), The Use of Management Accounting Practices in Malaysian SME, Ph.D. Thesis, and University of Exeter, United Kingdom.
[12]. Cambon. J., Guarnieri. F., Groeneweg. J. (2005), Towards a new tool for measuring safety managementsystem performance. Proceedings of the Second Resilience Engineering Symposium, France, Mines Paris, pp. 53-62.
[13]. Venkataraman. N. (2008), Safety performance factor. International Journal of Safety, Ergon, 14 (3), pp. 327-31.
[14]. May. G., Taisch. M., V.V. Barletta (2013), Energy related key performance indicators - State of the Art, Gaps and Industrial Needs, International Federation for Information Processing, pp. 257-267.
[15]. Van der Stede. W.A. Chow, C.W. Lin (2006), Strategy, choice of performance measures, and performance. Behavioral Research in Accounting, 18, pp. 185-205.
[16]. David Parmenter (2016), Available from www.davidparmenter.com.
[17]. Neely. A., Adams. C., Kennerley (2002), The performance prism: the scorecard for measuring and managing business success, London, Pretince Hall.
[18]. Salwa. M., Mara RidhuanChe Abdul Rahman (2015), Human Capital in SME Life Cycle Perspective, 7th International Economics & Business Management Conference, University of Kebangsaan Malaysia.
[19]. James Harrington (2016), Available fromhttp://www.goodreads.com/quotes/632992-
[20]. Eniola. A. &Ektebang H. (2014), SME firm's performance in Nigeria: competitive advantage and its impact. International Journal of Research Studies in Management, 3 (2), pp. 75–86.

Mr. Yadavalli. Srinivasarao, et. al. "Small and Medium Sized Enterprises Key Performance Indicators." *IOSR Journal of Economics and Finance (IOSR-JEF)*, 11(4), 2020, pp. 01-06.