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Applicability of Performance Measurement Systems in Incentivizing the Operational Level Indirect Employees: A Literature Review

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Abstract: An organization can be broadly categorized into three main segments as strategic level, tactical level and operational level. The operational level employees can be further categorized into direct and indirect employees based on the traceability of their work in the output. There are multiple incentive schemes developed for the direct employees based on the performance evaluation. However, there is a lack of indirect employee incentive schemes due to the difficulty in accurate performance measurement of the indirect employees. This study discusses the suitability of existing performance measurement systems for the performance evaluation of operational level indirect employees when developing an incentive scheme.

Key words: Incentives, KPI, performance, motivation, indirect employee

INTRODUCTION

The entire workforce in an organization can be broadly categorized into two sections as direct and indirect employees. The indirect employees play a major role in facilitating the direct employees throughout the entire organization. The higher performance level of direct employees is achievable only with the effective cooperation of indirect employees. The direct employees will receive smoother flow of production with the positive intervention of the indirect employees. As stated by Grammling and Holtmann, the financial incentive schemes have more impact on the performance of the employees than that of non-financial incentives. Therefore, the performance based monetary evaluation of indirect employees is essential in achieving the ultimate goals and objectives of the company. Gibbs *et al.* (2004) identifies most crucial issue in designing an incentive scheme is to use correct performance measures. In any organization, the operational level employees play a major role affecting the company's overall performance (Cox, 2014). This study focuses on analyzing the applicability of available performance measurement systems to design an incentive scheme for the operational level indirect employees.

Literature review:

Operational level in an organization: According to Cox (2014) and Goyal (2014) in traditional approach, an organization can be represented in three broad levels as strategic level, tactical level and operational level. The strategic level represents highest level of an organization. It formulates the mission statement and strategic objectives focusing on long-term planning for the survival of the organization in dynamic business environment. The operational level represents the lowest level in an organization. Operational activities focus on main core of the business and handling transaction information between both internal and external customers and suppliers. It formulates short term planning by considering information on available resources within the organization and the suppliers to achieve customer requirements. This information is shared with the tactical level which is the middle level of the organization between the strategic and operational level. Based on the information generated by operational level, tactical level generates detail plans to ensure that the strategic objectives of the organization can be achieved. Furthermore, based on the operational level performance, tactical level shares the information on organizational performance with the strategic level to make necessary amendments. Therefore, it is obvious that the operational level employees play a major role in organizational success.

Direct and indirect employees: According to Bragg, direct employees are engaged directly in the manufacturing process of final output. The traceable processes which include changing of the composition, form or condition of the final product is done by direct employees. Conversely, any employee that is involved in facilitating, maintaining and supervising the total manufacturing process is categorized as indirect. Only the direct employees are considered as engaged in direct value addition processes. However, it is obvious

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that direct workforce cannot be fully utilized and productive without the contribution of indirect employees.

There are multiple systems available in literature on giving incentives for direct employees. However, there is a lack of indirect employee incentive schemes due to the difficulty in accurate performance measurement of the indirect employees.

As stated by Lal and Srivastava, rewarding only the direct employees for their performance will lead to dissatisfaction of indirect employees who work side by side as facilitators. This will lead to feeling of unfairness and eventually end up with poor cooperation of indirect employees towards the direct employees. Not being rewarded for indirect employees performance may create employee unrest and increase the employee turnover ratio. The need of offering incentives for indirect employees based on the performance level is emphasized by Rajasekaran.

MATERIALS AND METHODS

Performance measurement system: According to Bourne *et al*. (2003), a PMS (Performance Measurement System) can be defined as a multi dimensional approach in evaluating and quantifying the efficiency, effectiveness and performance of actions and processes. These multi dimensional measures will help to predict the future behavior of the organization.

Employee performance and performance based incentive scheme: Neely *et al*. (2000) stated the major cause of manufacturing firm's failure in achieving an outstanding performance. The primitive evaluation of manufacturing processes only based on cost and efficiency is no longer applicable to the present business environment. Therefore, the companies should look forward to implement new conceptual and theoretical approaches to judge the employee performance in various aspects. The need of such concepts well recognized and practiced by the world-class manufacturers (Neely *et al*., 2000). This emphasizes the need of multi dimensional results evaluation mechanism which can be supported by a compatible performance measurement model. According to Sharma (2016), Senthilkumar *et al*. (2015) and Monappa (1985), the implementation of basic rate systems such as piece rate system possesses certain drawbacks. Its main focus is on productivity which results in one dimensional system. Therefore, the workers tend to concentrate on number of pieces being produced rather than considering the product quality. Especially, the companies which encourage teamwork such as garment factories will have negative impact due increase of competition between individuals (Frost and Media, 2013).

Conversely, the Performance Related Pay (PRP) system promotes the employees to increase the quality of output whilst encouraging the employees to exert the correct amount of effort. In addition to that, a PRP system is having the ability to attract only the employees or new comers with higher ability to perform. Furthermore, the employees consider PRP as a reflection of the development of personal growth, skills and abilities acquired through training and self-learning, etc. Through a structured result oriented PRP system, the motivation of all level of employees is obvious in any organization. In managerial perspective, PRP can influence the employee's attitudes and behaviors in order to gain more effectiveness and productivity which ultimately result in higher profit to the company (Mensah and Dogbe, 2011). Hence, the PRP system can be considered as more suitable for any organization as a whole. However, it can create an adverse effect on employee performance in the absence of proper performance evaluation criteria. Therefore, it is obvious to establish a well-structured Performance Measurement System (PMS) which is accompanied with PRP when developing an incentive scheme for operational level indirect employees in any organization.

More importantly, any performance measurement tool that is used for incentive scheme should be easily understandable and controllable to the affected employees (Vanderbeck, 2012; Snell *et al*., 2015; Schneier *et al*., 1995). It helps to align the individual employee performance to the overall organization objectives (Kooy, 2010). Therefore, the understandability of performance measurement systems to operational level indirect employees is one of the key considerations in this study.

RESULTS AND DISCUSSION

Applicability of available performance measurement systems on operational level indirect employee incentive schemes: Balanced scorecard, Lynch and Cross SMART (Strategic Measurement and Reporting Technique) pyramid, European Foundation for Quality Management Business Excellence model (EFQM model), performance measurement matrix, Performance Prism and Kanji Business Excellence Measurement Systems (KBEMS) are the most mentioned performance measurement systems in previous literature (Dietrich, 2016; Bititci, 2016; Jiang, 2014; Elgazzar, 2013; Khan *et al*., 2011; Cook, 2010). Out of them the Balanced Scorecard and SMART (Strategic Measurement and Reporting Technique) pyramid are two popular performance measurement models (Dietrich, 2016; Jiang, 2014; Striteska and Spickova, 2012; Stefenson, 2004). Therefore, this study

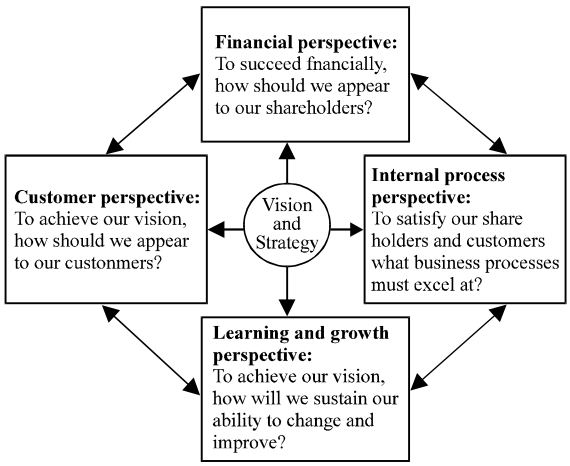

Fig. 1: Balanced Scorecard (Makhijani and Creelman, 2011)

Fig. 2: Lynch and cross SMART pyramid (Bititci, 2016; Salloum, 2010, Stefenson, 2004)

provides an in depth analysis of the suitability of these two performance measurement models along with a brief analysis on other four models mentioned above.

Applicability of balanced scorecard on operational level indirect employee incentive schemes: The Balanced Scorecard is used to evaluate the organizational performance by translating its vision and strategy into four balanced perspectives; financial, customer, internal process and employee learning and growth (Dietrich, 2016; Cook, 2010; Niven, 2010; Makhijani and Creelman, 2011; Kaplan and Norton, 1996) as shown in Fig. 1.

However, some important indicators linked to the company strategy may be eliminated due to unfitness to the Balanced Scorecard model. In other words, the company strategy may not be precisely translated into the actions of employees and internal processes (Rompho, 2011). The misalignment of employee's and company objectives and strategies will result in poor overall performance. The Balanced Scorecard is often known as a controlling tool rather than an improvement tool (Striteska and Spickova, 2012). It is considered as the major process failure especially when applying to a labor intensive organization. In addition to that Molleman, emphasize the inapplicability of Balanced Scorecard for a dynamic competitive business environment.

The design failure and process failures are major drawbacks of Balanced Scorecard when applying it practically (Rompho, 2011). Too many Key Performance Indicators (KPIs) will result in losing the focus on critical points. Too few KPIs will cause the failure in maintaining the balance between leading and lagging perspectives.

Identification of balanced indicators for each perspective may be impractical when considering about the operational level indirect employees. Therefore, the Balanced Scorecard may not applicable to measure the performance level of operational level indirect employee job categories. Furthermore, the Balanced Scorecard concept is known to be inappropriate for benchmarking which is essential in performance evaluation of employees with the purpose offering incentives. Therefore, as a whole, the Balanced Scorecard model is not applicable for measuring performance of operational level indirect employees.

Applicability of SMART (Strategic Measurement and Reporting Technique) pyramid on operational level indirect employee incentive schemes: This comprehensive performance measurement model includes both internally and externally focused performance indicators to measure the overall company's performance (Fig. 2). The corporate vision is hierarchically translated to the measures of each level of the pyramid. Due to the strategic correlation between each level of the pyramid, the measures at operational level employee's performance have significant importance on the overall measurement pyramid. In other words, the performance measures at departmental and operational level employees reflect the overall company's vision as well as internal and external business unit objectives (Dietrich, 2016; Klumpp *et al*., 2015; Coffey, 2010; Neely, 2007; Kandula, 2006). As stated by Tangen, a good PMS should possess certain characteristics. It should be derived directly from the company's strategic goals and objectives and should be redesigned to match with changes of objectives from time to time. Otherwise, the PMS will create an adverse effect on the organization by driving the employees towards a different direction. The performance measures should have a clear link from top to bottom to align all the employees to be consistently adhered with the organization's ultimate goals. In addition to that, the PMS

should have adequate number of measures to cover all important aspects. It should include performance measures to evaluate short and long term results, different types of performances as cost, quality, flexibility, delivery, etc., different perspectives (customer, competitor, shareholder, etc.) and various organizational levels. However there should be limited number of performance measures allocated for each job role. Otherwise, the employees get overburdened which will lead to employee dissatisfaction. Attainable targets for each performance measure should be clearly defined with specific timeframe to achieve it. SMART pyramid can be considered as a PMS covering almost all the above intended aspects.

SMART pyramid states that the departments and employees should have better understanding on the link between assigned performance measures to strategic goals of the company (Stefenson, 2004). Performance measurement should have the ability of aligning all business activities within the company towards satisfaction of customer requirements. This can be considered as a major concern when initiating a performance evaluation system to any organization. Rossi (2012) has stated that, the organization success can be critically influenced by the four measures at base level of SMART pyramid; quality, delivery, cycle time and waste. These measures are understandable for operational level employees as well. These four dimensions can be considered as key factors which lead the company towards the business excellence and will effectively help to survive in the competitive environment. Every department in a manufacturing firm plays Juran's triple roles as; supplier, processor and customer depending on the manufacturing process flow (Gasparik, 2007). Therefore, in case of SMART pyramid both internal and external customer satisfaction have been taken into consideration when setting performance measures at operational level employees of the departments. However, the SMART pyramid is unable to provide any mechanism on deriving KPIs for each level. Therefore, identification of prioritized KPIs and setting targets should be done by using an appropriate method.

Applicability of other common performance measurement systems on operational level indirect employee incentive schemes: In this study, other common performance measurement systems and their suitability in evaluating operational level employees are discussed briefly.

European Foundation for Quality Management Business Excellence model (EFQM model): EFQM model is a self assessment tool that can be useful in determining the maturity of an organization by considering nine major areas as shown in Fig. 3 (Legido, 2008; Bon, 2007). It critically examines the overall organizational method and performance (Cook, 2010).

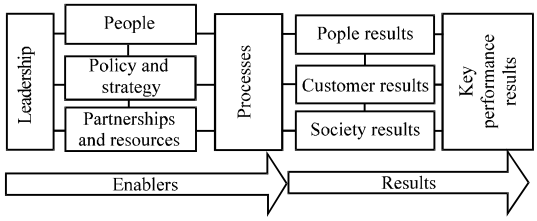

Fig. 3: EFQM model (Nelen and Hondeghem, 2000; Cook, 2010; Bon, 2007; Sante, 2006)

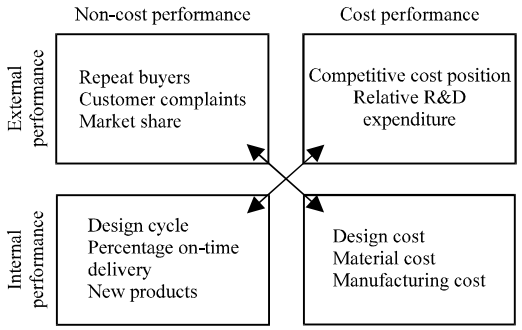

Fig. 4: Performance measurement matrix (Quagini and Tonchia, 2010; Salloum, 2010; Neely, 2007)

The determined organizational maturity level is used to develop strategic improvement plans. This provides a systematic procedure to achieve the organizational success (Kozak and Kozak, 2016; Cook, 2010). EFQM model is a continuous improvement tool that aims to improve Total Quality Maintenance (TQM) and thereby increase the customer and internal employee satisfaction together with performance results (Watson and Howarth, 2012; Bon, 2007; Nelen and Hondeghem, 2000). The assessment of the organization is done based on five main characteristics as leaderships, result-orientation, continuous improvement, transparency and cooperation (Cook, 2010; Sante, 2006).

Performance measurement matrix: Keegan introduced a 2×2 performance measurement matrix as given in Fig. 4. The purpose of this model is to create an overview of overall company performance through the effective integration of four cells (Salloum, 2010). The performance indicators are classified to cost or non-cost performances and internal or external performances (Quagini and Tonchia, 2010). The indicators in four cells represent the external/non-cost, external/cost, internal/non-cost and internal/cost performance measures (Jiang, 2014). Although, this model is simple to use, it does not create links between different business dimensions (Bititci, 2016).

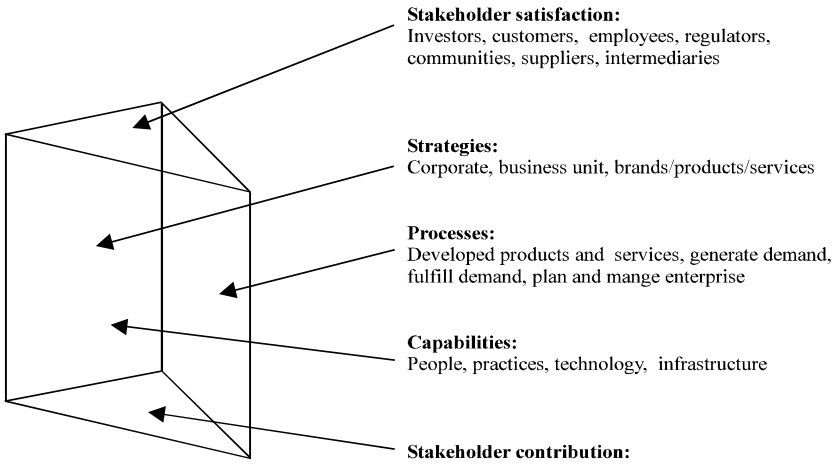

Fig. 5: Performance prism (Salloum, 2010; Neely *et al*., 2001)

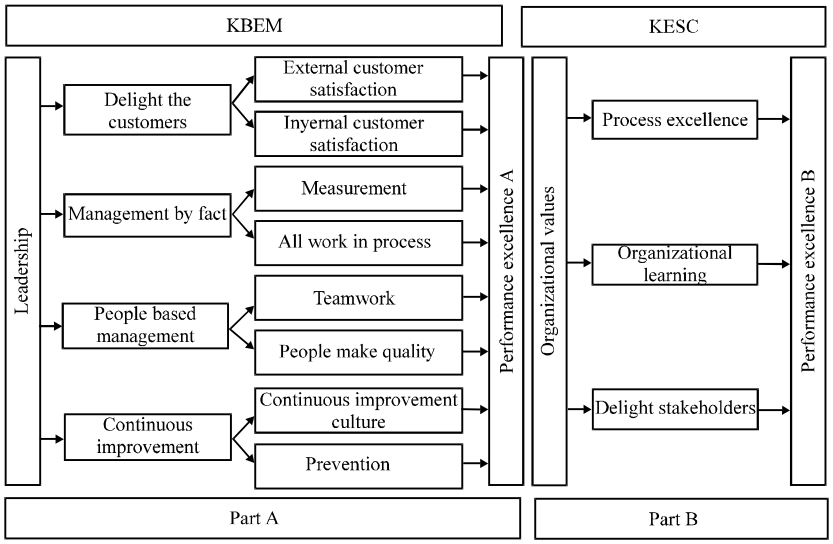

Fig. 6: Kanji Business Excellence Measurement System (KBEMS) (Naghavi *et al*., 2012; Zink, 2008)

Performance prism: The performance prism, developed by Neely *et al*. (2001), creates a link between five interrelated facets, stakeholder satisfaction, stakeholder contribution, strategies, processes and capabilities as shown in Fig. 5 (Striteska and Spickova, 2012; Salloum, 2010). In this model, the stakeholder contribution is linked with stakeholder satisfaction through the strategies, processes and capabilities of the company (Bititci, 2016). The key characteristic of the performance prism is it reflects the stakeholder's perspective in performance measurement (Striteska and Spickova, 2012; Salloum, 2010). This model ensures a solid foundation for performance measurement of overall organization (Salloum, 2010; Neely *et al*., 2001). The organizational strategies are considered as the basis in abovementioned performance measurement systems. In that situation, respective performance measures in the later levels are formulated based on the strategy. If the established organization strategy is misaligned with the stakeholder satisfaction, there is a possibility of failure in such performance measurement systems. This drawback is overcome in performance prism where the top level is stakeholder satisfaction (Striteska and Spickova, 2012; Salloum, 2010; Neely *et al*., 2001).

Kanji Business Excellence Measurement System (KBEMS): This system comprises of two measurement tools, Kanji's Business Excellence Model (KBEM) and Kanji's Excellence Scorecard (KESC) (Kanji, 2002) as shown in Fig. 6. According to Kanji

Table 1: Weaknesses of common performance measurement systems (Striteska and Spickova, 2012, Stefenson, 2004)

Performance measurement systems	Weaknesses when developing operational level indirect employee incentive schemes
European Foundation for Quality Management (EFQM) model	No guidelines provided for KPI selection for performance measurement of indirect employees More focus on quality management- No balanced indicators for evaluation No link between different management levels Is not a strategic management tool
Performance measurement matrix	Does not include customers or human resources as dimensions of performance Cannot give a balanced view of performance Consists of several different tools-is potentially complicated to understand and use
Performance prism	Some measures are not effective in practice Lack of logic among the measures Insufficient link between the results and drivers
Kanji Business Excellence Measurement System (KBEMS)	Is primarily designed for senior managers to provide them with an overall view of performance Does not offer explicit guidance on how to develop and implement PMS effectively

(2002), the combinations of these two parts provide a "comprehensive evaluation of the organizational. The KBEMS is the basis of the new certification system, Kanji-certification which shows the level of organizational achievement of the Critical Success Factors (CSFs). KBEMS is a tool to demonstrate whether the organizational performance is measured from both internal and stakeholders perspectives (Kanji, 2002).

Weaknesses of the above mentioned performance measurement systems when developing a performance based incentive scheme for operational level indirect employees are summarized in Table 1. Due to the abovementioned weaknesses of the stated PMSs in Table 1, these can be considered as inapplicable to evaluate the performance of operational level indirect employees in an incentive scheme.

CONCLUSION

According to the available literature, the Lynch and Cros'ss SMART pyramid seems to be an acceptable PMS for incentivizing the operational level indirect employees. Since, the guidelines for setting KPIs are excluded in SMART pyramid, the management is responsible for the selection of appropriate KPIs. Such performance measures should be selected to represent both internal and external effectiveness in SMART pyramid. The application of SMART pyramid for performance measurement should accompany a suitable method to select the KPIs.

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