

# ENTREPRENEURIAL LEADERSHIP, ENTREPRENEURIAL ORIENTATION, ORGANIZATIONAL EFFECTIVENESS AND THEIR RELATIONSHIPS TOWARDS FIRM PERFORMANCE

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## ABSTRACT

*This study is a cross-sectional descriptive & confirmatory study that analyzes the Indonesian heavy equipment industry. Therefore, the results only represent the condition of the industry at a certain point in time the research was conducted, unlike longitudinal data. Another implication is that this research cannot determine causality between constructs and can only represent the current condition. The construct that the author measures is entrepreneurial leadership (EL), entrepreneurial orientation (EO), organizational effectiveness (OE) and Firm performance (FP). FP is a relevant construct in strategic management research and is often used as the dependent variable. Despite this relevance, there is almost no consensus on its definition, dimensions and measurement, what is limiting progress in research and understanding of the concept. Successful FP operating in dynamic and changing environments have the ability to reach out and explore new sights. When the current conditions for new employee recruitment have been reduced, even every year there are no additional new employees, expenses, optimization & additional work jobs for each employee, etc. Possibly with this, I as the author would like to examine current in the company whether they have EL, EO, OE to improve FP, where employees understand and apply how Risks of risk and uncertainty as well as being proactive in maintaining the company's growth, so that the company can survive in a dynamic business situation. And for this study the author also wants to clarify that EL, EO, OE and FP are their have relationship have a positive effect for each other's.*

**Keyword:** *Entrepreneurial Leadership, Entrepreneurial Orientation, Firm Performance, Organizational Effectiveness*

## 1. Background

Indonesia's Central Bureau of Statistics (BPS) has released Indonesia's Economic Growth in the third quarter of 2020, which grew by 5.05 percent (q-to-q) compared to the second quarter of 2020 which experienced a growth contraction of 4.19 percent. On the other hand, several business fields have a dominant role such as the Processing Industry (5.25%); Agriculture, Forestry, and Fisheries (1.01%); Car-Motorcycle Repair (5.68%); Construction (5,72 percent); and Mining and Quarrying (1,72%).

The structure of Indonesia's Gross Domestic Product (GDP) according to business fields based on current prices in the third quarter of 2020 did not show any significant changes. The Indonesian economy is still dominated by the Processing Industry Business Field of 19.86 percent; followed by Agriculture, Forestry and Fisheries by 14.68 percent; Wholesale-Retail Trade, Car-Motorcycle Repair by 12.83 percent; Construction by 10.60 percent; and Mining and Quarrying by 6.16 percent. The role of these five business fields in the Indonesian economy reached 64.13 percent.

These conditions are a signal for the increasing demand for heavy equipment this year, but become a reference for how the competition among heavy equipment distributors is very tough, where they can survive in this pandemic situation with optimal company performance.

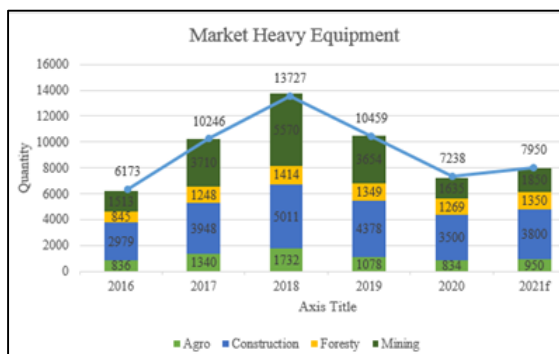


Figure 1. Market Heavy Equipment

PT United Tractors Tbk (PT UT), As of June 2020, Komatsu's heavy equipment sales volume was recorded at 853 units, down 56% compared to the June 2019 period of 1,917 units. Of the total sales of heavy equipment issued by the issuer with the PT UT stock code, 36% is absorbed by the mining sector, 30% by the construction sector, 22% by the forestry sector, and the remaining 12% by the plantation sector.

The construction machinery business unit is one of the five business units of PT UT. Only the gold mining business unit still posted revenue growth for the first six months of this year due to rising gold prices. Meanwhile, the mining contractor business unit, coal mining business unit and the construction industry business unit experienced a decline.

Overall, until the first semester of 2020, PT UT consolidated net income reached Rp. 33.2 trillion, a decrease of 23% compared to the same period in 2019. Each business unit is: construction machinery, mining contractors, coal mining, gold mining and construction industry contributed 22%, 46%, 18%, 12% and 2% respectively to total consolidated net revenues. Along with the decline in revenue, the net profit of PT UT also experienced a sharp decline of 28.27% from Rp5.66 trillion in the first semester of 2019 to Rp4.06 trillion in the first half of 2020.

From the data above, we can see from the company's performance. At this time, company performance is the first to be evaluated by investors and business can be done anywhere. Company performance is the most important thing to encourage customers to come back to our company. And therefore, the person responsible for running the company must improve the company's performance through new plans and procedures to update its operations and transactions during the company's existence.

Companies need to behave entrepreneurial-ly in order to have superior competitiveness

compared to competitors in a dynamic business and highly competitive environment. Rauch et al. (2009) confirmed that the empirical findings indicate that the relationship between entrepreneurial orientation and organizational performance are unclear and inconclusive. Some researchers confirmed a positive relationship between entrepreneurial orientation and organizational performance (Arief et al., 2013; Karacaoglu et al., 2012), and others found a negative entrepreneurial orientation-performance relationship. While others argue that entrepreneurial orientation needs to be combined with that other business orientations such as market orientation, learning orientation, and employee orientation to improve company performance.

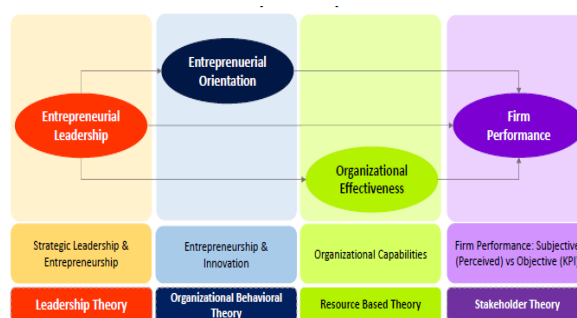
To assess the firm performance (FP) of the company must have an attachment to other constructs. Therefore, the authors examine other constructs, namely (1) entrepreneurial leadership (EL); (2) entrepreneurial orientation (EO); (3) organizational effectiveness (OE) as an independent variable, whether there is a relationship or not between the constructs.

In the previous research data, one can confirm through research data that the company's performance data has a positive relationship with some existing constructs, and researchers can see what variables are very influential on the company's performance and also the company can see any deficiencies that can be seen and found.

## 2. Literature Review

### 2.1 Conceptual Framework

This chapter examines the literature on the constructs of EL, EO, OE and FP that are used in this study. Achievement Figure 2 illustrates the literature review on the constructs used in this research study (top boxes in ellipses) and their grand theories (bottom boxes).



**Figure 2.** Literature Review on the Conceptual Model Framework

#### 2.1.1 Entrepreneurial Leadership

EL is defined as leadership exercised in entrepreneurial ventures meaning that entrepreneurial leadership is based on different leadership styles. Which leadership style is used in an entrepreneurial venture, depends on the vision of the entrepreneur. Exhibiting different leadership styles also means that there are different visions among entrepreneurs. Thornberry (2006) suggests that EL is seen as more transformational than transactional in nature, but with some fundamental differences.

EL can also be defined as the process of influencing organizations through leading and direct involvement in creating value for stakeholders by bringing together unique innovations and resource packages to respond to recognized opportunities. Gupta et al. (2004) demonstrated that EL creates a visionary scenario to gather and mobilize a supporting cast of participants who become committed to the vision of discovering and exploiting strategic value creation.

So, EL is about influencing others towards a goal through effective communication to recognize opportunities and share a vision of possible future that organizations can leverage to maintain competitiveness. EL must also have the ability to motivate people to continuously recognize and act on opportunities, to be creative and agile in

adapting to change. Furthermore, entrepreneurial leadership also has the ability to orchestrate resources effectively by understanding resource allocation and organizational disciplines to link entrepreneurship with strategic management.

Fontana and Musa (2014) define the dimensions of EI as follows:

- a. Strategic dimension;
- b. Communicative dimension;
- c. Motivational dimension; and
- d. Personal and / or organizational dimension.

### *2.1.2 Entrepreneurial Orientation*

EO as an organization's willingness to find and accept new opportunities and take responsibility for influencing change. According to Rauch et al. (2009), EO describes the company-level strategic processes that businesses use to gain competitive advantage. Thus, EO is not related to individual level variables as in previous entrepreneurial theories, it is related to company level processes (Rauch et al., 2009).

When the importance of EO on FP is considered, Entrepreneurial orientation can be a good measure to explore opportunities in the market and exploit them. If a company offers new products and services above average and enters new markets, it can be said that the company is an entrepreneurial company. Miller (1983) defines EO in three dimensions: innovation, risk taking, and proactiveness. Described below :

- a. According to Lumpkin and Dess (1996: 142), innovation reflects;
- b. Lumpkin and Dess (1996: 144) define risk taking; and
- c. Proactive (Venkatraman, 1989).

### *2.1.3 Organizational Effectiveness*

The composition of people who formulate an independent business identity for a

particular purpose is usually known as the organization's purpose and getting the desired results within the specified resources is treated as effectiveness. OE is the idea of how effective an organization is in achieving the results that the organization aims to produce. It plays an important role in accelerating organizational development. It is the net satisfaction of all constituents in the process of collecting and converting inputs into outputs in an efficient manner. OE is defined as the extent to which an organization, by using certain resources, fulfills its objectives without depleting its resources and without burdening its members and/or society. This is the maximum combined utility of the main constituents.

The objective model describes the effectiveness of the organization in terms of the extent to which the organization achieves its goals. The legitimacy model considers OE in terms of a background evaluation of the "preference of components for performance and natural constraints on performance from an external environmental perspective".

### *2.1.4 Firm Performance*

Many previous studies have focused on the stakeholder theory literature and how it correlates with FP. McVea and Freeman (2005) showed that firm performance can be defined as the total value created by the firm through its activities that is the sum of utilities created for each stakeholder. According to Phillips (2003), a firm's legitimate stakeholders are those individuals or groups to whom the firm owes an obligation as a result of their participation in the cooperative scheme that constitutes the firm and keeps it running. It includes customers, communities in which the firm operates, and suppliers of capital, equipment, materials, labor and some other specific stakeholders based on the type of the business.

The four factors or values are defined in terms of the perceived utility that stakeholders receive from the firm: stakeholder utility related to actual goods and services, stakeholder utility related to organizational justice, stakeholder utility related to perceived opportunity costs, and stakeholder utility from affiliation.

While there are four factors that define a perceived utility that stakeholders received from the firm based on the stakeholders standpoint, Selvam et al. (2016) suggested nine determinants or dimensions of firm performance which are still related to the stakeholders theory but in more specific way. There are profitability performance, environmental audit performance, market value performance of the firm, corporate governance performance and social growth performance, customer satisfaction, employee satisfaction, performance. The profitability performance refers to the firm's ability to gain profit.

As markets have become extremely competitive and volatile, they are constantly changing. It is important to evaluate the firm performance regularly since it is critical in developing strategy and assessing the achievement of firm objectives.

## *2.2 Previous Studies*

Based on the literature review, previous research shows that EI, EO and OE have a positive relationship with FP. FP is a relevant construct in strategic management research and frequently used as a dependent variable. Despite this relevance, there is hardly a consensus about its definition, dimensionality and measurement, what limits advances in research and understanding of the concept.

Fontana and Musa. (2016) suggests counterintuitively that the IP may not nec-

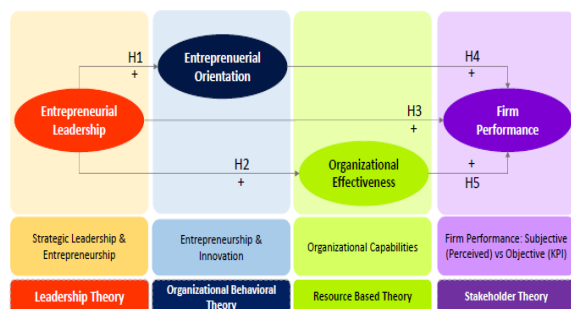
essarily have a positive relationship with innovation performance, with Cronbach's alpha 0.957. Wang T, et al (2012) This study opens new research avenues by extending and incorporating explanations and predictions of entrepreneurial orientation and legitimation, two areas that have been largely considered as independent of each other, with Cronbach's alpha 0.93. Jha, N et al. (2019) Employee engagement is found to mediate the relationship between employee voice and organizational effectiveness, with Cronbach's alpha 0.886 and the last. The results of this empirical study indicate that the adoption of business analytics (BA) positively influences business process performance (BPER). There is also positive relationship between business process performance (BPER) and firm performance (FP). Finally, the results show that BPER fully mediates the relationship between BA adoption and FP, with Cronbach's alpha 0.81.

FP is a relevant construct in strategic management research and frequently used as a dependent variable. Despite this relevance, there is hardly a consensus about its definition, dimensionality and measurement, what limits advances in research and understanding of the concept. There is an extensive literature about FP. Hence, it is very difficult to choose a single measurement of FP (Aydiner et al., 2019).

## **3. Research Model & Hypotheses Development**

### *3.1 Research Model*

Based on the literature review section above, the relationships of the constructs discussed previously are examined based on the research model as illustrated in Figure 3.



**Figure 3.** Research Model of the Study with Hypotheses

### 3.2 Hypotheses Development

#### 3.2.1 Entrepreneurial Leadership, Entrepreneurial Orientation and Firm Performance

The following hypotheses in research are :

**H1:** *Entrepreneurial Leadership has a positive relationship with Entrepreneurial Orientation.*

Thornberry (2006) suggests that entrepreneurial leadership is viewed to be more transformational than transactional in nature, but with some fundamental differences. Makri & Scandura (2010) introduce two dimensions of strategic leadership, termed “creative“ and “operational“.

**H4:** *Entrepreneurial Orientation has a positive relationship with Firm Performance.*

Firms need to behave entrepreneurially in order to have a competitive advantage over competitors in the everdynamic and highly competitive business environments. Drawing from this, several researchers have argued that EO, as a composite construct (Covin & Miller, 2014), has three dimensions: innovativeness, proactiveness, and risk-taking.

#### 3.2.2 Entrepreneurial Leadership, Organizational and Firm Performance

The following hypotheses in research are :

**H2:** *Entrepreneurial Leadership has a positive relationship with Organizational Effectiveness.*

Several previous studies have demonstrated the connection between EL and organizational performance. This connection was investigated using different types of research methods, including the meta-analysis, empirical, and conceptual methods. These studies, the empirical studies, were able to demonstrate a direct relationship between the two variables. The empirical studies have clearly identified

how entrepreneurial leadership generate successful outcomes and have linked its influence on the proliferation of small- and medium-sized enterprises (SMEs). The researchers found that entrepreneurial leadership had a positive effect on organizational performance.

**H5:** *Organizational Effectiveness has a positive relationship with Firm Performance.*

Firms with operational excellence receive continuous survival and sustainability. Likewise, operational excellence is defined as outstanding practice in managing an organization and achieving good results. It is a constant pursuit of improved performance and profitability and leads to business success in an organization.

#### 3.2.3 Entrepreneurial Leadership, Organizational and Firm Performance

The following Hypotheses in research are :

**H3:** *Entrepreneurial Leadership has a positive relationship with Firm Performance.*

An entrepreneur who holds the top position in an organization is seen as the leader of the organization that has certain leadership attributes and entrepreneurial characteristics. Many previous researches have coined the idea of entrepreneurs as the leader of the organization.

Numerous studies has tried to understand the factors that affects organizational per-

formance and leadership has appeared to become one of the most significant factors contributing to organizational performance. Therefore, entrepreneurs who are committed with the right leadership style may be the key towards organizational performance.

### *3.3 Data Coding*

The study uses the notations outlined for the constructs, dimensions, and indicators.

### *3.4 Data Analysis Method*

This study utilizes structural equation modelling (SEM) in order to test the hypotheses as well as to do confirmatory factor analysis of the model.

SEM is performed using the LISREL version 8.8 software. In order to ensure that the results are valid and reliable, goodness of fit (GoF) of the model must be evaluated.

Variables are explained by a unique set of variables that does not include every possible relationship (Hair et al. 2019). They outlined that SEM is most appropriate when dealing with multiple constructs that are represented by several measured variables, which is exactly the model of this study.

## **4. Results and Discussion**

### *4.1 Sample and Procedures*

Data is collected from google form data, where links are distributed to personal and group WhatsApp to employees of PT United Tractors, especially the service division in all branches/sites of PT UT throughout Indonesia.

Empirical data were collected from 57 Branches/sites (21 Branches and 36 Sites), which were represented by approximately 265 respondents. The survey is estimated to have been distributed to over 900 people, therefore the response rate is around 26.5%. With a sample of 265 respondents. After

further screening using SPSS Statistics software, the 4 respondents who were marked as outliers according to Mahalanobis Distance were removed. So the total number of respondents is 261. The screening process will be discussed later in another sub-chapter in more detail.

### *4.2 Demographic Data of Respondents*

Most of the respondents were male (99.62%). The biggest respondents are employees of PT UT (92.4%), EHEMCE Group employees (2.6%) and others (5%). Respondents' locations include (44%) in branches, (39%) in site and (17%) in HO.

Most of the respondents were in the age group of 30-39 years (66% of the total respondents), while the other age groups 20-29 years were around (14%), the age group 40-49 years was around (17%) and the age group 50-59 years was around (3%). Most of the respondents were male (99.62%), and most of them had high school education or equivalent (66.7%), followed by Diploma (15.1%), Bachelor degree (14.3%), Masters degree (3%) and Only (0.7%) of respondents have an education level below high school. More than half of the respondents (51%) are mechanical Members/Members, followed by (23%) Officers/Staff/Service Officers/Members, Leaders 11%, Supervisors (6%), Section Heads (5%), Managers (2%) and others around (2%). The number of years working most of the respondents (39.6%) 11 – 15 years, 5 – 10 years (23.8%), 15 – 20 years (16.2%), < 5 years (7.5%), > 25 years (7.2%) and 20 – 25 years (5.7%).

### *4.3 Data Analysis*

#### *4.3.1 Data Screening and Analysis*

After getting the raw data from the google form, the missing data was then checked for all 265 respondents using SPSS. The sample was then further examined for outliers using Mahalanobis Distance (MD).

The way MD works is to find an acceptable sample “distance” from the sample mean and categorize those further from this value as outliers. This works better than categorizing outliers using a boxplot, because the multiple boxplots that are generated are not squares but just one row, which makes every other data entry an outlier. Another difference is that MD detects multivariate outliers instead of univariates like boxplots (Leys et al., 2018). MD maps data in a field and finds the furthest acceptable distance from the data center. The analysis resulted in 4 more respondents who were categorized as outliers, and thus excluded from the sample, bringing a total of 261 respondents to the sample.

4.3.2. Descriptive Statistics Analysis

This study utilizes SPSS Version 26 from IBM in order to analyze the data using descriptive statistics feature.

The Cronbach’s alphas of the constructs are all within range or higher than the previous studies outlined in chapter 3, indicating good reliability. The data is converted to bar graph in order to show more clearly which dimension is more prevalent for the respondents based on the above discussion. The complete result is shown in the Table 1.

Table 1. Descriptive Statistics Result

Variable	Mean	SD	Min	Max	Cronbach's Alpha
EL	4,0709	0,6368	2,00	5,00	0,9700
EO	4,1571	0,6432	2,00	5,00	0,9100
OE	4,2529	0,6349	2,50	5,00	0,8880
FP	4,0977	0,6163	2,50	5,00	0,8820

4.3.3 Normality

In order to analyze the data using the proper tests (parametric or non-parametric), first normality of the data has to be determined. Using Kolmogorov-Smirnov and Shapiro-Wilk normality tests, the data is determined to be not normal (sig score < 0.05). This means that the data is more properly analyzed using non-parametric tests. The result can be seen in the Table 2.

Table 2. Normality Test Results

Variable	EL	EO	OE	FP
EL	1			
EO	0,527**	1		
OE	0,605**	0,686**	1	
FP	0,543**	0,650**	0,605**	1

4.3.4 Correlations

As can be seen in the Table 3, the data shows that the variables are correlated to each other significantly (P < 0.01) from Spearman’s correlation test. Normality test results indicate that the data is non-normal and thus Spearman’s correlation is best used for non-parametric data. The results showed that achievement entrepreneurial leadership is related with entrepreneurial orientation, organizational effectiveness and firm performance (ρ = 0,527, 0.605, 0,543). Entrepreneurial orientation is related with organizational effectiveness and firm performance (ρ = 0,686, 0.650) and organizational effectiveness is related with firm performance (ρ = 0,605).

Although the variables are significantly correlated, they are not too highly correlated (ρ > 0.9), as ρ = 1 means the variables are said to be strongly positively related, ρ = 0 means no connection at all between the two variables (Zeltzer, 2020). This means that there is a relationship between the variables, and the strength of their relationship can be seen by the values of the correlation.

Table 3. Spearman’s Rho Correlation Test Results

Variable	Kolmogorov-Smirnov		Shapiro-Wilk	
	Statistic	Significance	Statistic	Significance
EL	0,187	0,000	0,911	0,000
EO	0,174	0,000	0,910	0,000
OE	0,175	0,000	0,881	0,000
FP	0,188	0,000	0,917	0,000

\*\* indicates significant correlation at the 0.01 level (2-tailed).



#### 4.3.5. Compare Means Using One-way ANOVA

This study also looks at whether there are differences in the respondents' perspectives for each construct based on the demographic variables. This is done by using the average comparison test with ANOVA.

The results showed that the demographic variable of age can affect the EL, EO, OE & FP variables, see figure 4.2. This means that with age, the variables EL, EO, OE & FP will remain the highest for each employee. However, this study did not analyze the relationship between the two constructs and further demographic variables, as it was not the main focus of this study.

Similar to the previous relationship with age, the length of work in the company will also have a significant impact on the value of the variables EL, EO, OE & FP.

The same rationalization applies as an explanation for the different views on organizational effectiveness. Sub-sectors that are less affected by change will have different views on the sub-sectors that need to be wary of changes at every moment of life. Levene's statistical significance value can be seen in Table 4. Values in bold are significant values ( $P < 0.05$ ).

**Table 4.** Compared Means Test Analysis

Variable	EL	EO	OE	FP
Gender	0,911	0,594	0,697	0,332
Company Name	0,027	0,867	0,491	0,509
Location	0,07	0,337	0,815	0,485
Age	0,007	0,158	0,267	0,529
Education	0,559	0,234	0,949	0,578
Position in the Firm	0,068	0,253	0,121	0,784
Time Working for the Organization	0,166	0,109	0,252	0,509

#### 4.3.6 Multicollinearity Test

Multicollinearity is similar with correlation test in that it checks the correlation between the independent variables of a given model. If there is multicollinearity between the independent variables (IV) with respect to the dependent variable (DV) the result of the analysis could be disturbed (Ainiyah et

al., 2016, Zeltzer, 2019). Results showed that there are no multicollinearities in the data, as all tolerance score is  $> 0.1$  and variance inflation factor (VIF) score is  $< 10$  Ainiyah et al (2016). The result can be seen in the Table 5.

**Table 5.** Tolerance and VIF Score from Multi-Collinearity Test

DV	IV		EL		EO		OE	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
EL			0,529	1,891	0,529	1,891		
EO	0,634	1,577			0,634	1,577		
OE	0,723	1,384	0,723	1,384				
FP	0,611	1,637	0,509	1,964	0,447	2,237		

#### 4.4 Structural Equation Model (SEM)

This study utilizes structural equation modelling (SEM) in order to test the hypotheses as well as to do confirmatory factor analysis of the model. SEM is performed using the LISREL version 8.8 software. In order to ensure that the results are valid and reliable, goodness of fit (GoF) of the model must be evaluated. The evaluation of GoF can be split into three steps: 1) measurement model fit, which is testing the validity and reliability of the model. Validity is measured using t-values of the factor loadings and the standardized factor loading (SFL) values of the indicators. As for reliability, it is measured using construct reliability (CR) and variance extracted (VE). 2) structural model fit, which is measured using t-values and the SFL values of the relationships between constructs. 3) overall model fit, which uses various parameters mentioned in chapter 3 such as  $\chi^2$ , GFI, and RMSEA.

##### 4.4.1 Measurement Model Analysis

###### 4.4.1.1 Entrepreneurial Leadership Model Analysis

The measurement model analysis result for the construct EL can be seen in Table 6. Since this construct has dimensions, this study explores the single factor model (SFM), the oblique lower model (OLOM) by grouping the items into their respective

dimensions, and the higher order model (HOM) by measuring the construct at the level of the dimensions. The AVE value for single factor model and oblique lower model were 0,58 and 0,61 which is bigger than the cut-off value 0.50, which these could be due to the data sample or the respondents in answering the questionnaires, its a good result. However, this study looks at the higher order model of the construct that has AVE of 0.94 which is higher than the AVE cut-off value of 0.50. Thus, the use of higher order model for EL

would be acceptable, reliable and valid. The CR value of this construct is 0.97 for both single factor and oblique lower model, whereas its CR value is 0.98 for the higher model. Furthermore, the goodness of fit indices (GOF) for this construct are above the cut-off values for all models (i.e., single factor, oblique lower, and higher order models). Therefore, we could conclude that EL construct measurement in this study from the measurement model analysis is reliable and valid.

**Table 6.** Entrepreneurial Leadership (EL) Measurement Model Analysis Result

Item	Single Factor Model			Oblique Lower Model			Higher Order Model			
	SFL	t-Value	ej	SFL	t-Value	ej	Dimension	SFL	T-Value	ej
EL1	0,74	13,76	0,46	0,78	14,72	0,4	ELA	0,96	20,84	0,09
EL2	0,72	13,43	0,48	0,73	13,59	0,46				
EL3	0,74	13,95	0,45	0,77	14,58	0,41				
EL4	0,80	15,56	0,36	0,82	16,08	0,33				
EL5	0,52	8,86	0,73	0,52	8,84	0,73				
EL6	0,77	14,53	0,41	0,77	14,54	0,41				
EL7	0,75	14,04	0,44	0,76	14,08	0,44				
EL8	0,71	13,16	0,49	0,71	13,03	0,5				
EL9	0,75	14,04	0,44	0,77	14,65	0,4				
EL10	0,81	15,89	0,34	0,85	16,78	0,28				
EL11	0,76	14,33	0,43	0,79	14,98	0,38	ELB	0,95	20,56	0,1
EL12	0,73	13,64	0,46	0,8	15,14	0,37				
EL13	0,77	14,54	0,41	0,8	15,41	0,36				
EL14	0,83	16,43	0,31	0,84	16,56	0,29				
EL15	0,73	13,6	0,47	0,75	14,11	0,43	ELC	0,98	22	0,03
EL16	0,72	13,39	0,48	0,73	13,4	0,47				
EL17	0,81	15,8	0,34	0,83	16,22	0,32				
EL18	0,82	15,95	0,34	0,86	16,8	0,28				
EL19	0,79	15,07	0,38	0,8	15,53	0,35				
EL20	0,81	15,84	0,34	0,84	16,57	0,29	ELD	0,99	22,37	0,02
EL21	0,79	15,29	0,37	0,8	15,5	0,35				
EL22	0,75	14	0,44	0,75	14,02	0,44				
EL23	0,83	16,3	0,32	0,83	16,42	0,3				
EL24	0,80	15,4	0,37	0,81	15,69	0,34				
CR	0,97			0,97			0,98			
AVE	0,58			0,61			0,94			
$\chi^2/df$	0,0624			0,06			Perfect fit			
P-value of $\chi^2$	0,00034			0,0004			1			
RMSEA	0,037			0,04			0			
GFI	0,91			0,91			Perfect fit			
SRMR	0,016			0,017			Perfect fit			
CFI	1			1			Perfect fit			
NFI	0,99			0,99			Perfect fit			
NNFI	1			0,99			Perfect fit			
IFI	1			1			Perfect fit			

4.4.1.2 *Entrepreneurial Orientation Model Analysis*

The result for the construct EO is shown in Table 7. It can be seen that the AVE value is also not significant at the single factor

model and oblique lower model, bigger than the cut-off value 0.50. But is improved significantly in the higher order model, just like in EO. This would mean that it would be better to represent EO its same model with other models. It's a good result.

**Table 7.** Entrepreneurial Orientation (EO) Measurement Model Analysis Result

Item	Single Factor Model			Oblique Lower Model			Higher Order Model			
	SFL	t-Value	ej	SFL	t-Value	ej	Dimension	SFL	T-Value	ej
EO1	0,71	12,5	0,5	0,77	13,92	0,41	EOA	0,91	19,03	0,17
EO2	0,74	13,09	0,46	0,81	15,06	0,34				
EO3	0,69	12,1	0,52	0,74	13,06	0,46				
EO4	0,69	12,06	0,53	0,68	11,56	0,54	EOB	1,00	22,52	0,00
EO5	0,76	13,7	0,42	0,76	12,86	0,43				
EO6	0,77	14,1	0,4	0,78	13,46	0,39				
EO7	0,65	11,2	0,57	0,66	11,27	0,56	EOC	0,93	19,94	0,13
EO8	0,78	14,21	0,4	0,82	15,08	0,33				
EO9	0,68	11,88	0,53	0,75	13,3	0,44				
CR	0,91			0,92			0,96			
AVE	0,52			0,57			0,90			
$\chi^2/df$	0,21			0,23			Perfect fit			
P-value of $\chi^2$	0,01436			0,00821			1,000			
RMSEA	0,054			0,058			0,000			
GFI	0,97			0,97			Perfect fit			
SRMR	0,016			0,018			Perfect fit			
CFI	0,99			0,99			Perfect fit			
NFI	0,99			0,98			Perfect fit			
NNFI	0,99			0,99			Perfect fit			
IFI	0,99			0,99			Perfect fit			

4.4.1.3 *Organizational Effectiveness Model Analysis*

The measurement OE result for the construct can be seen in Table 8. As but with five indicators, then single factor OE conducted. the construct is being measured without dimension.

The result shows AVE value is 0.59 is higher than the cut-off value of 0.50, which these could be due to the data sample or the respondents in answering the questionnaires, its a good result. Further, the CR which indicates the convergent validity showed a value of 0.88 for the single factor model, that is above the cut-off value of 0.70. Moreover, the goodness of fit indices (GOF) for this construct are above the cut-off values. Therefore, we could conclude that OE construct measurement in this study

from the measurement model analysis is reliable and valid.

**Table 8.** Organizational Effectiveness (OE) Measurement Model Analysis Result

Item	Single Factor Model		
	SFL	t-Value	ej
OE1	0,63	10,4	0,61
OE2	0,76	13,41	0,43
OE3	0,83	14,97	0,3
OE4	0,82	14,58	0,33
OE5	0,80	14,39	0,36
CR	0,88		
AVE	0,59		
$\chi^2/df$	0,99		
P-value of $\chi^2$	0,90008		
RMSEA	0,000		
GFI	1,000		
SRMR	0,0023		
CFI	1,000		
NFI	1,000		
NNFI	1,01		
IFI	1,000		

#### 4.4.1.4 Firm Performance Model Analysis

The measurement model analysis result for the construct FP can be seen in Table 9. As the construct is being measured without dimension but with eight indicators, then single factor model analysis conducted. The result shows AVE value is 0.47 is lower than the cut-off value of 0.50, which these could be due to the data sample or the respondents in answering the questionnaires, despite the fact that the measurement was adopted from the validated and used in previous studies with different context and respondents' profile.

**Table 9.** Firm Performance (FP) Measurement Model Analysis Result

Item	Single Factor Model		
	SFL	t-Value	ej
FP1	0,74	13,21	0,45
FP2	0,76	13,58	0,43
FP3	0,70	11,84	0,5
FP4	0,82	15,12	0,32
FP5	0,68	11,72	0,53
FP6	0,55	8,99	0,69
FP7	0,57	9,00	0,68
FP8	0,59	9,90	0,65
CR	0,87		
AVE	0,47		
$\chi^2/df$	0,31		
P-value of $\chi^2$	0,36329		
RMSEA	0,019		
GFI	0,990		
SRMR	0,0094		
CFI	1,000		
NFI	0,990		
NNFI	1,00		
IFI	1,00		

Since, this construct has no dimension, this study then performed discriminant validity test by computing the square root value of AVE, which is 0.683 and then compared them to the correlation coefficients to ensure that this construct, i.e. firm performance measurement is valid. The result showed that the square root value of the AVE is higher than the correlation values described in table 4.3 above, so, it can be inferred that this construct has met its validity requirement based on the discriminant validity.

Further, the CR which indicates the convergent validity showed a value of 0.87 for the single factor model, that is above the cut-off value of 0.70. Moreover, the goodness of fit indices (GOF) for this construct are above the cut-off values. Therefore, we could conclude that FP construct measurement in this study from the measurement model analysis is reliable and valid.

#### 4.4.2 Structural Model Analysis

The structural model fit is a measure of the relationships between constructs in the model. The results of the structural model fit are also the basis for hypothesis testing, which will be discussed on its own subsection.

#### 4.4.3 Hypotheses Testing Results

Hypothesis testing results show there are five hypotheses that are supported. Table 10 shows the hypotheses testing result of this study.

**Table 10.** Hypothesis Testing Results

No.	Hypothesis Relationship	Structural Coefficient	T-value	Hypothesis Test Result
H-1	Entrepreneurial Leadership has a positive relationship with Entrepreneurial Orientation.	0,71	12,42	Supported
H-2	Entrepreneurial Leadership has a positive relationship with Organizational Effectiveness.	0,76	9,85	Supported
H-3	Entrepreneurial Leadership has a positive relationship with Firm Performance.	0,25	3,71	Supported
H-4	Entrepreneurial Orientation has a positive relationship with Firm Performance.	0,51	5,67	Supported
H-5	Organizational Effectiveness has a positive relationship with Firm Performance.	0,21	2,06	Supported

#### 4.4.4 Overall Model Fit Analysis

The overall model fit analysis of this study indicates that the model has a good fit as every model fit index show a good fit conclusion. Table 11 shows the results of overall model fit analysis.

**Table 11.** Overall Model Fit Analysis Results

Item	Overall Model fit	Fit Conclusion
$\chi^2/df$	0,10	Good Fit
P-value of $\chi^2$	0,00046	Good Fit
RMSEA	0,041	Good Fit
GFI	0,93	Good Fit
SRMR	0,023	Good Fit
CFI	1,00	Good Fit
NFI	0,99	Good Fit
NNFI	0,99	Good Fit
IFI	1,00	Good Fit
Conclusion	Good Fit	Good Fit

#### 4.5 Discussion

The study result shows there are five supported hypotheses even though the overall model fit analysis has shown that the research model has overall good fit. Each hypothesis will be explained in the next sub section below.

#### 4.5.1 Five Supported Hypotheses of this Study Result

According to this definition, EL can be applied to every type of firms independent of the size of the firm. Entrepreneurial leaders are having provocations related to the enactment of scenario and cast and should be able to seek opportunities, make the vision and create situations.

EO become important variables in improving corporate performance. Proposition underlying the importance of entrepreneurial orientation is that companies with a level of higher characteristics of the entrepreneur will have a level of performance and higher growth, being able to deal with the dynamics of the environment is more successful.

Organizations have to make constant shifts to adapt to the changing environment. The most important objective of any organization is to survive and sustain in such a turbulent atmosphere. With this consideration, most of the researches in organizational science have focused on how to improve the effectiveness of organizations. Every action taken by any organization is aimed at improving its effectiveness. Long-term effects can be attained by a firm only through a willing force of employees, which is committed to organizational objectives.

Management plays a crucial role in creating an environment of reciprocity where employees can be encouraged to perform toward the betterment of the organization.

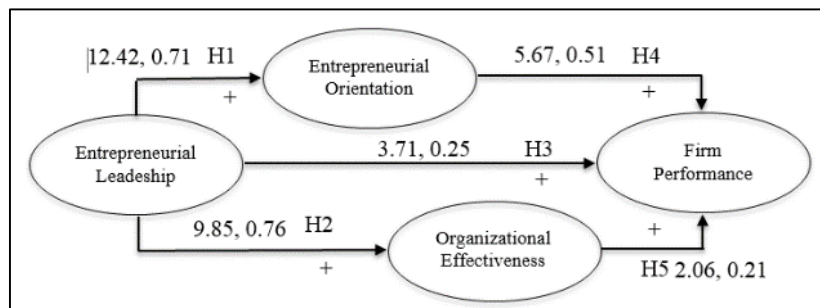
FP is a relevant construct in strategic management research and frequently used as a dependent variable. Despite this relevance, there is hardly a consensus about its definition, dimensionality and measurement, what limits advances in research and understanding of the concept. Research into FP suffers from problems such as lack of consensus, selection of indicators based on convenience and little consideration of its dimensionality (Combs et al. 2005; Richard *et al.*, 2009). Based on the explanation above, there has positive that each other EL, EO, OE and their relationship to FP.

#### 4.5.2 Overall Research Model

After running the hypotheses testing and defined the supported, then the research

model becomes as shown in Figure 4. The study provides solutions about the relationship between EO, EO, OE and their relationships towards FP, research model could describe that : 1) EL has a relationship with EO; 2) EL has a relationship with OE; 3) EL has a relationship with FP; 4) EO has a relationship with FP; and 5) OE has a relationship with FP.

Moreover, this study examines the relationships EL, EO, OE and their relationships towards FP in the context of heavy equipment industry. Based on data collected from 265 respondents that work in PT United Tractors, this study found that EL, EO and OE in are associated with towards FP. Indicates by the mean score from descriptive analysis results showed in Table 2 above, respondents view that hypothesis analysis for 4 construct, its supported, while the higher t-value on hypotheses testing results.



**Figure 4.** The Relationship of the Constructs, based on the Hypotheses Supported, The Values Indicate T-value and Structural Coefficient Respectively

#### 4.6 Research Contributions

This study broadens the literature of firm performance by filling the gap in the previous literature and therefore clarifies EL, EO, OE and their relationships towards FP. Findings from this study support the ideas of previous researchers as well as produce some practical contribution for business. Which contributes the most to the FP are EL with EO..

#### 4.6.1 Theoretical Contribution

Those theoretical contributions are as follows: First, this study examines the relationship between EL and EO, Santos & Brito (2012) subjective measurement model for firm performance for measurement of the constructs of EO, EC, EL and FP. And which combined EO with leadership attributes and used its construct to measure EL style have found a positive relationship between EL and business performance of SMEs.

Second, This develops positive feeling in their minds which is internally rewarding. As a result, they perceive shared responsibility for the success or failure of the organization (Lawler, 2001). Employee voice has emerged as a new concept that fits in the stream of positive psychology. It provides the policymakers a promising way to enhance employees' motivation and commitment to the organization. Thus, this research is a major contribution to advancing literature on EL relationships with EO.

#### *4.6.2 Managerial/Practical Contribution*

Results from this study provide insights about between EL, EO, OE and FP in the heavy equipment industry as the practical contributions by examines the relationship among all constructs used in this study. In order to face dynamic in the heavy equipment industry. Today, large and well-established organizations face increasing competition, unpredictable dynamic environmental situations and rapid changes in technology that need significant changes to deal with them.

When the current conditions for new employee recruitment have been reduced, even every year there are no additional new employees, expenses, optimization & additional work jobs for each employee, etc. Possibly with this, I as the author would like to examine current in the company whether they have EL, EO, OE to improve FP, where employees understand and apply how Risks of risk and uncertainty as well as being proactive in maintaining the company's growth, so that the company can survive in a dynamic business situation. And for this study the author also wants to clarify that EL, EO, OE and FP are their have relationship have a positive effect for each others.

The results showed that there were five supported hypotheses although the overall model fit analysis showed that the research model had a good overall fit and positive.

The dimensions that most contribute to the company's performance at PT UT in the field of heavy equipment procurement service division is the Communicative Dimension (EL) and Risk taking (EO).

What is of concern is that graduates of SMA/SMK are equivalent, even though graduates are among the lowest but with time and experience these employees can be relied on, because the competencies in the 4 constructs can be measured properly.

## **5. Conclusion and Recommendation**

### *5.1. Conclusion*

The results showed that there were five supported hypotheses although the overall model fit analysis showed that the research model had a good overall fit. The 4 constructs studied are EL, EO, OE and FP, the results of the hypothesis test show that they are mutually supportive. The most contributes construct to the FP are EL relationships with EO.

The most contributes dimension to the firm performance are Dimension Communicative dimension (EL) and Risk taking (EO). It should be remembered that the author conducted this research in the midst of the Covid-19 pandemic, in a dynamic business situation and uncertain government conditions. But PT UT, which has a business in the procurement of heavy equipment, still persists and is consistent with its business.

### *5.2. Research Limitations*

This study is a cross-sectional descriptive & confirmatory study that analyzes the Indonesian heavy equipment industry. Therefore, the results only represent the condition of the heavy equipment industry at a certain point in time the research was conducted, namely during the COVID-19 pandemic and dynamic business conditions, unlike longitudinal data. Another implication is that this research cannot determine

causality between constructs and can only represent the current condition.

### 5.3. Future Research

As previously stated, this study has revealed whether EL, EO, OE and FP are mutually supportive. Another possible research in the future is to duplicate the research but in the context of other studies, such as the so-called previous research, in order to generalize the results.

In the future at PT United Tractors, Tbk Service division, employees in the lowest class, especially mechanics/member mechanic, are expected to be given some competency materials regarding the 4 constructs more specific and given challenges in the form of projects for individuals, such as partnership program projects, CSM or others projects. And the author hopes, at least the 4 constructs above become additional assessments for KPI (Key Performance Individual), to determine the performance of employees compared to the profit/revenue that has been achieved, at least it can be tested every semester.

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