

# Warranting Increased Operational Performance of Pharmaceutical Firms of Indonesia through Collaborative and Calculative HRM Practices: Mediating Role of Employee Engagement

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# Warranting Increased Operational Performance of Pharmaceutical Firms of Indonesia through Collaborative and Calculative HRM Practices: Mediating Role of Employee Engagement

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## ABSTRACT

It is well obliged that the operational performance of the companies heavily depends on operational activities by the HR specialists. The study has an important aim to analyze the direct influence of calculative HRM practices and collaborative HRM practices on operational performance, while the employee job engagement plays an important mediating role between them. The data has been collected from almost 317 individuals, these are the front-line employees of the pharmaceutical companies. The data has been analyzed by applying numerous software such as AMOS and SPSS. Moreover, the major data analysis techniques that have been used are SEM and CFA. The analysis and discussion have shown that all hypotheses have accepted. The results have shown that employee job engagement has a significant mediating role in the relationship between calculative HRM practices, collaborative HRM practices, and operational performance. Moreover, the given study is unique because no previous study has explored the mediating role of employee job engagement in the relationship between

calculative HRM practices, collaborative HRM practices, and operational performance. The study is also effective in terms of theoretical, managerial and practical implications. The study has helped managers, companies and individual employees to understand the collaborative, calculative HRM practices and employee job management and operational performance of a company.

**Keywords:** Calculative HRM practices, collaborative HRM practices, employee job engagement, operational performance.

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## INTRODUCTION

Indonesia is one of the growing countries of world. It is considered the largest economy in its region that is Southeast Asia. The country is struggling hard to become a developed country so that it can best serve its nation. Various sectors of Indonesia are growing and one of them is Pharmaceutical. This sector of economy is providing products and services that are related to health care. The

production and manufacturing of pharmaceutical sector is high and most of the produced products are consumed by the national of Indonesia. This sector has opportunities to expand and grow as people consume their offerings. Moreover, due to potential, other economies are also trying to invest in pharmaceutical sector of Indonesia. Different provinces of country are employing these firms however, West Java is leading in term of firms working in it. Along with West Java, other regions of country also have

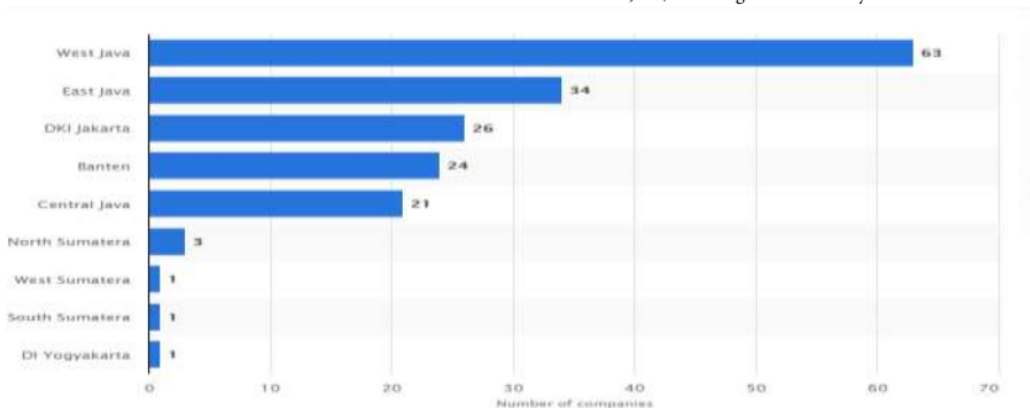


Figure 1: Pharmaceutical Firms of Indonesia

Operating firms as total number of pharmaceutical firms in Indonesia were 174 in 2018. These firms are spread across the country to serve domestic customers. The population of economy is continuously increasing, this increase in population demands increase production and manufacturing from firms. The demand and workload of pharmaceutical is also increasing in response to growing population. In this condition, pharmaceutical firms need to

increase the speed of production along with improved quality of products.

Pharmaceutical firms in Indonesia require focusing on their performance improvement from various aspects. These firms need to employ different standards of quality to improve their performance. Firms cannot serve better with mass production. This era of improvements demands various factors of quality that firms need to confirm in order to grow. Successful firms identify standards of

effectiveness in order to raise their performance. Moreover, along with effectiveness and efficiency, firms pay special attention to environmental factors. Recent laws made by states require firms to follow the rules that are made for environment purity. Firms that employ methods of efficiency often result in the products and manufacturing methods that consume less and produce more. Likewise, these methods produce less waste to avoid harmful effects. Another important factor of competitive performance is practices of HRM of pharmaceutical firms. HR is the unit that defines, design and employ policies of improvement that covers production methods as well as employee work specification. The ways designed to improve employee performance are of special importance as organization rely on its human resources to achieve its goals. Firms adopt different concepts to increase performance of their employees. They try to identify their individual performance to reward them, it increases the confidence of employee and they work hard. Likewise, organizations make psychological relationship with their employees. In response to this psychological relation, they exchange information and ideas that are effective for performance improvement of organization.

As demand is increasing from this sector of Indonesia, pharmaceutical firms should response it properly. Otherwise, due to attraction and competition, firms from outside country can replace these firms. These firms need to pay attention to their employees as working employee have better idea about how processes and products can be improving in a time saving manner. Moreover, these are the employees who know cost effective procedures of manufacturing. So, pharmaceutical firms need to make an emotional bond with their employees. The emotional relation is required to engage employee as if employees are not engaged with the firm, it is easier for other firms to attract them. Research has proved that human resource is one of the most crucial key resources to make a competitive edge over others. So, in order to serve their economy in a better way, pharmaceutical firms should recognize different ways to involve their employees.

In order to resolve the issue mentioned above, this study measures the impact of collaborative and calculative HRM practices on "operational performance" of organization. The study employs mediating role of the variable employee engagement. This study is unique in a way that the whole relation measured in this study is not investigated before. So, the aim of this study is given as follows:

1. To analyze the impact of calculative HRM practices on operational performance in pharmaceutical sector Indonesia.
2. To determine the impact of collaborative HRM practices on operational performance in pharmaceutical sector of Indonesia.
3. To identify the mediating role of employee job engagement between calculative HRM practices, collaborative HRM practices and operational performance in pharmaceutical sector of Indonesia.

Studies of previous scholars show that practices of human resource department are linked with success of organization. Moreover, it is studied that when employed are engaged with the firm, the quality and quantity of products made by organization enhances.

The study also includes other sections. Section two is about literature review. Section three includes methodology.

Section four explains data analysis and section five gives the conclusion of the study.

## LITERATURE REVIEW AND SOCIAL EXCHANGE THEORY

The human resources outcomes such employee engagement draws their relation and behavior with firm performance from the social exchange theory which act as a theoretical foundation for the proposed relationships (Huang et al., 2016). The work of George C. Homans and Peter Blau explain the Social exchange theory has its beginning in the field of sociology. The main focus of social exchange theory is that it highlights the elementary behavior and sub institutional, the practices of employee with other employee in direct interaction form the foundation of firms and organizations. Studies on the Human Resource Management (HRM) practices used contrasted behavior of employee with behavior of organization which ultimately determined the firm performance. Such as that involved in conforming to norms or to role prescriptions for appropriate behavior. The behavior of organizations and behavior of elementary forms were most often distinct. That elementary behavior could mostly 'crack the crust of institution' forcing variation in the organizations ways of doing somethings (Cook, 2015). Social Exchange Theory further explained that behaviors can be act as main driver of the employee like analysis of cost benefit results attract more employee to engage in the firm performance (Porter & Kramer, 2006; Rauch, Wiklund, Lumpkin, & Frese, 2009; Sarkis, Helms, & Hervani, 2010; Tate, Ellram, & Kirchoff, 2010). If a person have believe that they are capable to get more reward with their behavior to engage in the firm performance, automatically he changed his behavior towards organizational creativity. If relationships with other are not given that much value and are really distrustful, then there is very less worth of social exchange between them. In theoretical framework of social exchange, commitment of employees in an organization results in the development of psychological factor of employees that the management of organization values them. When the employees of an organization have the sense that they are getting value from organization and the management is using resources for their welfare, they get more involved and engaged in their jobs and organizations (Redmond, 2015).

### 4 Relationship between collaborative HRM practices and operational performance of Pharmaceutical Firms

Configuration of practices such as (HRM) in bundles and the relation among them have an important impact on firm operational performance. From the manufacturing industries of Uruguay a set of data was collected. Analysis was done on 150 manufacturing firms indicate clearly the presence of hierarchy between bundles enhancing (HRM) practices (Donate, Peña, & Sanchez de Pablo, 2016) which are most important to describe the enhanced operational performance of firms. Based on these practices the firm operate in effective manners (Bello-Pintado, 2015). Collaborative HRM practices and approaches result in the reduction of employee turnover which increases the performance of organization. In addition, such practices also result in better financial results of organization (Chowhan, 2016). Collaborative-based (HRM) practices

ultimately support the operational performance of Pharmaceutical Firms (Diaz-Fernandez, Bornay-Barrachina, & Lopez-Cabrales, 2017).

H1: collaborative HRM practices increased operational performance of Pharmaceutical Firms

### 25 Relationship between Calculative HRM practices and operational performance of Pharmaceutical Firms

HRM practices have an important relationship with operational performance of firms (Saridakis, Lai, & Cooper, 2017). In addition to it, (HRM) practices identifies the various aspects of "calculative and collaborative" (HRM) practices on performance. The firm performance can be explored with substitute associations between various HRM practices, categorized as collaborative and calculative, and employee turnover and organizational and financial results, in Pharmaceutical firm (Inkinen, Kianto, & Vanhala, 2015). Calculative human resource management (HRM) practices between Variations and similarities are described in terms of the divergence and convergence of (HRM) practices determined by firms, and the increasing influence of multinational companies (MNCs) (Al-Refaie, 2015).

H2: Calculative HRM practices increased operational performance of Pharmaceutical Firms

### Mediating role of Employee Engagement in operational performance of firm

Employee engagement positively affects the performance of the organization. However, the engagement level as overall in the case of organization are still examined to be lower than optimal (Hassan, 2016). A number of key factors of employee engagement have been critically investigated to examine their firm's viability that the companies which are having greater rate of engagement with the employees enjoy more productivity and growth as well as customer satisfaction which shows that employee engagement is very impactful factor (Jha, Balaji, Yavas, & Babakus, 2017). Organizations are giving much attention to such employee engagement practices in order to get competitive advantage over others. Several concepts such as employee engagement, employee delight etc. is given much attention in this regard. As far as employee engagement is concerned, it means the emotional attachment of employees towards organization and giving hundred percent of their efforts (Shanker, Bhanugopan, Van der Heijden, & Farrell, 2017). It has been proved that organizational commitment and engagement results in higher output and profits, therefore organizations pay attention towards developing better practices resulting in employee engagement (33) the organization and then enjoy the benefits (Obeidat, Abdallah, Aqqad, Akhoerschiedah, & Maqableh, 2016). The organizational repute of the organization also has major role in this regard as it is impacted by the better HRM practices of the organization. The increase in positive employee behaviors such as employee commitment and employment are the reasons behind this reputation (Barrick, Thurgood, Smith, & Courtright, 2015). As given by social exchange theory the employees that are more committed to their job gave outcomes that more motivated and energized to perform their job, thus showing higher levels of engagement at work

40 H3: Mediating role of Employee Engagement in operational performance of firm

### 16 Mediating role of Employee Engagement in the relationship between collaborative HRM practices and operational performance of Pharmaceutical Firms

In the collaborative (HRM) practices, employee establish a more psychological relational contract where communication and programmers policies, information sharing including communication of the strategic and mission statement, work and financial organization highlight, reinforce a culture of long-term commitment and a high level of trust. Previous studies show that practices of information-sharing and communication support the values by employees. Internalization of organizational goals, give rise to feelings of mutual trust and make the employees feel valued by the company (Cristiani & Peiró, 2019). They also gave for communication of employer-employee a formal mechanism about the issues which are related to work. A significant relationship between (HRM) and. In a study of US-based Fortune 1,000 firms, found that sharing of more extensive information throughout the firm is related to the objective of higher financial performance. Studies found support for large extensive communications being related with higher Motivation of employee, which, in turn, have relationship with operational performance of firm. Furthermore, as given by social exchange theory these practices, stress the significance of social aspects in the workplace, like affective attachments and group's feelings of solidarity and cohesion. In addition, collective extensive agreement cover reinforces International Labor Organization (ILO) rules of sharing information between parties at the workplace (Abesiga, Ngunjiri, & Zziwa, 2015; Burg-Brown, 2016; Sukresna, 2014). This could strengthen the performance of the unions in collaborative Human Resource Management (HRM) practices promoting trend meanwhile, this could weaken the perceptions of the employees about the contingency of this type of practices with organizational performance in this context. Still following the existing evidence, we formulate the following hypotheses (Cristiani & Peiró, 2019).

H4: Mediating role Employee Engagement in the relationship between collaborative HRM practices and operational performance of Pharmaceutical Firms.

### 5 Mediating role Employee Engagement in the relationship between calculative HRM practices and operational performance of Pharmaceutical Firms

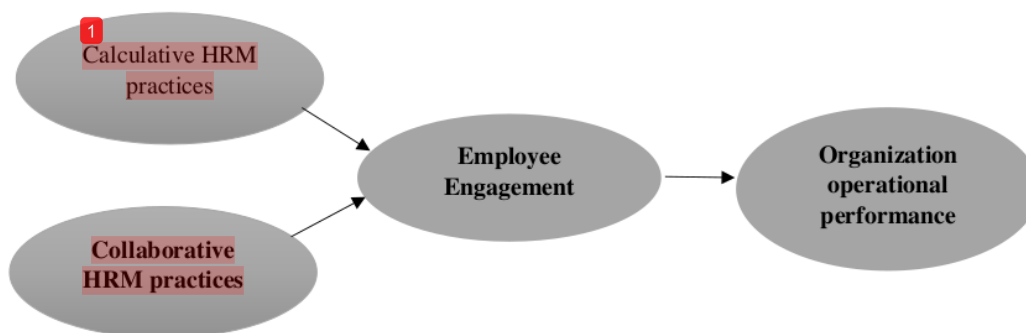
System of pay-for-performance are essential in rewarding and recognizing employee with High Engagement in firms increase their performance, practices to which Delaney and Hustled (1996) attributed mediating role of employee engagement on firm performance (Hamid, 2017). Empirical research has shown a direct and positive connection existing between incentive compensation of employee and organizational performance, explained by increase in productivity. Process of Training including activities like assessment of needs, setting objectives and goals, and the results evaluation are most successful at increasing the effectiveness of their programs of training (Misra & Srivastava, 2018), in terms of enhancing product and improving profitability or quality of service. Training

has been related to performance of firm. Cristiani and Peiró (2019) found a positive connection or relationship between training and organizational performance in Southern European countries. Employee perform in firms on the basis of resources if they have more human resource and its

effective management then they more engaged in that firm, because employee energy based on the firm resources.

**H5: Mediating role Employee Engagement in the relationship between calculative HRM practices and operational performance of Pharmaceutical Firms.**

## RESEARCH MODEL



## METHODOLOGY

### Data and sample

The data was collected through conducting cross sectional survey, which is employed is different primary data collection technique. To conduct survey, a questionnaire was designed that comprised on different section, with each depicts the items of measures. The questionnaire was closed (1), which includes questions and statement on various HR issues. The unit of analysis is the HR employees of leading pharmaceuticals companies of Indonesia. The issues pertaining to translation of language were deal through the translation of questionnaire in local Indonesian language to get the valid responses. To test the theoretical framework, the sample was restricted to the HR employees in pharmaceutical companies. The purposive survey sampling technique was applied to collect data through self-administered survey. The final sample size comprised on 317 responses among which the shares of male and female are 52.4 and 47.6 respectively. Initially 500 questionnaires were sent to HR employees of pharmaceutical companies by asking filter question: Have you ever work in HR department of company during last two years. On get the positive response, the survey formally started.

### Measures

The theoretical model comprised on total four variables including two independent, one dependent, and one mediating variable. The measures of each variable are constructed in the light of past studies and literature by aligning it with the scope of this research. The dependent variable operational performance of firms is measured by adopting the scale of Ghebreorgis and Karsten (2007). The measures is based on eighteen survey items that cover the broader (17) dimensions of HR practices impact on operational performance of firms. The independent variable collaborative HR practice is based on 14 survey items based on the study of Gooderham, Parry, and Ringdal

(2008). The 14-item scale includes six dichotomous variables and eight additional items that includes one item for communication policy, one item for briefing about firms employees and 12 items based on work at the professional/technical, managerial, clerical and manual levels and financial results. The calculative HRM practices variable consists of ten items based on the scale of Gooderham et al. (2008). It includes two items for training evaluation, four items for compensation, and four items for practices of employees, managerial, cleric and non-clerical Gooderham et al. (2008). As far as mediating variable is concerned, it is emulated from the study of Saks (2006) that based on twelve survey items which get the responses from employees on each dimension of HR collaborative and collective practices on employee engagement.

### Procedure and Data Analysis

The proposed hypotheses are tested by using the SEM through AMOS (Arbuckle, 2009). The SEM based on two part, measurement and structural model. For measurement model the "confirmatory factor analysis" is done to check the validity of measures. Moreover, model fitness tests are also used to check the strength of model, by computing comparative fit index, root mean square error of approximation (RMSEA), and Goodness of Fit (GFI) (Bollen, 1989). Moreover, SPSS is also used to estimate the frequency distribution of respondents, descriptive analysis of measures, and reliability factor analysis. The frequency distribution presents the demographic characteristics of respondents such as ages, education, and education background. The descriptive statistics indicate the central tendency, outliers, and normality in measures' data.

## DATA ANALYSIS AND INTERPRETATION

### Demographic details

The purpose of this research was to see the effect of "calculative HRM" (14) practices on "operational performance" of organization, the impact of collaborative HRM practices

on operational performance and the study also took employee job performance as a mediator between calculative HRM practices, Collaborative HRM practices and the operational performance. The study took a total of 317 individuals as a sample, in which, 166 were males and 151 were females. Out of a sample of 317 people, there were 38 people under graduation, 137 people had their post-

graduation done, 106 had their master's degree and 36 of the people had some other degree. Out of 317 individuals, there were 78 individuals between age of 21 to 30, there were 93 individuals of between 31 to 40 years of age, there were 97 individuals between 41 to 50 years of age and 49 individuals were more than fifty years in age.

**9** DESCRIPTIVE STATISTICS

**Table 1: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
OpPerf	317	1.00	4.94	3.5598	1.07445	-.782	.137
EmJEng	317	1.00	5.00	3.4180	1.09020	-.603	.137
CalHRM	317	1.00	5.00	3.4713	1.13641	-.627	.137
ColHRM	317	1.00	5.00	3.4937	1.10155	-.773	.137
Valid N (listwise)	317						

The table 1 above is showing the descriptive details of the study, there is a complete summary about the explanations of the variables, the descriptive coefficients are being shown in the above table. The data given in the table is a representation of the whole population in the form of a sample. It can be seen through the data that no outlier is present in it, because the maximum values and the

minimum values lie exactly in the appropriate range of the 5-point Likert scale. The values for skewed variables are present between -1 to +1 and so it can be observed that it is present in the normal of normality. The given data is proved to be normal and valid and can be proceeded for further testing.

**Table 2: Factor Loading and Convergent Validity**

	1	2	3	4	CR	AVE
OP1	.639				0.911	0.740
OP2	.729					
OP3	.784					
OP4	.830					
OP5	.794					
OP6	.808					
OP7	.799					
OP8	.844					
OP9	.842					
OP10	.878					
OP11	.799					
OP12	.775					
OP13	.740					
OP14	.840					
OP15	.832					
OP16	.861					
OP17	.857					
OP18	.854					
EE1			.820		0.923	0.748
EE2			.844			
EE3			.855			
EE4			.867			
EE5			.862			
EE6			.866			
EE7			.811			
EE8			.819			
EE9			.827			
EE10			.839			
EE11			.789			
EE12			.805			
CA1				.848	0.962	0.721
CA2				.768		
CA3				.765		

CA4		.806		
CA5		.804		
CA6		.786		
CA7		.787		
CA8		.851		
CA9		.852		
CA10		.845		
CO1	.910		0.915	0.737
CO2	.795			
CO3	.805			
CO4	.739			
CO5	.752			
CO6	.797			
CO7	.722			
CO8	.711			
CO9	.884			
CO10	.872			
CO11	.876			
CO12	.880			
CO13	.892			
CO14	.870			

The above table 2 is showing the factor loading and the discriminant validity of the given variables. The factor loading of all indicators of the variables is greater than 0.7. Therefore, it shows that all indicators are reliable and ready

for further testing. All of the factors are in a suitable range and all of the factors are in a suitable and normal sequence and range as well. This data is satisfactory to go for further testing and analysis, data is reliable.

Table 3: Discriminant validity

	EE	OP	CA	CO
EE	<b>0.865</b>			
OP	0.514	<b>0.860</b>		
CA	0.358	0.506	<b>0.849</b>	
CO	0.397	0.458	0.483	<b>0.859</b>
SH	0.361	0.479	0.407	<b>0.898</b>

The convergent and discriminant validity can be measured through this table and the values of composite reliability and average variance extract. The value of convergent validity is more than 70% and AVE is higher than 50%. This

shows that the variables are discriminated from each other. All of the variables have maximum amount of factor loading with itself as compared with other, so collected data is authentic.

Table 4: Confirmatory Factors Analysis and KMO

CFA Indicators	CMIN/DF	GFI	IFI	CFI	RMSEA	KMO
Threshold Value	≤ 3	≥ 0.80	≥ 0.90	≥ 0.90	≤ 0.08	0.6 – 1.0
Observed Value	2.902	0.800	0.912	0.912	0.078	0.941

The table 4 is showing results for confirmatory factor analysis and KMO, the table depicts that CMIN is lesser than 3, GFI is greater than the threshold 0.80, CFI is more than the appropriate range 0.90, IFI is more than normal

range 0.90, and RMSEA is less than threshold 0.08. All of the results depict that the data is completely valid range and is satisfactory to go for further testing of hypothesis. Following is the picture of CFA in figure one.

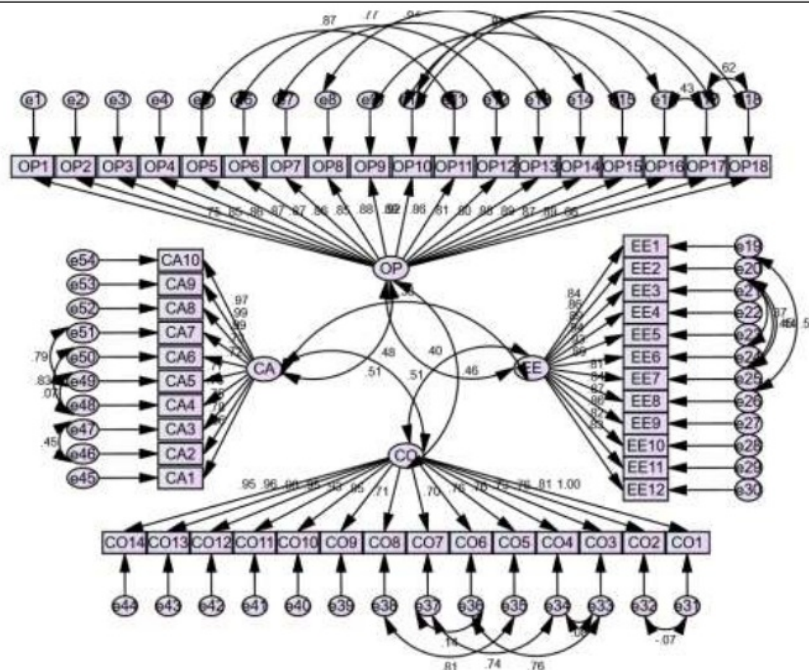


Figure 1: CFA

SEM

Table 5: Structural Equation Modeling

Hypothesis	B-Value	SE	P-Value	Decision
CA→OP	.355	.050	.000	Accepted
CO→OP	.138	.052	.011	Accepted
CA→EE→OP	.062	.026	.020	Accepted
CO→EE→OP	.092	.034	.010	Accepted

The table 5 above is showing the relationships among the different variables, it can be seen that the value of significance for relationship between CA and OP and between CO and OP is significant as the p value is less than .05. The mediation of EE between CA and OP and between CO and OP is significant as the p value are less than .05 as well. This means that there is 35.5% impact of calculative

HRM practices on operational performance while 13.8% impact of collaborative HRM practices on operational performance. The mediating of employee engagement is 6.2% and 9.2% in case of calculative and collaborative HRM practices respectively. Following is the screenshot of SEM:

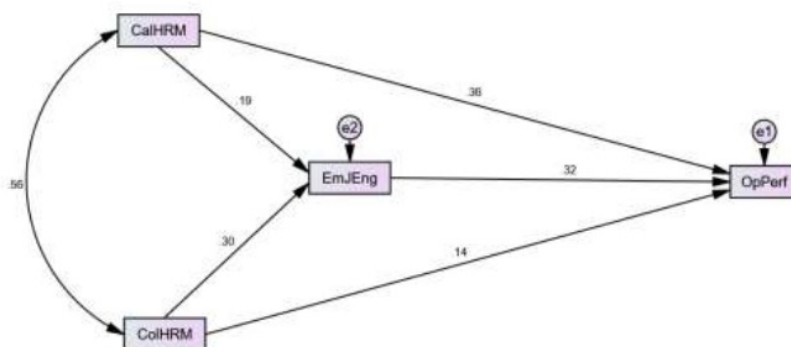


Figure 2: SEM



## 6 DISCUSSION AND CONCLUSION

### Discussion

The purpose of the current research was to see the effect of calculative HRM practices on operational performance of the organization, the impact of collaborative HRM practices on operational performance and the study also took employee job performance as a mediating variable between calculative HRM practices, Collaborative HRM practices and the operational performance. The first hypothesis developed by the author was that, "The impact of CA on OP is significant." This hypothesis has been accepted by the study as the value of p is less than .05 and also the results are supported by past studies (Sohn, 2015). The second hypothesis proposed by the study was that, "The impact of CO on OP is significant." This hypothesis has been accepted by the study as the value of p is less than .05 and also the results are supported by past studies (Dirgeyasa & Ansari, 2015). The third hypothesis of the study was that, "The mediating impact of EE between CA and OP is significant." This hypothesis has been accepted by the study as the value of p is less than .05 and also the results are supported by past studies (Kis-Katos & Sparrow, 2015). The fourth hypothesis presented in the research was that, "The mediating impact of EE between CO and OP is significant." This hypothesis has been accepted by the study as the value of p is less than .05 and also the results are supported by past studies (Plummer & Boyle, 2016).

### CONCLUSION

The foremost objective of the given paper is to explore the impacts of HRM practices and collaborative WRM procedures on the operational performance of the pharmaceutical firms, while the employee job engagement has a mediating role also. The survey designed questionnaire is developed for data collection and analysis. The data mainly has been collected from 317 individuals and mostly the data has been collected from 137 individuals. Moreover, the various significant results have been applied to analyze the results. The multiple results such as KMO, SEM, and descriptive statistics tests are applied. The findings have demonstrated that the calculative HRM practices, as well as collaborative WRM practices, have a positive and significant impact on the operational efficiency of the pharmaceutical firms. This means that the HRM practices have helped to recruit, select and trained the employees to increase the output of the organizations. The results have also indicated that HRM and collaboration practices helped in internal and also the external environment of the pharmaceutical companies. The discussion and results also depicted that the job engagement of the employees has a significant mediating role in the relationship between collaborative HRM practices and HRM practices with operational performance. The findings of this prior research have helped firms to increase the role of employee engagement and foster collective bargaining. Finally, the study has helped to understand the theory of HRM and the theory of social exchange.

### POLICY IMPLICATIONS

This study has provided a significant mediating role of employee's engagement in pharmaceutical firms in Indonesia. Employee job engagement has supported the

significant relationship between calculative HRM practices, collaborative HRM practices, and operational performance. This study has concluded that the improvement of the skills of teamwork increase the performance of firm against the environmental indicators like productivity, a decrease in the production of waste has a great impact on the operational performance of pharmaceutical firms of Indonesia. The fundamental self-evaluations, motivation, innovation among employees of pharmaceutical firms in Indonesia play a mediating role in enhancing the performance of pharmaceutical firms in Indonesia. The variables discussed in this research have given benefits to the pharmaceutical sectors of Indonesia and governmental bodies. pharmaceutical sector of Indonesia should use other human resource management practices to enhance the operational performance of pharmaceutical firms in Indonesia. This study will help pharmaceutical firms in Indonesia in the future.

### LIMITATIONS

Every research has some limitations therefore this research also has few limitations. The first limitation of this research is that it has only discussed two human resources management such as calculative HRM practices and collaborative human resources. There should be more practices of HRM that enhance the operational performance of pharmaceutical sectors in Indonesia. The second limitation of this research is that this study has a lack of variables, there should be more variables that helped to enhance the operational performance of the pharmaceutical sectors of Indonesia. The third restraint of this research is the usage of survey data with single defendants. The fourth limitation of this research is the small size of the sample, there should be a large size of the sample.

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