



## Knowledge-based human resource management practices and business innovation performance

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### Abstract

This research aims to fill the research gap between human resource management, structural capital, relational capital and business innovation performance. The researcher argues that the performance of business innovation in Micro, Small and Medium Enterprises in Warembungan Regency is largely made possible by knowledge-based Human Resource Management Practices. Researchers have tested this idea empirically in survey data to 100 respondents spread across villages in Warembungan Regency using structural equation modeling (SEM) based on Partial Least Square (PLS). The method used in this research is non-probability sampling with purposive sampling technique. The results of this study indicate that knowledge-based HRM practices positively affect innovation performance and illustrate the important role of human resources in this relationship: knowledge-based HRM practices impact structural and relational capital and also affect innovation performance by increasing the structural and relational capital of MSME actors in Warembungan Regency District Minahasa, Indonesia.

**Keywords:** practice HRM, Relational Capital, Structural Capital, Business Innovation Performance

### Introduction

Micro and Small Enterprises/Companies are one of the economic activities that thrive in North Sulawesi. Based on the 2017 Annual IMK Survey, there are 97,319 businesses/companies spread across all regencies/cities in. Of this amount, as many as 91,328 businesses/companies or 93.84 percent are micro industries, while the rest are small industries.

In connection with the large contribution of SMEs to Warembungan Regency, good performance is needed. To achieve good performance, it is necessary to implement and innovate on an ongoing basis. The ups and downs experienced by MSMEs in Warembungan Regency also have an impact at the sub-district, village and hamlet levels. Currently, MSMEs in Warembungan Regency are quite traditional both in production and management as well as innovation in achieving competitive advantage. In carrying out business operations, they are only based on the experience they have mastered and rely on knowledge from the heritage of their ancestors so that it can be said to be less effective and less efficient. From this, the level of effectiveness and efficiency between entrepreneurs with one another can be known from one Intellectual Capital (IC).

Innovation in organizations is, first and foremost, a human problem. Because the people who develop and implement innovative ideas will do so depending on effective human resource management (HR) practices. Apart from that it will also depend on Intellectual Capital (IC), because any innovation implies the development of new knowledge as inputs (eg new ideas, concepts, prototypes, etc.) and the result is novelty in production. Thus, both HRM and knowledge are the main enablers of innovation in MSMEs.

Human resources must be drawn, selected and placed appropriately, but here the problem is the transparency of the selection process for employee needs, which is often applied using the "collusion and nepotism" method. This continues to develop and take place from generation to generation from ancient times to the present and continues to be practiced by every organization including MSMEs, the problem in this case is the output that will be produced from the recruitment process. For an employee to contribute in the work is a must, or even become the most important thing. However the condition is, an MSME will assess the performance of an employee from the contribution they can and have given.

However, this is contrary to the goal of an MSME, which in reality there are still many MSMEs in the Regency Warembungan is not aware of the importance of human resources for the survival of its business.

MSMEs in Warembungan Regency in Intellectual Capital (IC) have problems including not having a good strategy because MSME actors are too focused on existing strategies (structural capital) while in reality the conditions that occur in the field are often not as expected. In addition, MSME actors also do not have skilled workers for research and business development so that the expenditures incurred for product and market expansion are greater and are also likely to be disproportionate to the results. In relation to suppliers (relational capital), MSME actors also face problems, namely the occurrence of fraud by suppliers, even though the supplier can be trusted, it's just that there is always one employee who commits fraud, for example, prices are raised by employees who distribute or exchange good goods be less good.

The scarcity of this research highlights the need for further study of the relationship between Human Resource Management, Intellectual Capital (IC) and business innovation performance. This study aims to fill this gap. Researchers argue that innovation in companies is mostly only made possible by knowledge-based HRM practices (Minbaeva & Collings, 2013) <sup>[6]</sup> which includes handling recruitment, training and development system that focuses on knowledge, aspects of development and how to assess and compensation systems that support knowledge-based behavior. Researchers suspect that these Human Resource Management practices will have an impact on the level of Intellectual Capital (IC) in MSMEs, which reflects the level of MSMEs in generating intangible value, including the skills of their employees and the effectiveness of the business organizational structure, as well as their external relations.

## Literature Review

### Practice Human Resource Management (HRM)

Human resources Management is the utilization of human resources within the organization, which is carried out through the functions of human resource planning, recruitment and selection, human resource development, career planning and development, compensation and welfare, occupational safety and health, and industrial relations (Marwansyah, 2010). Human resource management is a process consisting of four tasks to attract, develop, motivate and retain human resources (Safuan, 2016) <sup>[11]</sup>. The human resource management process consists of six functions, namely training and development, performance evaluation, compensation, employee relations with staff, health safety, recruitment and selection. Finally, human resource management is implicated in managers who are responsible for equipping organizations with competent staff, and ensuring compliance utilizing their potential (Yang & Lin, 2009) <sup>[16]</sup>.

### Capital Structural

Structural capital can improve the performance of new

product development or can be referred to as innovation capability due to the context in transforming knowledge into value or benefit (Saddam, 2017) <sup>[10]</sup>. Structural capital includes intangible assets that form part of the design structure of the company that facilitates the flow of knowledge or information with the consequent improvement of organizationally which leads to the availability of a more mature vision in product development performance. Structural capital can be said to help in the creation of a clearer vision, as well as competitive advantage. Structural/Organizational Capital includes any element of an organizational structure that facilitates the ability of employees to create wealth for the company and its stakeholders. The effectiveness of this process is very important because it involves internal procedures that allow for knowledge integration and sharing of capabilities, generate wealth creation for the organization. In addition, knowledge management processes contribute to the effectiveness of customer generation (Zablah *et al.*, 2004) <sup>[18]</sup>.

### Relational Capital

Relational capital is closely related to internal business relationships with external parties such as the relationship between MSMEs and customer loyalty to our business. Relational capital includes corporate image, customer loyalty, customer satisfaction, and interaction with suppliers by employees, capacity negotiations, distribution channels, channel suppliers, licensing agreements, and franchise agreements (Starovic, D. and Marr, 2003) <sup>[14]</sup>. Relational capital is the knowledge accumulated by the firm as a result of exchanges with third parties and the potential future knowledge accumulated as a result of those exchanges. Value for the company is directly related to the length of the relationship with the parties (Pablos, 2004).

Relational capital contributes to innovation because not all the knowledge needed to innovate is within the boundaries of the company. External relationships can help companies innovate by introducing existing solutions elsewhere or combining knowledge from various external sources (Endrias, 2014).

### Business Performance

Any organization that is engaged in seeking profit certainly requires organizational performance that continues to increase every year. Declining organizational performance reflects the organization needs to be improved. According to (Rahmanto *et al.*, 2018) <sup>[9]</sup>, performance is a series of management activities that provide an overview of the extent to which the results have been achieved in carrying out their duties and responsibilities in accountability public, both in the form of successes and shortcomings that occur. Performance is a description of the level of achievement of the implementation of an activity or program or policy in realizing the goals, objectives, mission, and vision of the organization contained in the strategic planning of an organization (Mahsun, 2009) <sup>[4]</sup>. The framework for this research is as follows:

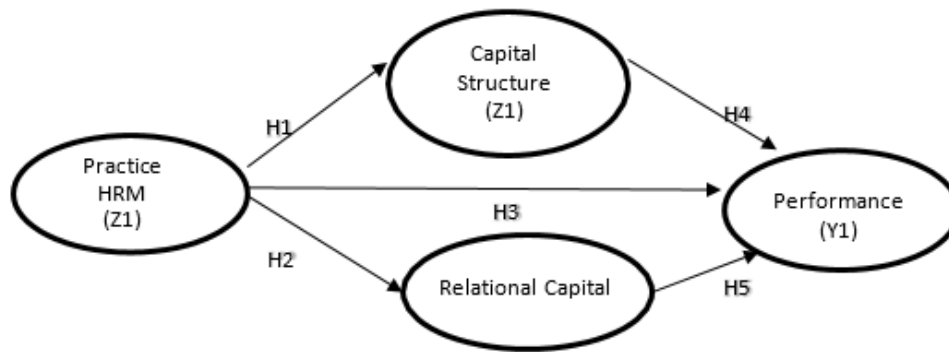


Fig 1

## Method

### Population and Sampling Technique

The population is a collection of all elements that will be concluded (Indrawan & Yaniawati, 2014) [2]. The population of this study, based on data from the Department of Cooperatives and SMEs in Warembungan Regency, was recorded to be around 230. In this study, the sampling technique used purposive sampling. This technique was chosen because it was assessed according to the needs and abilities of the researcher. The criteria for determining respondents are based on a qualified sample technique (stratification) based on. First, the minimum education background is elementary school; Second, MSMEs are established at least 1 last year; Third, turnover and assets owned. In this study the technique used in determining the sample size is using the slovin technique (Umar, 2003) [15]. In this study, the percentage of 10% was used as the sampling error limit, so that based on the results of calculations with a population of 230 MSME actors, the sample in this study was 99.56 but because the subject was not a fraction, it was rounded up to 100 respondents. Collecting data in this study using a questionnaire. Disseminate a list of questionnaire questions via online with using a google form that was distributed to MSMEs throughout Warembungan Regency who were used as respondents.

### Data Analysis Method

In this study, the analysis was carried out using descriptive analysis methods and inferential analysis methods. The analytical tool used is Partial Square (PLS), which is SEM based on variance, with SmartPLS. PLS testing stages include: First, test indicators measured by the criteria: Convergent Validity, Discriminant Validity, and Composite Reliability. Second, the model fit test is carried out by looking at the estimated results of SmartPLS output compared to criteria such as SRMR, Chi-Square, NFI, and RMS Theta.

### Hypothesis Testing

Hypothesis testing is a branch of inferential statistics that is used to test the truth of a statement statistically and draw conclusions whether to accept or reject the statement. The Inner Model or structural model is actually a hypothesis test, describing the relationship and influence between latent variables based on substantive theory. The inner model is a

test of the structural model by looking at the R-square value as a test of goodness of fit model. In addition, the significance test of the influence between constructs was also carried out by looking at the parameter coefficient values and the t-statistical significance value.

### Path Coefficient Analysis

Path analysis according to (Sarwono, 2007) [12] can be done by calculating the direct effect, indirect effect, and total effect. According to (Sekaran, 2016) [13], the mediating or intervening variable is an intermediary variable, which serves to mediate the relationship between the independent variable and the dependent variable. The mediation test is used to prove how relational capital and structural capital as mediating variables function to mediate the relationship between the independent variable, namely HRM practice and the dependent variable, namely the performance of business innovation. According to Baron and Kenny in (Menor *et al.*, 2007) [5], if the independent variable does not have a direct influence on the dependent variable after controlling for the mediator variable, it can be stated as perfect or complete mediation. Meanwhile, if the influence of the independent variable on the dependent variable after controlling for the mediator variable is reduced but still significant, then it is declared as partial mediation. There are several criteria to determine whether there is a mediation effect in a relationship according to Baron and Kenny (1986), namely: First, in the first equation, the independent variable must have a significant effect on the mediator variable; Second, in the second equation, the variable the mediator must have a significant effect on the dependent variable, and third, the independent variable must have a significant effect on the dependent variable.

## Result

### Characteristics of Respondents

After the respondent has filled out the questionnaire, the data is entered into an excel worksheet to be recapitulated, the editing process using SPSS, coding and tabulating data and analyzing it. This analysis provides a nominal scale that shows the absolute frequency and percentage based on age, gender, last education and length of work for the people of the city of Yogyakarta, as users of Pantene shampoo products. The distribution of respondents can be presented as follows:

Table 1

Characteristic	Description	Number of People	Percentage (%)
Gender:	Male	55	55%
	Female	45	45%
	Total	100	100%
Respondent's age	< 20	4	4%
	20 th – 30 th	4	4%
	31 th – 40 th	36	36%
	41 th – 50 th	24	24%
	> 50 and above	32	32%
	Total	100	100%
Last Education	ES	8	8%
	JS	8	8%
	HS	13	13%
	D1/D2/D3	22	22%
	S1/S2/S3	49	49%
	Total	100	100%
long time to start business	Less than 1 year	14	14%
	1 – 3 year	36	36%
	4 – 6 year	22	22%
	7 – 9 year	21	21%
	> 10 year	7	7%
	Total	100	100%
Business size (Asset)	Maks 500 juta	73	73%
	≥ Rp 50 juta – Rp 500 juta	10	10%
	≥ Rp 500 juta – Rp 20 M	11	11%
	≥ Rp 10 M	6	6%
	Total	100	100%

Tabel 2: Ringkasan Hasil Inner Model

Hipotesis	Original Sampel (O)	T Statistics	P Values	Keterangan
Practice HRM → Structural Capital	0.432	1.058	0.025	Proven
Practice HRM → Relational Capital	0.388	2.607	0.034	Proven
Practice HRM → Business Performance	0.264	5.367	0.000	Proven
Structural Capital → innovation performance	0.692	0.633	0.527	Not Proven
Relational Capital → innovation performance	0.432	0.635	0.014	Proven

As for more explanation the results of the Inner Model test are as follows:

1. The magnitude of the influence of the variable Human Resource Management Practice (X1) on structural capital (Z1) is 0.432 with T Statistics 1.058 and P Values 0.025 less than 0.05, indicating that the Practice of Human Resource Management has a significant positive effect on structural capital. The practice of Human Resource Management (HRM) in MSMEs is believed to be able to increase the combination of knowledge in the form of the ability of business owners to provide infrastructure (collectively) for knowledge of development activities within an organization.
2. The magnitude of the influence of the variable Human Resource Management Practice (X1) on relational capital (Z2) is 0.388 with T Statistics 2.607 and P Values 0.034 less than 0.05, indicating that the Practice of Human Resource Management on relational capital has a significant positive effect. The practice of Human Resource Management (HRM) in MSMEs can improve the harmonious relationship/association network owned by the company with its partners, both from reliable and quality suppliers, from loyal customers who are satisfied with the services of the company concerned, from the company's relationship with the government and with the surrounding community.
3. The magnitude of the influence of the variable Human Resource Management Practice (X1) on the performance

of business innovation (Y1) is 0.264 with T Statistics 5.367 and P Values 0.000 less than 0.05, indicating that the Practice of Human Resource Management has a significant positive effect on innovation performance. The practice of Human Resource Management (HRM) in MSMEs can improve innovation performance for MSME actors.

4. The magnitude of the influence of Structural Capital (Z1) on Business Innovation Performance (Y1) is 0.692 with T Statistics 0.633 and P Values 0.527 greater than 0.05, indicating that structural capital has no significant positive effect on business innovation performance. Social capital, especially the social network of entrepreneurs, cannot play an important role in the company's innovation strategy. Building a business network with business consultants, accountants, customers, and among other stakeholders, has no significant positive effect on their business.
5. The magnitude of the influence of the Relational Capital variable (Z2) on the performance of business innovation (Y1) is 0.432 with T Statistics 0.635 and P Values 0.014 less than 0.05, indicating that the relational capital on the performance of business innovation has a significant positive effect. Harmonious relationship/association network owned by the company and its partners, both from reliable and quality suppliers, coming from loyal customers and feeling satisfied with the services of the company in question, coming from the company's

relationship with the government and with the surrounding community can improve the performance of

MSMEs.

### Path Analysis

#### a. It is suspected that there is an influence between Human Resource Management Practices on Business Innovation Performance through Structural Capital

Mediation Test - Indirect Effect

Table 3

Hypothesis	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Practice HRM → Structure Capital → Business Performance	0.034	0.526	0.599

From the results of the Indirect effects analysis using Smart PLS as shown in the table above, it was found that the HRM Practice had an insignificant positive effect on Business Performance through Structural Capital with a significant of 0.599 or  $> 0.05$ . This means that the practice of human

resource management is able to improve innovation performance directly and without going through the choice of structural capital.

Mediation Test - Total Effect

Table 4

Hypothesis	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Practice HRM → Business Performance	0.475	2.403	0.008
Practice HRM → Capital Structure	0.448	4.342	0.000
Capital Structure → Business Performance	0.136	3.521	0.002

From the results of the total effects analysis using Smart PLS as shown in the table above, It was found that the relationship between HRM Practices and Business Performance was still significant with p-value 0.008 ( $< 0.05$ ). Thus, it can be concluded that this mediation is only quasi-mediating. Full

mediation (fully mediating) occurs if the total effects found a relationship between HRM Practices on Business Performance becomes insignificant (Abdillah & Hartono, 2015) [1].

#### b. It is suspected that there is an influence of the practice of Human Resource Management on the Performance of Business Innovation through Relational Capital

Table 4

Hypothesis	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Practice HRM → Relational Capital → Business Performance	0.332	6.562	0.004

From the results of the Indirect effects analysis using Smart PLS as shown in the table above, it was found that the HRM Practice had a positive effect on Business Performance through Relational Capital with a significance of 0.004 or  $< 0.05$ . This means that the practice of human resource management is able to improve innovation performance directly without going through the choice of relational capital. The absence of mediation effect in this study is due

to the relational modal variable itself, is not taken into consideration in making decisions on human resource management practices and innovation performance. This shows that relational capital raises different perceptions for MSME actors in Warembungan Regency.

Furthermore, to find out whether this mediation is full or quasi-mediating, it can be seen through the table below:

Table 5

Hipotesis	Original Sample (O)	T Statistics ( O/STDEV )	P Values
Practice HRM → Business Performance	0.378	7.814	0.006
Practice HRM → Relational Capital	0.645	4.033	0.004
Relational Capital → Business Performance	0.226	6.958	0.008

From the results of the total analysis effects using Smart PLS as in the table above, it was found that the relationship between HRM Practices and Business Performance was still significant with a p-value of 0.006 ( $< 0.05$ ). Thus, it can be concluded that this mediation only is quasi-mediating. Full mediation (fully mediating) occurs if the total effects found the relationship between HRM practices and business performance to be insignificant (Abdillah & Hartono, 2015) [1].

influence of elements of intellectual capital (intellectual capital) which includes structural capital (structural capital) and relational capital (relational capital) on the performance of business innovation. This research was conducted on the entire population of MSMEs in Warembungan Regency using a sample of 100 respondents who have criteria as owners of the related MSMEs. The results of this study indicate that knowledge-based Human Resource Management practices positively affect innovation performance and illustrate the important role of human resources in this relationship: knowledge-based HRM practices have an

### Conclusion

This study has shown empirical evidence regarding the

impact on structural and relational capital and affect innovation performance by increasing their relational capital, however. Structural capital does not play a role as a developer of innovation performance, with the better the existing structural capital it will not get better.

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