

An Analysis of Impact of HRM in EPM with specific reference to Manufacturing sector

1.SivaShankari R2 Dr.P. Radha

1. Research Scholar, Bharathiyar University, Coimbatore

2. Associate Professor, Oxford College of Business Management, Bangalore

Abstract

This study discusses in detail about the impact of HRM on EPM in manufacturing industry. The HRM practices could contribute and support to the creation, utilization and addition of knowledge about the Man Management practices being followed in industry. EPM is considered to be one of the interior ideas, processes, approaches, methods and techniques of HRM. It is so effective and proficient that not simply assist the enterprise understands its strategic goals and objectives but also improve and increase the management capacity and operational efficiency. The simple Random sampling method is used to identify the respondents. The HR managers of the manufacturing industries were selected as respondents. 75 respondents were selected for this study. The universe size is 250 and the method of descriptive study was used to describe the elements of study. The study showed the result, out of 75 respondents maximum number of the respondents (98.7) percentage was agreed that there is a relationship between human resource management and EPM in the manufacturing sector. In addition to this, the study also examined the result based on the human resource management process is most important in the manufacturing industry and showed the result that out of 75 respondents, there are maximum number of respondent with 96 percentage were agreed that all the factors of Human Resource Management process are important in a manufacturing sector. : The concept of Enterprise Performance Management (EPM) was considered in the study which is unique in nature as no study by taking the respondents from Coimbatore has been carried out by any researcher. The impact of EPM on HRM was analyzed through systematic approach to find out the impact and its implications.

Key words: Human Resource Management, Employee Performance Management, productivity, Satisfaction, Manufacturing.

1. Introduction

EPM is about assuring that the business or management is decoding its approach into assessable pointers and objectives and examining its end result¹. It denotes that there is a successful and efficient people position among the business and enterprise where the specific key result areas (KRAs) are being associated with the business goals and purposes¹. In addition, the compensation and credit device supports behaviors, which clearly support to the whole stratagem of the management either directly or indirectly². This assures that the management functions like a well-organized system where every single function of the same

is subsidizing to the whole accomplishment. There is a growing drift in implementing EPM values and methods in executing some of the important manufacturing or management processes³

2. Methodology

The sampling may be characterized as the determination of any piece of a total or totality in light of which a judgment or obstruction about the total or totality is made⁴. Sampling is a procedure of examining so as to get data around a whole populace just a piece of it. In the greater part of the examination work and overviews, the standard methodology

happens to sum up or to draw inductions in light of tests about the populace parameters from that the examples are taken⁵. Sampling is a procedure of selecting units from a populace of intrigued individual's starts by examining the example the investigator might reasonably sum up the outcomes back to the populace from which they were picked⁶. Populace is the total or the totality of factual information shaping a subject of examination⁷. Tests will spare cash and time. It will make the researcher to choose the specific

specimens that are suited for the study. There are two sorts of inspecting systems, for example, probability examining and non-probability sampling procedure⁸

Probability examining or random testing is the one in which every part of point by point populace has a similar probability of being picked. Probability examining ascertains testing incorrectness. It is otherwise called chance sampling method⁹.

3. Analysis

Table 1 Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .747 | .747 | 5 |

Here, cronbach's alpha = 0.747

It reflects high reliability of the measuring instrument. Furthermore, it indicates good level of internal consistency with respect to the specific sample.

Table.2. Inter-Item Correlation Matrix

| | Need for enterprise performance management1 | Need for enterprise performance management2 | Need for enterprise performance management3 | Need for enterprise performance management4 | Need for enterprise performance management5 |
|---|---|---|---|---|---|
| Need for enterprise performance management1 | 1.000 | .538 | .431 | .403 | .382 |
| Need for enterprise performance management2 | .538 | 1.000 | .309 | .186 | .097 |
| Need for enterprise performance management3 | .431 | .309 | 1.000 | .522 | .496 |
| Need for enterprise performance management4 | .403 | .186 | .522 | 1.000 | .352 |
| Need for enterprise performance management5 | .382 | .097 | .496 | .352 | 1.000 |

The correlation coefficient between a variable and itself is always 1, hence the principal diagonal of the correlation matrix

contains 1s. If any pair of variables has a value less than 0.5, consider dropping one of them from the analysis.

Table. 3.KMO and Bartlett's Test

| | |
|--|--------------------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .683 |
| Bartlett's Test of Sphericity | Approx. Chi-Square |
| | df |
| | Sig. |
| | 93.842 |
| | 10 |
| | .000 |

The sampling adequacy was measured (which determines if the responses given with the sample are adequate or not) which is 0.683 i.e. Acceptable for factor analysis to proceed. The character of identity matrix is confirmed

through the test of sphericity which is less than 0.005. Hence this matrix is identity matrix. Hence, we can proceed with the analysis further considering all the factors.

Table 4 Communalities

| | Initial | Extraction |
|---|---------|------------|
| Need for enterprise performance management1 | 1.000 | .733 |
| Need for enterprise performance management2 | 1.000 | .877 |
| Need for enterprise performance management3 | 1.000 | .690 |
| Need for enterprise performance management4 | 1.000 | .583 |
| Need for enterprise performance management5 | 1.000 | .655 |

The table of communalities helps in determining which factors are to be considered for further analysis. It shows how much variance (i.e. the communality value which should be more than 0.5 to be considered for further

analysis) in the variables has been accounted by the extracted factors. Since the extraction values of all the factors is greater than 0.5 therefore, all the extracted factors are considered for further analysis.

Table 5. Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.516 | 50.312 | 50.312 | 2.516 | 50.312 | 50.312 | 1.992 | 39.838 | 39.838 |
| 2 | 1.021 | 20.425 | 70.737 | 1.021 | 20.425 | 70.737 | 1.545 | 30.899 | 70.737 |
| 3 | .645 | 12.902 | 83.638 | | | | | | |
| 4 | .479 | 9.581 | 93.219 | | | | | | |
| 5 | .339 | 6.781 | 100.000 | | | | | | |

Eigenvalue actually reflects the number of extracted factors whose sum should be equal to number of items which are subjected to factor analysis. The table of total variance explained describes the total variance of components (70.737%) and extract the components whose

initial total eigenvalues is more than 1. Here in the total column, the eigenvalue for the 1st component is $2.516 > 1$ and for 2nd component is $1.021 > 1$. Hence, from the table above, only 2 components are extracted out of 5.

Table 6 Rotated Component Matrix

| | Component | |
|---|-----------|------|
| | 1 | 2 |
| Need for enterprise performance management5 | .809 | |
| Need for enterprise performance management3 | .778 | |
| Need for enterprise performance management4 | .740 | |
| Need for enterprise performance management2 | | .936 |
| Need for enterprise performance management1 | .429 | .740 |

Rotated Component Matrix: The idea of rotation is to reduce the number of factors on which the variables under investigation have

high loadings. It consider the values greater than 0.5.

Here, factor5, factor3 and factor4 are substantially loaded on component 1.

Factor1 and factor2 are substantially loaded on component 2.

Table 7 Relationship between human resource management and EPM in manufacturing sector

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|------------|-----------|---------|---------------|--------------------|
| Valid Yes | 74 | 98.7 | 98.7 | 98.7 |
| Don't know | 1 | 1.3 | 1.3 | 100.0 |
| Total | 75 | 100.0 | 100.0 | |

From the above frequency table and pie chart, we infer that out of 75 respondents maximum respondents (98.7%) agree that there

is a relationship between human resource management and EPM in manufacturing sector.

Table 8. Human resource management process is most in the manufacturing industry

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------------------------------|-----------|---------|---------------|--------------------|
| Valid Recruitment and selection | 1 | 1.3 | 1.3 | 1.3 |
| Training and development | 1 | 1.3 | 1.3 | 2.7 |
| Performance management | 1 | 1.3 | 1.3 | 4.0 |
| All of the above | 72 | 96.0 | 96.0 | 100.0 |
| Total | 75 | 100.0 | 100.0 | |

From the above frequency table for experience in current company and bar graph, we infer that out of 75 respondents maximum

respondents (96%) agree that all the factors following human resource management process are important in the manufacturing sector..

Table 9. Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | No. of Items |
|------------------|--|--------------|
| .739 | .753 | 5 |

Here, cronbach's alpha = 0.739

It reflects good reliability of the measuring instrument. Furthermore, it indicates good level of internal consistency with respect to the specific sample.

Table .10. Inter-Item Correlation Matrix

| | HRM1 | HRM2 | HRM3 | HRM4 | HRM5 |
|------|-------|-------|-------|-------|-------|
| HRM1 | 1.000 | .505 | .331 | .224 | .223 |
| HRM2 | .505 | 1.000 | .730 | .299 | .409 |
| HRM3 | .331 | .730 | 1.000 | .244 | .367 |
| HRM4 | .224 | .299 | .244 | 1.000 | .452 |
| HRM5 | .223 | .409 | .367 | .452 | 1.000 |

The component matrix table above shows the loadings of four variables on one

factor extracted. The higher the absolute value of the loading, the more the factor contributes to

the variable. We suppressed all loadings less than 0.5.

Table 11. KMO and Bartlett's Test

| | | |
|--|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .674 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 247.251 |
| | df | 6 |
| | Sig. | .000 |

The sampling adequacy measured through KMO (which determines if the responses given with the sample are adequate or not) which is 0.674. The character of identity matrix is confirmed through the test of sphericity which is less than 0.005 Hence this matrix is identity matrix. Hence, we can proceed with the analysis further considering all the factors.

Table 12. Communalities

| | Initial | Extraction |
|-------------------------|---------|------------|
| Improved market value 1 | 1.000 | .604 |
| Improved market value 2 | 1.000 | .488 |
| Improved market value 3 | 1.000 | .853 |
| Improved market value 4 | 1.000 | .826 |

Extraction Method: Principal Component Analysis. for further analysis) in the variables has been accounted by the extracted factors. Since the extraction values of all the factors is greater than 0.5 therefore, all the extracted factors are considered for further analysis

The table of communalities show how much variance (i.e. the communality value which should be more than 0.5 to be considered

Table 13. Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 2.772 | 69.299 | 69.299 | 2.772 | 69.299 | 69.299 |
| 2 | .744 | 18.594 | 87.893 | | | |
| 3 | .450 | 11.244 | 99.137 | | | |
| 4 | .035 | .863 | 100.000 | | | |

Extraction Method: Principal Component Analysis.

.The table of total variance explained describes the total variance of components (69.299%) and extract the components whose initial total eigenvalues is more than 1. Here in

the total column, the eigenvalue for the 1st component is $2.772 > 1$. Hence, from the table above, only 1 component is extracted out of 4.

Table 14. Component Matrix*

| | Component |
|-------------------------|-----------|
| | 1 |
| Improved market value 3 | .924 |
| Improved market value 4 | .909 |
| Improved market value 1 | .777 |
| Improved market value 2 | .699 |

Extraction Method: Principal Component Analysis.

*. 1 component extracted.

Table 15 Satisfaction level of human resource management impacting on EPM

| | Frequency | Percent | Valid Percent | Cumulative Percent |
|----------------------|-----------|---------|---------------|--------------------|
| Valid Very satisfied | 63 | 84.0 | 84.0 | 84.0 |
| Satisfied | 11 | 14.7 | 14.7 | 98.7 |
| Neutral | 1 | 1.3 | 1.3 | 100.0 |
| Total | 75 | 100.0 | 100.0 | |

The component matrix table above shows the loadings of five variables on one factor extracted. The higher the absolute value of the loading, the more the factor contributes to the variable. We suppressed all loadings less than 0.5

From the above frequency table for experience in current company and bar graph, we infer that out of 75 respondents maximum respondents (84%) are very satisfied with the way of human resource management impacting on enterprise performance management and very few respondents (1.3%) are neutral with the way of human resource management impacting on enterprise performance management.

Discussion

The Cronbach Alpha value was 0.567 which reflect satisfactory reliability of the measuring instrument and also indicate a satisfactory level of internal consistency with respect to the specific sample. By testing the value with the help of KMO and Bartlett test, it was found that which showed the value 0.554

which is acceptable for the factor analysis. In order to check the total variance value, it showed the result that the total various component was 71.57 to percentage and extract the component whose initial total eigen value was more than one so that the total column value for the first component is 1.76 to which is greater than 1 and for the second component the value was 1.101 which is greater than 1 so that it can be concluded only two components are extracted out of 4. By taking the value with the help of rotated component Matrix, it showed the result that factor 3, factor 4 is substantially loaded on component one and Factor one and factor 2 is substantially loaded on component 2.

In order to examined the data based on the satisfaction by which the way of HRM on EPM in the organization and showed the result that out of 75 ,84% were very much satisfied with the way of Human Resource Management impacting on EPM and very few respondents with 1.3% were neutral with the way of Human Resource Management impacting on enterprise performance management.

5. Conclusion

It is essential to manage the enterprise performance of manufacturing industry by evaluating the impact of HRM in an effective way. It includes management of employees, operational activities by retaining the employees and workers and motivates them so that they will be able to increase their capability level which makes automatically impact on the growth of a company. Apart from this, the Conclusion and Recommendation also describes in the study which is useful for the manufacturing industry to make effective improvement in their performance so that they will be able to achieve the desired goal and growth in an effective manner. Apart from this, the study also explains the research limitation which is faced by the researcher while collecting the data and information and this future existence of the study also explain in this section

6. References:

- 1 Yasir, T, et al (2011). The Way Human Resource Management (HRM) Practices Effect Employees Performance: A Case of Textile Sector. International Journal of Economics and Management Sciences, 1(4), 112-117. Available at :<https://www.hilarispublisher.com>
- 2 Anatoliy, G.G., (2011). Enterprise Performance Management: Conception, Model and Mechanism. Polish Journal of Management Studies, Volume 4, Pp. 78-95. Available at : ile:///C:/Users/User/Downloads/httpwww_pjms_zim_pcz_plpdfpjms4enterprise20performance20management.pdf
- 3 Ron, D, (2010). Enterprise Performance Management Done Right an Operating System for Your Organization. Wiley Online Library. Available at:<https://www.wiley.com/en-us/Enterprise+Performance+Management+Done+Right%3A+An+Operating+System+for+Your+Organization-p-9781118417133>
- 4 Auberbach, C. F. and Silverstein, L. B (2003) Qualitative Data: An Introduction to Coding and Analysis. New York: New York University

- Press. Available at <https://psycnet.apa.org/record/2003-88052-000>
- 5 Smith T M F (1983), On the validity of inferences from nonrandom sample, Journal of the Royal Statistical Society, Series A (General) 146: 394-403, Available at :ile:///C:/Users/User/Downloads/httpwww_pjms_zim_pcz_plpdfpjms4enterprise20performance20management.pdf.
 - 6 Becker. A and Shadbegian. J,(2008), The green industry: an examination of environmental products manufacturing, NCEE, pp. 1-43 Available at :<https://ageconsearch.umn.edu/record/280871/us> age
 - 7 Bergstrom. R, et al (2011), Managing the Unthinkable Scenario-Based Enterprise Performance Management (EPM), Accenture, pp. 1-24. Available at :<https://fddocuments.in/document/managing-the-unthinkable-scenario-based-enterprise-performance-management-mediaaccenture2016-02-04managing.html>
 - 8 Bibi P, Pangil F B and Johari J B (2016), HRM Practices and Employees' Retention:
 - 9 Blaxter, L. Hughes, C. & Tight, M. (1998) How to Research. Buckingham: Open University Press.. Available at :http://abcreorg.weebly.com/uploads/9/9/8/2/9982776/how_to_research.pdf
 - 10 Eremenko-Grigorenko, A.A.2000 Organizational and Economic Mechanism of business activities of enterprise: PhD thesis. Donetsk 2000.