

Analyzing Factors Attributing To Effectiveness of Performance Management System of a Manufacturing Industry

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Abstract

Performance Management System (PMS) is considered as one of the vital aspects of Human Resource Management. PMS is the focus of study in this paper. The effectiveness of Performance Management System of a manufacturing company in Malaysia has been studied. And for this study, factor analysis is conducted. Different factors attributing to effectiveness of Performance Management System have been extracted and the study highlighted that Reward and Development, Continuous Communication and Departmental Development, Standard and Goal Setting, Developing HR Systems, Policy and Tool for Performance Management, Performance Measurement, Performance Linkage to Payment Decisions, Fairness for Employee Appraisal, Implementation and Employee Control, and Performance Review and Employee Recognition are the factors responsible for PMS Effectiveness. It has been suggested for taking developmental measures to enhance the existing Performance Management System contributing more for the benefits of organization and also for the betterment of the employees of the organization. Firstly, the importance of Performance Management System and the factors attributing to its effectiveness have been discussed in the introduction section. Secondly, relevant literature is being reviewed. It is followed by discussion about the methodology adopted in this study. Fourthly, results pertaining to this study and their analysis have been discussed in detail. Finally, concluding comments have been mentioned.

Keywords: Performance management; HR development; PMS effectiveness.



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1. Introduction

The key term in business is 'performance'. The success or failure of an organization is attributed to its performance. The future planned action is taken based on the past performance analysis of an organization. There should be continuous strive to excel in performance which largely depends on the human resources of an organization. It is the high performing individuals and team of employees whose contributions differentiate their organization from other organizations. It is advantageous for organizations to lead in the competitive market. The factors like developmental measures, developing HR Systems align with organizational goals are responsible for attaining performance (Farheen *et al.*, 2014; Oberoi and Rajgarhia, 2013). Performance is considered as a true litmus test for market survival for an organization. It is manager's effort which is attributing to effectiveness of performance appraisal (Sogra, 2009) and poor employee's rating affect performance of individual employees & departmental performance. The fairness in appraisal is considered as a key factor for motivating employees and ultimately leading to effectiveness of company's performance management system.

2. Review of Literature

The purpose of performance indication is for creating and shaping the future of an organization which is based on the ability to evaluate the achievements (Lebas, 1995). The achievements are indicated by different parameters which should match the strategy and vision of an organization subject to external constraints of the market. Performance is the potential base for implementing the future actions to attain objectives and targets in an organization. Performance policy, performance measurement tools along with effective implementation of PMS strategies are the factors important for achieving PMS goals. There is importance of effective Performance

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Management System for organizations in the changing scenario of business. There is a gradual shift from performance appraisal systems (PAS) to PMS in organizations as well as in academic research arena (Claus and Briscoe, 2009; DeNisi and Pritchard, 2006; DeNisi and Smith, 2014; Sharma T. *et al.*, 2008), studies reflecting appraisal as a vital component of Performance Management System (Biron *et al.*, 2011; Erdogan, 2002) All these studies stand firmly on the essentiality of PMS for organizations. And also the factors attributing to PMS effectiveness have been reflected in different studies. The assessment of appraisal has shifted from individual employee centric to different aspects of organizational performance. It has given rise to the concept of Performance Management. It has been pointed out that individual performance goals should be aligned with the goals of an organization to attain expected short-term and long-term organizational goals (Soumi and Viswanath, 2012). The need for research on effectiveness of PMS and the factors and sub-factors attributing towards PMS effectiveness has been emphasized in different studies (Dewettinck and Van Dijk, 2013; Mishra and Farooqi, 2013; Simmons, 2002). Difficulties in discussing the PMS effectiveness of an organization without understanding its objectives has been pointed out by Hamilton and Chervany (1981). Context specification of effectiveness was viewed by Cohen (1993). Erlendsson (2002) confirmed “efficiency” as performing tasks with reasonable effort and “effectiveness” as collective team efforts for meeting performance objectives.

Doing the right things as “effective” (Drucker, 2006); “efficient” as achieving results with best resource utilization (Graves, 2010), doing things right is efficiency (Drucker, 2006) and achievement of intended objectives is effectiveness (Shany, 2012; Wojtczak, 2000). Studies related to the aspect of Performance management and its effectiveness has been limited (Amba *et al.*, 2000; Budhwar and Baruch, 2003; Rao, 2007; Sadananda, 2009). Most studies have been generic on PMS. PMS Effectiveness focus should be on “doing the right things” (accuracy), and “doing things the right way” (fairness) have been revealed by Sharma N. P. and Sharma (2016). The use of “PMS Effectiveness” (PMSE) in the field of academics and practitioners is more. However, the term PMSE has been poorly defined (Sharma N. P. and Sharma, 2016). Andersen *et al.* (2014) viewed that more research in PMSE should be conducted to explore more insights in performance management field. More research to measure PMS effectiveness of organizations have been emphasized (Biron *et al.*, 2011; Thurston and McNall, 2010). All these essentiality being revealed by previous researchers created interest in pursuing the present study. The present study is addressing to PMS which is an important area of human resource management having interest among the academicians as well as management practitioners.

3. Methodology

The present research is a descriptive and analytical one in which both primary and secondary source of data have been used. The employees working in a semiconductor manufacturing company operating in Malaysia have participated in this study. The company is one amongst the leading semiconductor producers in the world. Since last four decades, it has been functioning in Malaysia. The company has a culture of communication, cascading and reinforcing the policy goals for the benefits of the organization as well as for its human resources. The Performance Management System (PMS) of the organization is there for the effective management of organization and appraisal of staff. The company follows 360 degree appraisal method. The system is used for deciding employee reward.

A research instrument comprising 52 items having option to select any one from five point Likert Scale ranging from Strongly Disagree (1) to Strongly Agree (5) was administered to 133 respondents. The response of the participants pertaining to the factors and the latent items attributing to effectiveness of Performance Management System (PMS) has been analyzed. The instrument used by Maleka (2014) has been referred and modified to adopt the contextual applicability and content validity for this study. Factor analysis has been done using SPSS software 20.0 version. The factors and their latent items, extent of variance represented by each extracted factor have been investigated. The rotated component matrix, variance calculation and latent factors scoring above 0.50 have been represented. The present study has the following key objectives viz; to investigate the factors attributing to effectiveness of Performance Management System in an organization, to provide suggestive measures to improve effectiveness of Performance Management system in an organization.

4. Results and Discussion

4.1. Analysis of Survey Results

4.1.1. Demographic

There is essentiality of demographic information for a comprehensive and fruitful quantitative analysis. In pursuing this study general information and background of the responding participants have been collected. The personnel employed in the organization in different levels have been administered with the questionnaire. Both the managerial and non-managerial level of the employees constitutes the data source. The following table (Table 1) shows the summary of respondents’ demographic information. The analysis indicates that 35.33 % of the respondents are less than 25 years of age, little above one quarter (27.06%) are in 25 to 30 years of age range, 29.02% are within 35 to 45 years of age and less per cent age i.e. 8. 27% of the respondents are more than 45 years of age. The table also shows that little less than 3/4th comprising 71.42% are male and rest 28.57% of the respondents belongs to female gender. It is indicated that qualification-wise, 15.78 % of the respondents have Diploma qualification, 59.39% are Degree holders, around one-quarter (24.81%) are Post-Graduates. Experience-wise distribution of data indicates that 23.30 % have less than 5 years of experience whereas one-third (32.33%) have 5 to 10 years of work experience followed by respondents constituting 27.81% of the total number having 10 to 15 years of experience and the remaining 16.54% of the respondents have 15 to 20 years of experience. It is shown

in the table that 35.33% of the respondents are Managers and remaining 64.66% belongs to Non-Managerial category. The demographic data of the respondents reveals that the participants have different qualifications having a mixed range of work experience. Respondents' distribution in different age group, designation and gender provide necessary base for getting unbiased and judicious data inputs which are necessary for the outcome of this present research work. The response of the different categories of the respondents provides necessary inputs for this empirical investigation. The reliability of the scale has been ensured though measuring Cronbach's alpha coefficient value of each of the construct which was greater than 0.7.

Table-1. Distribution of Respondents

Demographic Indicators	Categories	Number	% age of Respondents
Age	< 25 years	47	35.33
	25-30 years	36	27.06
	35-45 years	39	29.02
	>45 years	11	8.27
	Total	133	100%
Gender	Male	95	71.42
	Female	38	28.57
	Total	133	100%

Table-1. Distribution of Respondents (Continued)

Demographic Indicators	Categories	Number	% age of Respondents
Qualification	Diploma	21	15.78
	Degree	79	59.39
	Post-Graduate	33	24.81
	Total	133	100%
Experience	0-5 Years	31	23.30
	5-10 Years	43	32.33
	10-15 Years	37	27.81
	15-20 Years	22	16.54
	Total	133	100%
Designation	Manager	47	35.33
	Non-Manager	86	64.66
	Total	133	100%

Analysis of survey results

4.1.2. Factor Analysis of Effectiveness of Performance Management System Factors

Factor Analysis is considered as an analytical technique used for factor deduction. In other words, such analysis is used for data reduction in the literature. This technique was used by the researchers for developing the configuration (or structure) and in determining the inter-correlationship among the decisive factors in the study. The variation among the group of variables is found by this analysis. Factor Analysis is different from ranking analysis used in research. The overall percentage of variance indicated by each of the variable is computed. It determines the number of factors for the entire set of data in the study (Akadire and Olomolaiye, 2012). The pattern matrix is formed from a large number of variables which ultimately indicates how different variables are working in combined form. In order to go for Factor Analysis, validation requirement is done before it is applied on a set of variables. The validity test was proposed by Kaiser based on the range of eigenvalue (Kaiser, 1974) and it is stated that any eigenvalue less than 1 is not appropriate for Factor Analysis. In this study, the researchers have used SPSS package in order to conduct Factor Analysis through Factor Extraction and Varimax Rotation. The Kaiser-Meyer-Olkin (KMO) and Bartlett's Sphericity (P value = 0) were significant. The KMO value is 0.76 (> 0.5) indicating the suitability of the sample data for the Factor Analysis. The underlying factors have been identified by using principal components analysis. The requisite number of factors representing the set of data is determined through the total percentage of variance. In other words, total percentage of variance attributed by each factor has been examined. The principal factor extraction with a varimax rotation has been executed through the SPSS factor reduction for 52 items from 133 responding participants. The total variance explained by each factor has been listed in the column under factor loading. The percentage of variance and the cumulative percentage of the variance for each factor have been indicated in a tabular form (Table 2). In total, eleven factors have been extracted accounting for 87% of variance in responses. The first two factors accounted for 13% and 12% of variance. All the factor loadings have been greater than 0.5 and to be more particular 19 factors are more than 0.7 as their loading factor. It is confirmed from the figure that an 11 factor model should be sufficient for this research model.

Table-2. Factor Structure of Principal Factors Extraction and Varimax Rotation on PMS Effectiveness Factor Items

Item number	Factor loading	% of variance explained	Cumulative % age of variance explained
Factor 1. PMS factors for reward and development			
45 The reward system facilitates the implementation of strategy by attracting and retaining the right kind of people	0.881		
44 The reward system facilitates the implementation of strategy by motivating desired levels of performance	0.854		
46 Positive and negative financial and non-financial consequences of performance are utilized effectively	0.769		
47 PMS establishes a clear connection between performance and rewards	0.714		
50 Employees have faith in the performance appraisal system	0.704		
48 The appraisal system of the organization adds value towards the development of the employees	0.704		
49 Performance appraisal system is applied fairly and equally towards all employees	0.604		
52 Performance appraisal system plays an important role in the organization's success	0.596		
51 Performance appraisal changes employee's attitude to work	0.513	13.584	13.584
Factor 2. PMS for continuous communication and departmental development			
1 Clearly defined PMS is communicated effectively to all the employees.	0.822		
5 The department's performance system supports the objectives of the department's business plan	0.697		
29 Senior Management demonstrates that they take performance reviews seriously.	0.675		
4 Formal communication process is in place to ensure that employees understand the department's business plan	0.654		
25 Mechanism exists to continuously improve performance	0.637		
28 Supervisors effectively design opportunities for subordinates to develop	0.603		
34 Feedback is given as soon as possible after the activity is performed.	0.585		
8 The PMS was developed with inputs from the staff throughout the department.	0.569	12.564	26.148
Factor 3. PMS standard and goal setting			
19 Performance goals are mutually developed and have specific time frames	0.854		
20 Employees consider performance standards attainable	0.813		
22 Relevant performance expectations are set between supervisor and employee	0.644		
21 Personal development objectives, negotiated with supervisor are in place	0.620		
3 Goals with appropriate performance standards are in place at three levels namely organizational, team and individual	0.551		
23 Employees are clear about how their performance is to be measured	0.530	9.714	35.862
Factor 4. PMS for developing HR systems			
37 Sufficient information for appraising staff members' performance is available	0.820		
39 Descriptive assessment based on actual accomplishment and behaviours demonstrated are used.	0.734		
38 Objectivity of Performance Management System is maintained	0.627		

Table-2. Factor Structure of Principal Factors Extraction and Varimax Rotation on PMS Effectiveness Factor Items (continued)

Item number	Factor loading	% of variance explained	Cumulative % age of variance explained
35 Feedback is provided within the context of the performance plan so that employee behaviour is linked to the individual's performance plan	0.593		
41 Outcomes of performance review are fed directly into other human resources systems	0.550	8.889	44.751
Factor 5. PMS policy and tool for performance management			
13 There is an approved policy in the organization that addresses the Performance Management System	0.823		
6 The PMS is viewed by employees as a valuable tool for managing how work gets done	0.570		
16 Senior Management is committed to successful implementation of Performance Management System	0.522		
26 Sufficient information is communicated to all employees to enable them to execute their responsibilities in the best interest of the organization	0.506		
7 The PMS is viewed by employees as a valuable tool for managing how work gets done	0.500	7.290	52.041
Factor 6. PMS for performance management			
31 Performance is measured based on the factors previously agreed upon	0.568	6.854	58.895
Factor 7. PMS linkages to payment decisions			
9 The PMS is better than the incident reporting system	0.883		
43 Pay decisions are linked to performance achievements	0.649	6.834	65.729
Factor 8. PMS fairness for employee appraisal			
11 The PMS enables the organization to identify underperformers	0.933		
10 The PMS results in the fair performance appraisal of staff members	0.796	6.505	72.234
Factor 9. PMS and supervisory accountability			
17 Supervisors are held accountable for ensuring completion of each step of Performance Management System	0.879	5.549	77.784
Factor 10. PMS implementation and employ control			
18 All employees are committed to the successful implementation of PMS	0.760		
2 Senior Management is accountable for effective implementation of PMS	0.734		
36 Feedback is directed towards activities and resources the individual can control	0.595	5.536	83.319
Factor 11. PMS review and employ recognition			
33 Effective personal recognition is provided during review meetings	0.802	4.072	87.391

Analysis of survey results

4.1.3. Meaning of Underlying PMS Effectiveness Factors

4.1.3.1. PMS for Reward and Development (Factor 1)

This factor consists of nine items which focus primarily on PMS for employee reward and development of organization. Retaining employee through reward, employee motivation, performance linked reward system, performance consequences, value addition for development, appraisal for changing attitude of employees, importance of appraisal for organizational success, employees' faith on appraisal system and its fair applicability are the items contained in this factor.

4.1.3.2. PMS for Continuous Communication and Departmental Development (Factor 2)

Factor two comprises eight items. All the items explain PMS for continuous communication and departmental development. This factor contains clearly defined PMS communication effectively to all employees, development performance system supporting the objectives of the departmental business plan, performance management review taken seriously by senior management, communicating developmental business plan to employees for clear

understanding of mechanism exist to continuously improving performance, designing opportunity for development of subordinates items. The factors relating to development of department, individual employees and HR System of the organization are responsible for PMS effectiveness. These findings support the studies conducted by Oberoi and Rajgarhia (2013); Farheen *et al.* (2014).

4.1.3.3. PMS Standard and Goal Setting (Factor 3)

There are six items which examine the factor pertaining to PMS standard and goal setting. Performance goals are mutually developed and has specific time frames, employee consideration of performance standards as attainable, relevant performance expectations being set between supervisor and employees, goals with appropriate performance standards are in place at three levels namely organization, team and individual, employees' clarity about measurement of their performance; all these items are there in this factor. The item personal development objectives negotiated with the supervisors are in place is also included in this factor number three.

4.1.3.4. PMS for Developing HR Systems (Factor 4)

This factor has five items which explain PMS for developing human resource systems. Availability of sufficient information for appraising staff members' performance, use of descriptive performance assessment based on actual accomplishment and behaviours demonstrated by employees, maintenance of objectivity of PMS, contextual feedback based on employee's performance plan and incorporating performance review outcomes into other human resources systems which includes reward, training & development; are the items contained in this factor. This result is in similar line of different studies conducted by Oberoi and Rajgarhia (2013); Farheen *et al.* (2014).

4.1.3.5. PMS Policy and Tool for Performance Management (Factor 5)

There are five items in the factor regarding PMS policy and tools for performance management. The appraisal policy of the organization, PMS as viewed by the employees' as a valuable tool for managing work and for individual performance, commitment of senior management for successful implementation of PMS, outcomes of performance review are fed directly into other human resources systems; are the items contained in this factor.

4.1.3.6. PMS for Performance Measurement (Factor 6)

The factor six which comprises one item explains the measurement of performance based on the factors previously agreed upon with the employee.

4.1.3.7. PMS Linkage to Payment Decisions (Factor 7)

This factor has two items pertaining to linkage of PMS with payment decisions. The importance of PMS better than the incident reporting system and linkage of performance achievements with pay decisions through PMS are included in this factor.

4.1.3.8. PMS Fairness for Employee Appraisal (Factor 8)

There are two items in this factor relating to PMS fairness for appraisal of employee performance. The ability of PMS for identifying the underperformers and fair appraisal of employee performance are the items which examine this factor. The importance of this factor being revealed in this study supports the previous study of Lebas (1995).

4.1.3.9. PMS and Supervisory Accountability (Factor 9)

Factor 9 is composed of one item that supervisors are held accountable for ensuring completion of each step of PMS.

4.1.3.10. PMS Implementation and Employee Control (Factor 10)

In this factor, there are three items regarding implementation of PMS and employee control. Employees' commitment for the successful implementation of PMS, senior management role for effective implementation of PMS, performance feedback directed towards activities and resources for controlling individual performance; are the items contained in this factor.

4.1.3.11. PMS Review and Employee Recognition (Factor 11)

This factor is composed of one item which explains the effective personal recognition which is provided during review meetings.

4.1.3.12. Suggestion

The perception about the PMS of the organization carries a great value and accordingly the employee motivation is driven in the organization. Different factors impacting effectiveness of PMS have been revealed in this study. This finding supports the previous studies conducted by Simmons (2002); Dewettinck and Van Dijk (2013); Mishra and Farooqi (2013). Further studies in future shall unfold new insights in the area of performance management. Enough care should be taken to evaluate employees' performance minutely and neutrally. An unbiased appraisal helps in strengthening employees' trust on the existing PMS and ethical practice of the organization. Proper appraisal can also recognize the talents those can be groomed for future leadership positions. It is essential on

the part of the employees to understand the importance of Performance Management System (PMS). It is suggested for improving writing skills for appraisers whose effective communication helps in proper assessment of performance. Appraisers should develop better writing skills which help in accurate filling of performance of subordinate employees. The requisite appraisal form should be properly filled in without any bias. It would also avoid in mentioning critical incidents associated with employees' performance. Suitable Human Resource Development (HRD) mechanism should be developed for enhancing PMS effectiveness of an organization. Training & development policy, methods, documentation and evaluation measures should be properly aligned with organizational performance. It would result in exploring and taking right strategies for business success also in long-run. More studies should be conducted considering the vitality of effectiveness of PMS. And this suggestion is in similar line of thought being suggested by Biron *et al.* (2011); Thurston and McNall (2010). Appropriate statistical tools should be used in order to minimize appraisal biasness. Proper training should be imparted to the appraisers. The non-performers and mediocre performers should not be rated highly like the high performers. It is an area of concern. The outcome indicating some factors responsible for PMS effectiveness does support previous studies as mentioned earlier. Some new factors like PMS implementation, employ control, communication, recognition, policy and tool for managing performance, payment decisions etc. have been revealed in this study. It contributes immensely to the existing body of knowledge to be useful for academicians as well as for practitioners in the performance management field.

5. Conclusion

The present study provides an overview of different studies pertaining to Performance Management System (PMS) and its effectiveness. The importance of Performance Management System has been well established in different studies. Proper implementation of well-designed PMS is of great benefit for an organization. Different factors attributing to PMS effectiveness have been extracted. Eleven factors have been extracted by factor analysis conducted on 52 items. These factors constitute a strong ground for the effectiveness of PMS and each factor has certain underlying latent items. The factors viz; PMS for Reward and Development, PMS for Continuous Communication and Departmental Development, PMS for Standard and Goal Setting, PMS for Developing HR Systems, PMS Policy and Tool for Performance Management, PMS for Performance Measurement, PMS Linkage to Payment Decisions, PMS Fairness for Employee Appraisal, PMS Implementation and Employee Control, and PMS Review and Employee Recognition are responsible for PMS Effectiveness. The findings of the factors are in consonance with some of the previous studies. The present study can be further conducted in other organizations having different cultural and geographical operations to determine some new dimensions of Performance Management System and its effectiveness. The insights of this study shall contribute in developing new models in the area of Performance Management system.

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