Linkages between HR Practices and Performance of SMEs[1]

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Micro, Small, and Medium Enterprises (MSMEs) contribute 45 per cent of industrial output and 40 per cent of exports in India. Its share in the manufacturing output is 37.33 per cent (MSME). Past researches have shown positive linkages between HRM practices leading to enhanced organizational performance through enhanced employee outcomes (Paauwe and Richardson, 1997; Guest, Sheehan, and Conway, 2000). In the present study, an attempt has been made to establish an empirical relationship between HR practices and performance of SMEs at Vadodara district.

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Table 1: Small and Medium Enterprises Defined

Enterprises	Investment in Plant and Machinery (Manufacturing Industry)	Investment in Equipment (Service Industry)
Small	Above Rs. 25 lakhs and up to Rs. 5 crore	Above Rs. 10 lakhs and up to Rs. 2 crore
Medium	Above Rs. 5 crore and up to Rs. 10 crore	Above Rs. 2 crore up to Rs. 5 crore

(Source: MSME, Annual Report 2014-15)

Chandler and McEvoy (2000) state that even if it is indicated by published researches that effective HRM is one of the many problems that SMEs face, there is lack of research identifying practices used by SMEs. This implies that more researches concerning HRM in SMEs are needed (Heneman and Tansky, 2003).

OBJECTIVES

The objectives of the paper are as follows:

- To find the linkages between HRM practices and performance of SMEs in the Vadodara district.
- To demonstrate a conceptual understanding of the linkages between HR practices and performance through literature review.

LITERATURE REVIEW

The most widely used HR practices which affects a firms performance have been identified as recruitment and selection, training and development, performance evaluation and compensation (Dessler, 2008; Fisher, Schoenfeldt, and Shaw, 2006). Researchers across the globe have agreed that a bundle of mutually compatible HR practices have a positive effect on organizational performance (Farnham, 2010; Lengnick-Hall et al., 2009).

Saddam and Mansor (2015) highlighted the importance of HRM practices to achieve superior performance with special reference to the effective use of recruitment and selection practices in oil and gas sector firms in Iraq. Their study showed that effective recruitment and selection practices had a positive linkage with performance represented by labour productivity, product quality, organizational innovations, and customer satisfaction.

There is increasing empirical evidence suggesting that HR bundles which are mutually reinforcing, synergistic, and overlapping facilitate employee commitment and involvement

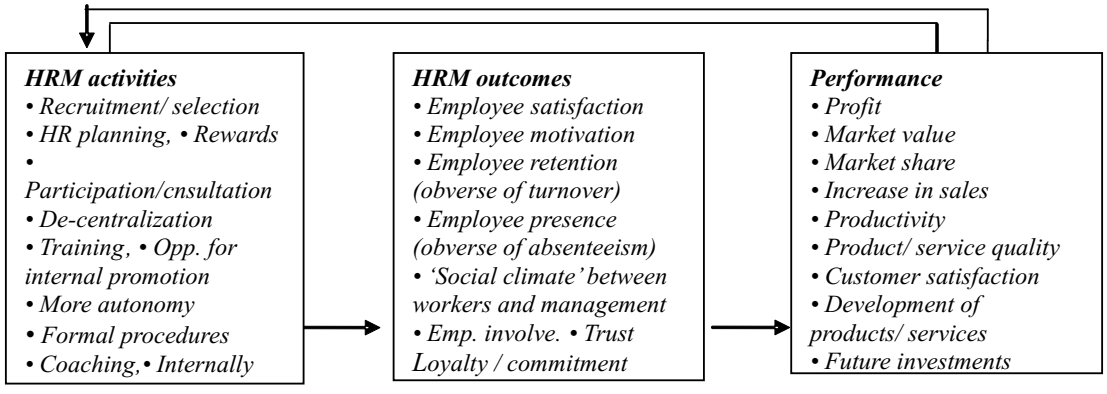
(MacDuffie, 1995; Guthrie, Spell and Nyamori, 2002; Camps and Luna-Arocas, 2010).

Boselie, Dietz, and Boon, (2005) after their study of 104 articles concluded that HRM in its 'system' form have been found to 'matter' for organizational performance in a positive sense. Kasturi, Orlov, and Roufagalas, (2006) in their study have shown that the effect of HRM philosophy on productivity is highly significant, though the effect is small. In the same lines, Singh and Vohra (2009) found a low level of formalization of HRM practices in the SMEs sector in India; the formalization was higher in medium enterprises, and lower in smaller counterparts.

Paawe and Richardson (1997); Guest, Sheehan, and Conway (2000), and Paauwe (2009) in their study opined that the distance between some of the performance indicators (profits, market value) and HR interventions is quite large and potentially subject to other business interventions like research and development activities, marketing strategies, and the like. Thus, the need for identifying performance indicators that are far more proximal in terms of what HR practices can actually affect like attitudes, behaviour and the like which result in outcomes at organizational level (productivity and quality of services and/or products). Thus, the introduction of the concept of employee outcomes which are more directly affected by HR practices, which ultimately leads towards enhancing organizational performance in terms of profits, productivity, etc.

The representation of the HRM-performance linkage is put forward by Paauwe and Richardson (1997) as in Figure 1.

Figure 1: Paawe and Richardson Model (1997)
(Reversed causality)



Contingency and/ or control variables: *Organizational level: age, size, technology, capital intensity, degree of unionization, industry/ sector, Individual employee level: age, gender, education level, job experience, nationality, etc.(Source: Paauwe and Richardson, 1997)*

HR Practices and Performance Dimensions in the Present Study

Based on literature review (Paauwe and Richardson, 1997; Guest, 1997; Dessler, 2008;Fisher, Schoenfeldt, and Shaw, 2006 and others) major HR practices identified in the present study are: recruitment and selection, training and development, performance management system, employee participation, employee decision-making, and welfare measures

Performance dimensions identified in this study have been inspired from the study undertaken by Dyer and Reeves (1995) and include:

- employee outcomes like competence, employee attitudes (commitment, co-operation); employee behaviour (regularity, punctuality, discipline); employee-involvement.
- organizational performance outcomes (like customer satisfaction, supplier satisfaction, product/ service development, quality, utilization of resources, reduction of defects, per cent change in net profit margin, ROI (in per cent average performance of two years).

METHODOLOGY

Non-probability sampling method of quota sampling was used in the study. Vadodara district was divided into quota (strata/control category) of each industrial estate, based on the Federation of Small Scale Industries (FSSI) 2006 Directory and 10per cent firms have been selected from each industrial estate based on a mix of convenience sampling as well as snowball sampling. As the FSSI Directory's database was old (published in 2006), and few of the firms mentioned in the directory had closed down, it could not be adopted as the sampling frame.

Data were collected using a structured questionnaire through one-to-one approach. The sample comprised 215 respondents from 126 SME firms across eight industrial estates. Respondents included 83 SME owners/ entrepreneurs and 132 employees who were managing heads like employees from senior management/HR managers. The eight estates were GIDC Makarpura, Sardar Estate, Patel Estate, Gorwa BIDC Industrial Estate, Chhani Estate, Mujmahuda, Vadodara City area, and Padra Industrial Estate.

Table 2 shows the distribution and bifurcation of the sample across the various industrial estates of Vadodara district.

Table 2: Sample Distribution and Bifurcation

Samples taken from eight Industrial Estates out of a total of twelve Estates in the district (i.e 67% of Industrial Estates)			
126 SME Firms		**215 Respondents (Managing Heads)**	
Small Enterprises	**Medium Enterprises**	**Owners/ Entrepreneurs**	**Employees including Senior/ Middle Level Management**
84 (67%)	42 (33%)	82 (38%)	133 (62%)

The distribution of the samples across the eight industrial estates is in Table 3.

Table 3: Distribution of Samples across Industrial Estates

Samples Taken From Eight Estates Out Of A Total Of Twelve Estates In The District (i.e 67% Of Industrial Estates Included in the Survey)					
Estate	**Total No. Of MSME Units (As Per FSSI Directory)**	**Only SMEs (70% of MSMEs*)**	**Target Sample Size (10% of SMEs)**	**Samples Accomplished (SME Firms)**	**No. of Respondents (Owners/ Managing Heads)**
GIDC Makarpura	1,403	982	64	64 (6.5%)	109
Sardar Estate	126	88	9	8 (10%)	13
Patel Estate	144	100	10	10 (10%)	10
Gorwa BIDC	89	62	6	8 (14%)	16
Chhani Estate	85	60	6	9 (15%)	18
Mujmahuda	23	16	2#	4 (25%)	8
Vadodara City	215	150	15	15 (10%)	24
Padra Ind. Area	27	19	2#	2 (100%)	3
Others (Waghodia , POR)	134	94	9	6	14
			Total:	**126 SMEs**	**215**

* As per feedback from FSSI Head, VCCI Head & DIC Head)

Reliability Test

Reliability is a measure of how a scale can be relied on to produce similar measurements every time we use the scale. Cronbach's alpha was administered to test the reliability of the scale items. If the alpha value for the scale is 0.7 or more, it is usually considered a good scale. The scale was found out to be reliable in the present study.

Cronbach's Alpha Reliability Test was administered for the below mentioned three constructs separately as well as taken together (consisting of 31 items):

- HR practices
- Employee outcomes (as a 'performance dimension')
- Organizational performance outcomes (as a 'performance dimension')

Table 4: Cronbach Alpha Values for Scale Items

Construct	No. of Items	Cronbach Alpha
HR Practices	14	.802
Employee Outcomes	9	.888
Organizational Performance Outcomes	8	.865
HR Practices and Performance Dimensions	31	.905

Table 4 shows the Cronbach Alpha values for all three constructs separately as well as for all 31 scale items of HR practices and performance dimension. Data are found to be reliable.

Mann-Whitney Test for Presence of an Internal HR Person

Mann-Whitney Test was done to see if there is any influence of presence of an internal HR person on the HR Practices in the SME firms.

The null and alternate hypothesis is framed as under:

Ho: There is no significant influence of Presence of an Internal HR Person on HR Practices.

H1: There is significant influence of Presence of an Internal HR Person on HR Practice

Table 5: Mann-Whitney Test for Presence of an Internal HR Person

HR Practices	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Our organization places the right person in the right job	5216	10887	-1.53	0.126
Selection is on the basis of merit	4600.5	10271.5	-3.153	0.002
Organizes training and skill development programs	4120	9791	-3.901	0
Employees are rotated from one job to another	5060.5	10731.5	-1.7	0.089
Appraises the performance of employees at regular intervals.	5070.5	10741.5	-1.886	0.059
Employees receive feedback	4719	10390	-2.851	0.004
Enough opportunity for career growth	4232.5	9903.5	-3.653	0
Compensation is decided on the basis of competence or ability	4550.5	10221.5	-3.353	0.001
Good performers are given financial incentives	4785	10456	-2.311	0.021
Good performers are given non-financial incentives.	4711.5	10706.5	-2.416	0.016
Good performers are given more authority and responsibility.	4936	10607	-2.086	0.037
Employees participate in the decision-making process.	5339.5	11010.5	-1.02	0.308
Employees are given opportunity to suggest improvement	5233.5	10904.5	-1.453	0.146
Employees can openly communicate with the superiors	5196.5	10867.5	-1.566	0.117

Table 5 shows that the p-value of the following statements on HR practices is less than 0.05:

- selection is on the basis of merit
- organizes training and skill development programmes
- employees receive feedback
- enough opportunity for career growth
- compensation is decided on the basis of competence or ability
- good performers are given financial incentives
- good performers are given non-financial incentives
- good performers are given more authority and responsibility

As the p-value of the above statements on HR Practices is less than 0.05, we reject the null hypothesis and conclude that there is a significant influence of presence of an internal HR person on the following HR Practices: Selection, Training & Skill Development, Feedback mechanism, career-growth, Compensation, non-financial incentives and Authority & responsibility (delegation of power). This brings out the significance of the presence of an internal HR person in the functioning of SMEs with respect to HR practices.

RESEARCH HYPOTHESES

A hypothesized technology acceptance model was tested using structural equation modelling using AMOS 18 software.

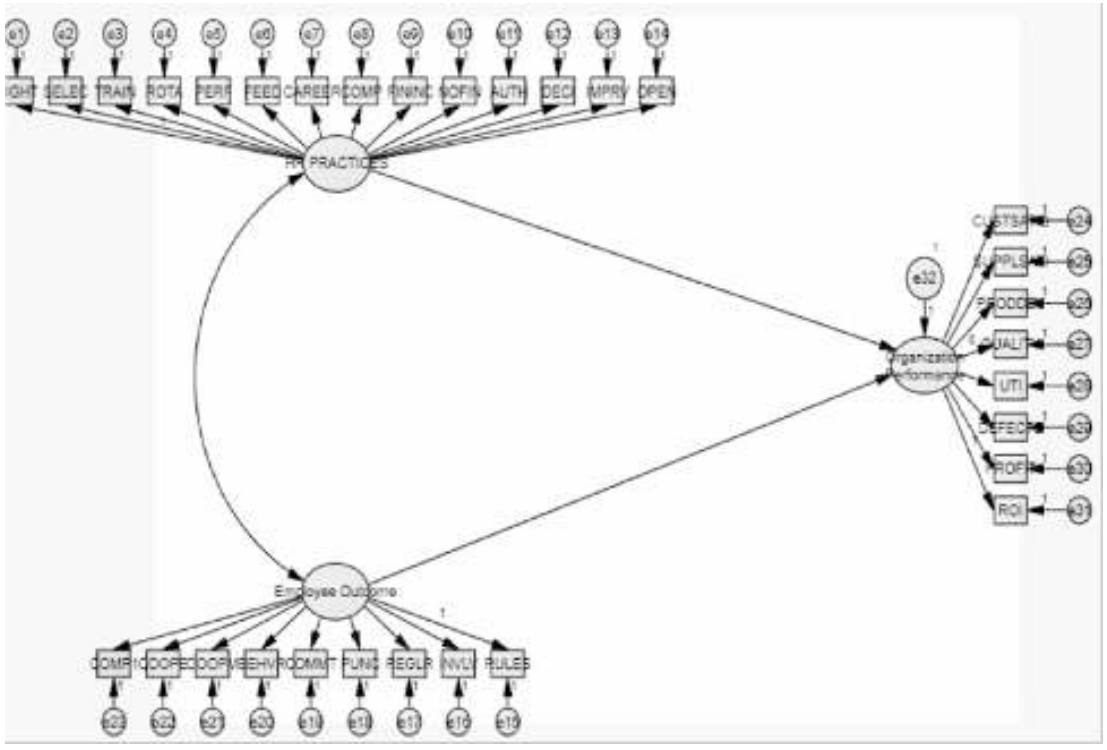
The major hypothesis in the study is as follows:

H1: HR Practices positively and directly affects organizational performance.

Structural Equation Modelling (SEM)

Figure 2 shows the SEM model showing the linkages between HR practices and organizational outcomes

Figure 2: Structural Equation Model



FINDINGS

Examination of the path coefficients and the significance level between the constructs in the model were used to test the hypothesis. The analysis in Table 6 shows that HR practices have a positive significant relationship with organizational performance.

Table 6: Relation Between the Constructs

Relation Between Constructs	Estimate	P Value	Null Hypothesis
HR Practices- Organizational Performance	0.879	0	Reject

Table 7 shows the parameter summary of the model.

Table 7: Parameter Summary

	Weights	Covariances	Variances	Means	Intercepts	Total
Fixed	36	0	1	0	0	37
Labeled	0	0	0	0	0	0
Unlabeled	29	1	33	0	0	63
Total	65	1	34	0	0	100

H0: Relationships does not exist between the constructs.

H1: Relationships exist between the constructs.

As the p-value of chi-square is less than 0.05, the null hypothesis is rejected and we conclude that a relationship exists between the constructs.

Table 8 shows the model fit summary.

Table 8: Model Fit Summary

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	63	2224.358	433	0	5.137
Saturated model	496	0	0		
Independence model	31	4345.298	465	0	9.345

In Table 8, we see the labels NPAR (number of parameters), CMIN (minimum discrepancy), DF (degrees of freedom), P (probability value), and CMIN/DF. The test of our Ho, technology acceptance model fits the data, yielded a chi square value of 2224.35, with 433 degrees of freedom and a probability of less than .000 ($p < .0001$), thereby suggesting that fit of the data to the hypothesized model is not entirely adequate. Because the chi square statistic equals (N–1) Fmin, this value tends to be substantial when the model does not hold and when sample size is large (Joreskog and Sorbom, 1993).

Table 9: Root Mean Square and Goodness of Fit Index

Model	RMR	GFI	AGFI	PGFI
Default model	0.137	0.62	0.564	0.541
Saturated model	0	1		
Independence model	0.179	0.254	0.204	0.238

In Table 9, we observe the labels RMR,GFI, AGFI, and PGFI. The root mean square residual (RMR) represents the average residual value derived from the fitting of the variance–covariance matrix for the hypothesized model $\Sigma(\theta)$ to the variance–covariance matrix of the sample data (S). However, because these residuals are relative to the sizes of the observed variances and covariances, they are difficult to interpret. Thus, they are best interpreted in the metric of the correlation matrix (Hu and Bentler, 1995; Joreskog and Sorbom,1996). The standardized RMR, then, represents the average value across all

standardized residuals, and ranges from zero to 1.00; in a well-fitting model, this value will be small (say, .05 or less). The value of 0.137 shown in Table8 represents the unstandardized residual value.

The Goodness-of-Fit Index (GFI) is a measure of the relative amount of variance and covariance in S that is jointly explained by Σ. The Adjusted Goodness-of-Fit Index (AGFI) differs from the GFI only in the fact that it adjusts for the number of degrees of freedom in the specified model. GFI and AGFI can be classified as absolute indices of fit because they basically compare the hypothesized model with no model at all (Hu and Bentler, 1995). Both indices range from zero to 1.00, with values close to 1.00 being indicative of good fit. In our model GFI = 0.620 and AGFI = 0.564 which is considered to be moderate fit.

Table 10: Root Mean Square Error of Approximation (RMSEA)

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	0.139	0.133	0.145	0
Independence model	0.197	0.192	0.203	0

The Root Mean Square Error of Approximation (RMSEA) (Table 10) also called Badness of Fit Index and which was first proposed by Steiger and Lind in 1980, has only recently been recognized as one of the most informative criteria in covariance structure modelling. This discrepancy, as measured by RMSEA, is expressed per degree of freedom, thus making it sensitive to the number of estimated parameters in the model (i.e., the complexity of the model). Values less than .05 indicate good fit, and values as high as .08 represent reasonable errors of approximation in the population (Browne and Cudeck, 1993). MacCallum, Browne, and Sugawara, (1996) have recently elaborated on these cutpoints and have noted that RMSEA values ranging from .08 to .10 indicate mediocre fit, and those greater than .10 indicate poor fit. Hu and Bentler (1999) have suggested a value of .06 to be indicative of good fit between the hypothesized model and the observed data. In our model, RMSEA is 0.139 which suggests not good fit. The 90 per cent confidence interval for the RMSEA is between a LO of 0.133 and a HI of 0.145. Thus, even the upper bound is close to .08.In addition to reporting a confidence interval around the RMSEA value, AMOS tests for the closeness of fit (PCLOSE). That is, it tests the hypothesis that the RMSEA is "good" in the population (specifically, that it is < .05). Joreskog and Sorbom (1996) have suggested that the p-value for this test should be > .50. In our case it is 0.000< 0.05 which is not good. However, the fact remains that it is difficult to have a model which contains all the values within the prescribed ideal limits, as these are tested in real life situations.

CONCLUSION

The study shows that there is significant influence of presence of an internal HR person on HR practices. HR practices positively and directly affect organizational performance. Examination of the path coefficients and the significance level between the constructs in the model were used to test the hypotheses. The analysis shows that HR practices has a positive significant relationship with organizational performance. Further, as the p-value of Chi-Square is less than 0.05, the null hypothesis is rejected and we conclude that a relationship exists between this constructs.

LIMITATIONS

The study has been conducted across 10 per cent SMEs in each industrial estate. Thus, the results may or may not be representative. Further, only one or two respondents have been taken as sample from each firm, owing to the nature of the industry. Some of the SEM statistics are not the ideal ones, as should be in a good model. For example, in our model GFI = 0.620 and AGFI = 0.564 which is considered to be moderate fit. However, the fact remains that it is difficult to have a model which contains all the values within the prescribed ideal limits in the real-life scenario.

FUTURE SCOPE OF THE STUDY

In future, the researcher aims to do modifications in the Structural Equation Model by deleting some criteria, which are showing a high variance, with the objective to improve the SEM Model, to improve GFI and AGFI, which are presently lower as compared to ideal norms. Further, future research can also be done to extend the scope of the study to various other districts in Gujarat to know what are the linkages between HR practices and performance of SMEs.

MANAGERIAL IMPLICATIONS

Much research has been done in large firms to establish the linkages between HR practices and performance. This is a unique study in the SME sector to establish the linkage between HR practices and SMEs performance. It involved convincing the owners of SMEs, which was a very challenging task, as they were quite apprehensive to share information on issues related to HR practices. The study will prove helpful for industry associations, academia, entrepreneurs, managing heads.

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