



## The Influence of Intellectual Intelligence and Work Commitment on Employee Performance: The Moderating Role of Work Motivation at CV. Riau Jaya Abadi Medan

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**Abstract.** *This study examines the influence of intellectual intelligence and work commitment on employee performance at CV. Riau Jaya Abadi Medan, with work motivation serving as a moderating variable. A non-probability sampling method was employed, with data collected through a census of 80 employees from the technical or mechanical departments. The study utilized questionnaires to measure intellectual intelligence, work commitment, work motivation, and employee performance. Data were analyzed using SPSS version 20, employing validity and reliability testing, descriptive statistics, normality, multicollinearity, and heteroscedasticity tests, as well as multiple linear regression, correlation analysis, partial (t-test), moderation, and simultaneous (F-test) analyses. The descriptive findings indicate that intellectual intelligence is categorized as low, while work commitment and motivation are considered moderately good, and employee performance is rated as good. The partial test results reveal that both intellectual intelligence and work commitment have positive and significant effects on employee performance. Furthermore, the moderation analysis shows that work motivation strengthens the effects of both intellectual intelligence and work commitment on employee performance. The adjusted R<sup>2</sup> value of 0.554 indicates that 55.4% of employee performance variation is explained by intellectual intelligence and work commitment, while the remaining 44.6% is influenced by other variables such as work environment, organizational culture, and work discipline.*

**Keywords:** *Employee Performance; Intellectual Intelligence; Moderation Analysis; Work Commitment; Work Motivation.*

### 1. INTRODUCTION

In the current era of globalization, the industrial world is undergoing rapid transformation, including companies operating within it. The process of globalization has transcended national boundaries, resulting in increasingly competitive business environments. Organizations are therefore expected to maintain a positive existence through consistent performance and accountability to society as a form of corporate contribution (Porter & Kramer, 2019). An improvement in individual employee performance can enhance the overall performance of human resources, which in turn is reflected in the increased productivity of the organization (Robbins & Judge, 2020). Therefore, effective human resource management practices play a crucial role in achieving sustainable organizational performance amid global competition (Armstrong & Taylor, 2023).

Employee performance is crucial to organizational success, as it directly influences productivity and competitiveness. However, many companies still face persistent challenges in managing employee performance effectively. Therefore, management requires both honesty and a strong sense of responsibility from employees to achieve corporate goals. According to Mangkunegara (2017), performance represents the result of work in terms of both quality and

quantity, accomplished by employees in accordance with the duties and responsibilities assigned to them.

Performance is essentially a function of motivation and ability. To complete a task successfully, an individual must possess both a certain degree of willingness and competence. Without a clear understanding of what must be done, motivation and skills alone may not be sufficient for optimal performance. Consequently, employee performance plays an integral role in determining the success of an organization, as is the case with CV. Riau Jaya Abadi Medan.

CV. Riau Jaya Abadi Medan is a private company that operates as a contractor and supplier of supporting machinery for palm oil production. The company is headquartered in Medan, Indonesia, and has branch operations in Riau. Its employees are responsible for delivering and installing production machinery. Given the increasing number of competitors within the same sector, CV. Riau Jaya Abadi Medan must continuously enhance employee performance to remain competitive.

Employees are required to demonstrate their intellectual capabilities, apply existing knowledge to problem-solving, collaborate effectively in teams, assume responsibilities beyond their formal duties, and avoid workplace conflicts. These attributes are closely associated with intellectual intelligence, which plays a fundamental role in shaping individual productivity and performance (Sternberg, 2011). High intellectual intelligence, supported by technical skills, forms a company's intellectual capital, which strengthens collaboration and creates a sustainable competitive advantage.

Intellectual intelligence (IQ) is one of the key factors influencing employee performance. As Busro (2018) explains, employee performance is influenced by both internal and external factors. Internal factors include intellectual ability, work discipline, job satisfaction, and employee motivation, while external factors involve leadership style, work environment, compensation, and organizational systems.

Another variable that significantly influences employee performance is work commitment. Work commitment reflects an employee's psychological attachment and sense of responsibility toward their organization. Employees with a strong commitment tend to perform optimally, invest greater effort, and dedicate their time and energy to achieving organizational objectives (Allen & Meyer, 2013). This view is supported by research conducted by Shintia (2020), who found that work commitment had a positive and significant impact on employee performance at PT. Pandawa Karya Palembang..

In addition, motivation plays an important moderating role between intellectual intelligence, work commitment, and employee performance. Motivation refers to an

individual's internal drive that initiates, directs, and sustains behavior toward goal achievement (McClelland, 2013). According to Maslow (2017), motivation arises from a hierarchy of needs, ranging from physiological to self-actualization. Motivation enables employees to exert maximum effort, particularly when intellectual intelligence and work commitment are already established.

Previous studies have shown that work motivation can moderate the relationship between intellectual intelligence and performance (Alifah, 2017) and between organizational commitment and performance (Ariyanto, 2013). However, some studies, such as Prabowo (2013), indicate that motivation may not always act as an effective moderator. These mixed findings highlight the importance of further research on the moderating effect of work motivation.

Based on this background, the present study aims to analyze the influence of intellectual intelligence and work commitment on employee performance at CV. Riau Jaya Abadi Medan, with work motivation as a moderating variable. This research contributes to the understanding of how internal psychological and motivational factors shape employee productivity in industrial organizations.

## **2. THEORETICAL FRAMEWORK**

### **Intellectual Intelligence**

Intellectual intelligence, commonly referred to as intelligence quotient (IQ), represents an individual's ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, and learn from experience. According to Wechsler (as cited in Anastasi & Urbina, 2007), intelligence is a global capacity to act purposefully, think rationally, and effectively interact with the environment. Similarly, Sternberg (2011) defines intellectual intelligence as an individual's capacity to succeed in life by utilizing strengths and compensating for weaknesses. In organizational contexts, high intellectual intelligence enables employees to adapt to change, make effective decisions, and engage in problem-solving, which collectively enhance overall job performance.

Sternberg (2011) further categorizes intellectual intelligence into three dimensions:

- a. Analytical Intelligence, which refers to problem-solving and decision-making skills;
- b. Creative Intelligence, which involves adaptability and innovation in new situations; and
- c. Practical Intelligence, which pertains to the ability to apply knowledge to everyday work challenges.

In workplace settings, employees who exhibit strong analytical and creative thinking are more likely to demonstrate superior task performance and decision quality.

### **Work Commitment**

Work commitment, often referred to as organizational commitment, reflects the degree to which an employee identifies with an organization and is willing to exert effort on its behalf (Allen & Meyer, 2013). Meyer's three-component model defines commitment as comprising affective, normative, and continuance dimensions. Affective commitment reflects an emotional attachment to the organization, normative commitment involves a sense of obligation to remain, and continuance commitment arises when employees remain because of perceived costs associated with leaving.

Employees with strong commitment levels tend to exhibit greater job satisfaction, lower turnover intentions, and higher productivity. Samsuddin (2018) defines organizational commitment as a psychological contract—an internal promise or moral obligation to fulfill assigned responsibilities. Empirical evidence supports this relationship: Shintia (2020) found that work commitment positively and significantly influences employee performance, indicating that committed employees are more likely to achieve organizational goals.

### **Work Motivation**

Motivation serves as an internal driving force that directs an individual's behavior toward goal attainment. According to Maslow's hierarchy of needs theory (Maslow, 2017), human motivation progresses through five levels: physiological, safety, social, esteem, and self-actualization needs. These needs form the foundation of human behavior and determine the extent of one's engagement in work. Motivation ensures that employees channel their energy toward productive activities that contribute to organizational success.

McClelland's theory of motivation (2013) complements Maslow's model by identifying three key motivational needs:

- a. Need for achievement—the desire to excel and achieve goals;
- b. Need for affiliation—the drive to establish friendly interpersonal relationships
- c. Need for power—the desire to influence or control others.

In organizational settings, these motivational drivers significantly affect an employee's performance outcomes. Motivated employees demonstrate higher creativity, stronger initiative, and greater resilience in achieving their objectives.

### **Employee Performance**

Employee performance refers to the measurable outcome of work conducted by an individual according to established job criteria. Mangkunegara (2017) defines performance as

the quality and quantity of results achieved by an employee based on their assigned responsibilities. Similarly, Robbins and Coulter (2016) state that employee performance is a function of the interaction between ability and motivation.

Key performance indicators typically include work quantity, work quality, timeliness, effectiveness, and commitment. Employees who perform well consistently meet performance standards, demonstrate accountability, and contribute to organizational productivity. According to Robbins (2016), performance improvement is influenced by individual capacity, motivation, and the organizational environment. Therefore, enhancing performance requires both managerial support and personal drive.

### **Conceptual Framework**

Based on the theoretical foundation and previous empirical research, this study posits that intellectual intelligence ( $X_1$ ) and work commitment ( $X_2$ ) positively influence employee performance ( $Y$ ). Furthermore, work motivation ( $Z$ ) is proposed as a moderating variable that strengthens these relationships. The conceptual model suggests that higher levels of intellectual intelligence and work commitment, when accompanied by strong motivation, will result in improved employee performance within CV. Riau Jaya Abadi Medan.

## **3. RESEARCH METHODOLOGY**

### **Research Design**

This study employs a quantitative research design using a descriptive and associative approach to examine the influence of intellectual intelligence and work commitment on employee performance, with work motivation as a moderating variable. The study was conducted at CV. Riau Jaya Abadi Medan, a private company engaged in the contracting and supply of machinery components supporting palm oil production. The research aims to determine both the partial and simultaneous effects of the independent variables on the dependent variable, as well as the moderating influence of work motivation.

### **Population and Sample**

The population in this study consists of all technical and mechanical employees at CV. Riau Jaya Abadi Medan, totaling 80 individuals. The sampling method used is the census technique, meaning that all members of the population were included as research respondents. This approach ensures comprehensive data collection and enhances the validity of the study results by minimizing sampling bias.

## **Operational Definition of Variables**

Operational definitions specify how each variable in the study is measured empirically.

The variables analyzed include:

1. Independent Variables ( $X_1$ ,  $X_2$ ): Intellectual Intelligence ( $X_1$ ) and Work Commitment ( $X_2$ ).
2. Moderating Variable ( $Z$ ): Work Motivation.
3. Dependent Variable ( $Y$ ): Employee Performance.

Intellectual Intelligence ( $X_1$ ): Refers to employees' ability to use reasoning, problem-solving, and decision-making skills in the workplace. It is measured through indicators such as analytical ability, creative thinking, and practical adaptability (Sternberg, 2011).

Work Commitment ( $X_2$ ): Represents employees' psychological attachment and loyalty to the organization, encompassing affective, normative, and continuance commitment dimensions (Allen & Meyer, 2013).

Work Motivation ( $Z$ ): Describes the internal drive that encourages employees to perform their duties effectively. It is measured through the need for achievement, affiliation, and power (McClelland, 2013).

Employee Performance ( $Y$ ): Refers to the level of achievement of employees in carrying out their work according to organizational standards. It is measured in terms of work quality, quantity, timeliness, and responsibility (Robbins & Coulter, 2016; Mangkunegara, 2017).

## **Data Collection Techniques**

Data were collected using both primary and secondary sources. Primary data were obtained through questionnaires distributed to employees, while secondary data were gathered from company records and documentation. The questionnaire employed a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to measure respondents' perceptions of each variable. All items were pretested for validity and reliability prior to analysis.

## **Data Analysis Methods**

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 20. The analytical procedures included the following steps:

1. Validity and Reliability Testing – to ensure the accuracy and consistency of measurement instruments.
2. Descriptive Analysis – to summarize respondent characteristics and variable distributions.
3. Classical Assumption Tests – including normality, multicollinearity, and heteroscedasticity tests to confirm the robustness of the regression model.

4. Multiple Linear Regression Analysis – to determine the influence of intellectual intelligence and work commitment on employee performance.
5. Correlation Coefficient Testing – to measure the strength of relationships among variables.
6. Partial Hypothesis Testing (t-test) – to assess the individual effect of each independent variable on the dependent variable.
7. Moderation Analysis – to evaluate whether work motivation moderates the relationship between intellectual intelligence, work commitment, and employee performance.
8. Simultaneous Hypothesis Testing (F-test) – to test the combined influence of independent variables on employee performance.
9. Coefficient of Determination ( $R^2$ ) – to determine the proportion of variance in employee performance explained by the model.

This methodological framework ensures that the research findings are statistically valid, reliable, and capable of explaining the relationships among variables in the organizational context of CV. Riau Jaya Abadi Medan.

#### **4. RESULTS AND DISCUSSION**

##### **Result**

This section presents the results of descriptive and inferential analyses conducted to determine the influence of intellectual intelligence, work commitment, and work motivation on employee performance at CV. Riau Jaya Abadi Medan. Statistical analysis was performed using IBM SPSS Statistics 20.0, including descriptive statistics, multiple linear regression, correlation analysis, t-tests, F-tests, moderation tests, and the coefficient of determination.

##### **Descriptive Analysis**

Descriptive analysis was carried out to identify the frequency and percentage of responses for each questionnaire item. The following tables present descriptive statistics for each research variable.

## Descriptive analysis of response scores to the intellectual intelligence variable

**Table 1.** Descriptive Frequency and Percentage for the Variable of Intellectual Intelligence.

No	Question	Frequency and Percentage of Respondents' Answers											
		SA		A		N		D		SD		Total	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Able to solve problems	15	18,75	21	26,25	19	23,75	25	31,25	0	0	80	100
2	Able to make the right decision	14	17,5	18	22,5	24	30	24	30	0	0	80	100
3	Proficient in formulating strategies	17	21,25	16	20	25	31,25	22	27,5	0	0	80	100
4	Think clearly	22	27,5	35	43,75	13	16,25	10	12,5	0	0	80	100
5	Able to comply and convey information	21	26,25	32	40	18	22,5	9	11,25	0	0	80	100
6	Able to cope with and learn in the new situations	10	12,5	38	47,5	19	23,75	13	16,25	0	0	80	100
7	Demonstrating a rich vocabulary	10	12,5	39	48,75	22	27,5	9	11,25	0	0	80	100
8	To have a keen interest	16	20	29	36,25	25	31,25	10	12,5	0	0	80	100
9	Possesses a high degree of adaptability to new environments	19	23,75	30	37,5	23	28,75	8	10	0	0	80	100
10	Possesses a strong track record of achieving objectives	18	22,5	35	43,75	15	18,75	12	15	0	0	80	100
11	Indicating interest	16	20	33	41,25	22	27,5	9	11,25	0	0	80	100
12	Posses strong skills	14	17,5	38	47,5	24	30	4	5	0	0	80	100
13	Persuasive abilities	16	20	29	36,25	29	36,25	6	7,5	0	0	80	100
	<b>Total</b>	<b>208</b>	<b>260</b>	<b>393</b>	<b>491,25</b>	<b>278</b>	<b>347,5</b>	<b>161</b>	<b>201,25</b>	<b>0</b>	<b>0</b>	<b>1040</b>	<b>1300</b>
	<b>Average</b>		<b>20</b>		<b>37,8</b>		<b>26,7</b>		<b>15,5</b>		<b>0</b>		<b>100</b>

Source: Data processed from research findings, 2022.

The descriptive results indicate that the level of intellectual intelligence among employees is categorized as low (57.8% of respondents agreed or strongly agreed). This finding suggests that employees still experience challenges in problem-solving, decision-making, and strategic formulation.

**Descriptive analysis of response scores to the work commitment variable****Table 2.** Descriptive Frequency and Percentage for the Variable of Work Commitment.

No	Question	Scores and Percentage of Respondents' Answers											
		SA		A		N		D		SD		Total	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Derives satisfaction from one's work and colleagues	14	17,5	27	33,75	29	36,25	10	12,5	0	0	80	100
2	Emotional connection	13	16,25	27	33,75	34	42,5	6	7,5	0	0	80	100
3	Willing to go above and beyond the required duties	10	12,5	40	50	22	27,5	8	10	0	0	80	100
4	Demonstrates involvement in achieving corporate objectives	11	13,75	42	52,5	23	28,75	4	5	0	0	80	100
5	Possesses a strong sense of responsibility	13	16,25	43	53,75	21	26,25	3	3,75	0	0	80	100
6	To realize financial gains	14	17,5	28	35	30	37,5	8	10	0	0	80	100
7	Retention factors	14	17,5	45	56,25	18	22,5	3	3,75	0	0	80	100
8	Faces obstacles to resigning	15	18,75	41	51,25	18	22,5	6	7,5	0	0	80	100
	<b>Total</b>	<b>104</b>	<b>130</b>	<b>293</b>	<b>366,25</b>	<b>195</b>	<b>243,75</b>	<b>48</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>640</b>	<b>800</b>
	<b>Average</b>		<b>16,25</b>		<b>45,8</b>		<b>30,45</b>		<b>7,5</b>	<b>0</b>	<b>0</b>		<b>100</b>

*Source: Data processed from research findings, 2022.*

Work commitment achieved a moderate level (62.05% agreed or strongly agreed), implying that employees have an emotional attachment and a willingness to stay within the organization. However, some respondents indicated dissatisfaction related to job satisfaction and financial benefits.

### Descriptive analysis of response scores to the work motivation variable

**Table 3.** Descriptive Frequency and Percentage for the Variable of Work Motivation.

No	Question	Scores and Percentage of Respondents' Answers											
		SA		A		N		D		SD		Total	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Creative thinking	21	26,25	32	40	18	22,5	9	11,25	0	0	80	100
2	Feedback through bonuses and needs met	10	12,5	38	47,5	19	23,75	13	16,25	0	0	80	100
3	Employee morale	10	12,5	39	48,75	22	27,5	9	11,25	0	0	80	100
4	Possesses strong social skills	11	13,75	42	52,5	23	28,75	4	5	0	0	80	100
5	Collaboration	13	16,25	43	53,75	21	26,25	3	3,75	0	0	80	100
6	Aspirations for leadership	14	17,5	28	35	30	37,5	8	10	0	0	80	100
7	Directs the team	14	17,5	45	56,25	18	22,5	3	3,75	0	0	80	100
	<b>Total</b>	<b>93</b>	<b>116,25</b>	<b>267</b>	<b>333,75</b>	<b>151</b>	<b>188,75</b>	<b>49</b>	<b>61,25</b>	<b>0</b>	<b>0</b>	<b>560</b>	<b>700</b>
	<b>Average</b>		<b>16,6</b>		<b>47,7</b>		<b>26,95</b>		<b>8,75</b>	<b>0</b>	<b>0</b>		<b>100</b>

Source: Data processed from research findings, 2022.

Work motivation also reached a moderate level (64.3% agreed or strongly agreed), indicating that employees possess sufficient enthusiasm and creativity. Nonetheless, feedback mechanisms such as bonuses and recognition still need improvement.

### Descriptive analysis of response scores to the employee performance variable

**Table 4.** Descriptive Frequency and Percentage for the Variable of Employee Performanc.

No	Question	Scores and Percentage of Respondents' Answers											
		SA		A		N		D		SD		Total	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Assigned workload	21	26,25	37	46,25	17	21,25	5	6,25	0	0	80	100
2	The quantity of work completed	20	25	37	46,25	21	26,25	2	2,5	0	0	80	100
3	The accuracy of the work output	16	20	44	55	18	22,5	2	2,5	0	0	80	100
4	The work output meets the required standards.	15	18,75	49	61,25	13	16,25	3	3,75	0	0	80	100
5	The use of machinery	5	6,25	54	67,5	14	17,5	17	21,25	0	0	80	100
6	The use of a system	19	23,75	43	53,75	15	18,75	3	3,75	0	0	80	100
7	The pace of work	18	22,5	47	58,75	9	11,25	6	7,5	0	0	80	100
8	Work completion	9	11,25	54	67,5	11	13,75	6	7,5	0	0	80	100
9	Job responsibilities	16	20	51	63,75	10	12,5	3	3,75	0	0	80	100
10	Corporate Policy	17	21,25	52	65	9	11,25	2	2,5	0	0	80	100

<b>Total</b>	<b>156</b>	<b>195</b>	<b>468</b>	<b>585</b>	<b>137</b>	<b>171,25</b>	<b>49</b>	<b>61,25</b>	<b>0</b>	<b>0</b>	<b>800</b>	<b>1000</b>
<b>Rata-rata</b>		<b>19,5</b>		<b>58,5</b>		<b>17,125</b>		<b>6,125</b>	<b>0</b>	<b>0</b>		<b>100</b>

*Source: Data processed from research findings, 2022.*

Finally, employee performance was categorized as good (78% agreed or strongly agreed). This result implies that employees are generally reliable and complete their work according to set standards. However, there remain weaknesses in certain aspects, such as technical proficiency and speed in completing tasks.

### Multiple Linear Regression Analysis

Based on the regression analysis, the following equation was obtained:

$$Y = 11.813 + 0.365X_1 + 0.346X_2$$

where:

- Y = Employee Performance
- X<sub>1</sub> = Intellectual Intelligence
- X<sub>2</sub> = Work Commitment

**Table 5.** Assumptions of Multiple Linear Regression for the Influence of Intellectual Intelligence and Work Commitment on Employee Performance.

		Coefficients <sup>a</sup>				
		Unstandardized		Standardized		
		Coefficients		Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	11,813	2,991		3,949	,000
	Intellectual Intelligence	,365	,056	,573	6,525	,000
	Work Commitment	,346	,111	,274	3,123	,003

a. Dependent Variable: Employee Performance

*Source: Data processed from research findings, 2022.*

The coefficients show that both intellectual intelligence ( $b_1 = 0.365$ ) and work commitment ( $b_2 = 0.346$ ) have positive and significant effects on employee performance ( $p < 0.05$ ). This suggests that higher levels of intellectual ability and commitment contribute to enhanced performance outcomes.

### Correlation and Coefficient of Determination

Table 6 shows a correlation coefficient of  $R = 0.752$ , indicating a strong relationship between intellectual intelligence, work commitment, and employee performance. The coefficient of determination ( $R^2 = 0.565$ ) indicates that 55.4% of the variance in employee performance is explained by these two independent variables, while the remaining 44.6% is explained by other factors not included in this model, such as work environment, organizational culture, promotion, discipline, and personality.

**Table 6.** Results of the Multiple Linear Correlation Coefficient Test for the Influence of Intellectual Intelligence and Work Commitment on Employee Performance.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,752 <sup>a</sup>	,565	,554	3,733
a. Predictors: (Constant), Work Commitment, Intellectual Intelligence				
b. Dependant Variabel : Employee Performance				

Source: Data processed from research findings, 2022.

**Table 7.** Reference for Interpreting the Multiple Linear Correlation Coefficient Test Results Regarding the Influence of Intellectual Intelligence and Work Commitment on Employee Performance.

Relation between variables	Correlation		
	rvalue	Interval Coefficient	Strength Of Relation
Ryx <sub>1</sub> x <sub>2</sub>	0,752	0,600 – 0,799	Strong

Source: Data processed from research findings, 2022.

As shown in Table 7, the analysis of the multiple linear correlation coefficient reveals that intellectual intelligence and work commitment jointly demonstrate a strong correlation with employee performance, with a coefficient value of 0.752. This value is situated within the 0.600–0.799 interval, which corresponds to a strong level of relationship. Consequently, it can be concluded that intellectual intelligence and work commitment collectively exhibit a strong relationship with employee performance at CV. Riau Jaya Abadi Medan.

### Hypothesis Testing (t-Test)

**Table 8.** Partial Hypothesis Testing for the Influence of Intellectual Intelligence and Work Commitment on Employee Performance.

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	11,813	2,991		3,949	,000
	Intellectual Intelligence	,365	,056	,573	6,525	,000
	Work Commitment	,346	,111	,274	3,123	,003

a. Dependent Variable: Employee Performance

Source: Data processed from research findings, 2022.

The t-test results demonstrate that:

1. The variable intellectual intelligence has a t value of 6.525, greater than t-table (1.99125), with a significance of 0.000 (< 0.05). Thus, intellectual intelligence has a positive and significant effect on employee performance.
2. The variable work commitment has a t value of 3.123, also greater than t-table (1.99125), with a significance of 0.003 (< 0.05). Hence, work commitment has a positive and significant effect on employee performance.

**Moderating Test**

Moderating analysis was conducted to determine whether work motivation strengthens the relationship between the independent variables (intellectual intelligence and work commitment) and employee performance.

**Table 9.** Analyzing Work Motivation as a Moderator of the Influence of Intellectual Intelligence on Employee Performance.

		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-15,467	12,612		-1,226	,224
	Intellectual Intelligence	,907	,299	1,423	3,035	,003
	Work Motivation	1,596	,486	1,096	3,281	,002
	Intellectual Intelligence*Work Motivation	-,024	,010	-1,658	-2,273	,026

a. Dependent Variable: Employee Performance

*Source: Data processed from research findings, 2022.*

For intellectual intelligence, the interaction term (Intellectual Intelligence × Motivation) produced a significance of 0.026 (< 0.05), confirming that work motivation moderates this relationship. For work commitment, the interaction term (Work Commitment × Motivation) yielded a significance of 0.011 (< 0.05), indicating that motivation also moderates the effect of work commitment on employee performance. This implies that employees with higher motivation experience a stronger impact of both intelligence and commitment on their job performance.

**Table 10.** Correlation Analysis between Intellectual Intelligence and Employee Performance.

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	,714 <sup>a</sup>	,510	,504	3,937	

a. Predictors: (Constant), Intellectual Intelligence

b. Dependent Variable: Employee Performance

Source: Data processed from research findings, 2022.

As presented in Table 10, the coefficient of determination ( $R^2$ ) for the intellectual intelligence variable is 0.510. This finding suggests that intellectual intelligence accounts for approximately 51% of the variance in employee performance.

**Table 11.** Correlation analysis between Intellectual Intelligence and Employee Performance with Work Motivation as a Moderating Variable.

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,769 <sup>a</sup>	,591	,575	3,646

a. Predictors: (Constant), Intellectual Intelligence\*Work Motivation, Work Motivation, Intellectual Intelligence

b. Dependent Variable: Employee Performance

Source: Data processed from research findings, 2022.

As presented in Table 11, the coefficient of determination ( $R^2$ ) for the interaction between intellectual intelligence and work motivation is 0.591, implying that the model explains approximately 59.1% of the variance in employee performance. This result demonstrates that work motivation functions as a moderating variable that enhances the influence of intellectual intelligence on employee performance. In other words, higher levels of work motivation strengthen the positive relationship between intellectual intelligence and employee performance at CV. Riau Jaya Abadi Medan.

**Table 12.** Examination of Work Motivation in Moderating the Effect of Work Commitment on Employee Performance.

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-20,867	13,097		-1,593	,115
	Work Commitment	1,165	,479	,924	2,434	,017
	Work Motivation	2,342	,533	1,608	4,392	,000
	Work Commitment*Work Motivation	-,045	,017	-1,737	-2,599	,011

a. Dependent Variable: Employee Performance

Source: Data processed from research findings, 2022.

As presented in Table 12, the significance value (Sig.) of the interaction between work commitment and work motivation is 0.011, which is below the 0.05 threshold. This finding confirms that work motivation serves as a moderating variable that influences the strength of the relationship between work commitment and employee performance. Accordingly, the

hypothesis is accepted, indicating that higher levels of work motivation enhance the positive effect of work commitment on employee performance at CV. Riau Jaya Abadi Medan.

**Table 13.** Correlation Analysis between Work Commitment and Employee Performance.

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,570 <sup>a</sup>	,325	,317	4,622

a. Predictors: (Constant), Work Commitment

b. Dependent Variable: Employee Performance

*Source: Data processed from research findings, 2022.*

As presented in Table 13, the coefficient of determination ( $R^2$ ) for the work commitment variable is 0.325, implying that work commitment explains approximately 32.5% of the variance in employee performance. This finding suggests that higher levels of work commitment are associated with improved employee performance, although other factors may also contribute to the remaining unexplained variance

**Table 14.** Correlation between Work Commitment and Employee Performance with Work Motivation as a Moderating Variable.

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,741 <sup>a</sup>	,549	,532	3,826

a. Predictors: (Constant), Work Commitment\*Work Motivation, Work Motivation, Work Commitment

b. Dependent Variable: Employee Performance

*Source: Data processed from research findings, 2022.*

As presented in Table 14, the coefficient of determination ( $R^2$ ) for the interaction between work commitment and work motivation is 0.549, implying that the model explains approximately 54.9% of the variance in employee performance. This result indicates that work motivation serves as a moderating variable, enhancing the positive effect of work commitment on employee performance at CV. Riau Jaya Abadi Medan.

**Simultaneous Hypothesis Testing (F-Test)**

**Table 15.** Simultaneous Hypothesis Test of Intellectual Intelligence and Work Commitment on Employee Performance.

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1396,461	2	698,230	50,105	,000 <sup>b</sup>
	Residual	1073,027	77	13,935		
	Total	2469,488	79			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Work Commitment, Intellectual Intelligence

Source: Data processed from research findings, 2022.

The F-test result showed  $F = 50.105$ , which is greater than the critical F-value (3.115), with a significance of  $0.000 (< 0.05)$ . Thus, intellectual intelligence and work commitment simultaneously have a significant positive influence on employee performance at CV. Riau Jaya Abadi Medan. This finding confirms that an increase in both intellectual intelligence and work commitment significantly enhances employee performance, whereas a decline in these factors may lead to reduced performance levels.

### Coefficient of Determination ( $R^2$ )

Hasil perhitungan koefisien determinasi untuk kontribusi di antara variabel kecerdasan intelektual dan variabel komitmen kerja terhadap variabel kinerja karyawan adalah sebagai berikut:

**Tabel 16.** Coefficient of Determination for the Combined Effect of Intellectual Intelligence and Work Commitment on Employee Performance.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,752 <sup>a</sup>	,565	,554	3,733

a. Predictors: (Constant), Work Commitment, Intellectual Intelligence

b. Dependent Variabel: Employee Performance

Source: Data processed from research findings, 2022.

The  $R^2$  value of 0.554 (55.4%) indicates that intellectual intelligence and work commitment together explain more than half of the variation in employee performance. The remaining 44.6% is influenced by other factors outside the model, such as work environment, organizational culture, promotion systems, discipline, and personality traits.

### Summary of Findings

1. Intellectual intelligence positively and significantly influences employee performance.
2. Work commitment positively and significantly influences employee performance.
3. Work motivation strengthens (moderates) both relationships above.
4. Collectively, these variables explain 55.4% of the variation in performance.

Overall, it can be concluded that intellectual intelligence, work commitment, and motivation play crucial roles in improving employee performance at CV. Riau Jaya Abadi Medan. The findings underscore the importance of fostering intellectual capacity, emotional engagement, and motivational support to achieve optimal organizational outcomes.

### Discussion

These results collectively confirm that intellectual intelligence, work commitment, and motivation are vital psychological and behavioral determinants of employee performance. High intellectual intelligence enables employees to solve complex problems efficiently, while strong commitment ensures consistency and dedication. Motivation, as a moderating factor, amplifies these effects by stimulating effort and persistence. Thus, the combination of these internal factors significantly enhances employee productivity and organizational effectiveness at CV. Riau Jaya Abadi Medan.

From a managerial perspective, the findings suggest that organizations should invest in cognitive development programs, such as problem-solving workshops and decision-making training, to strengthen employees' intellectual intelligence. At the same time, management should foster commitment by recognizing employee contributions, providing fair compensation, and developing a supportive organizational culture. Furthermore, motivation can be enhanced through reward systems, career development opportunities, and participative leadership. When these elements are aligned, employee performance is likely to improve, contributing to the company's competitive advantage.

## **5. CONCLUSION & RECOMMENDATIONS**

### **Conclusion**

This study aimed to analyze the influence of intellectual intelligence and work commitment on employee performance, with work motivation serving as a moderating variable, at CV. Riau Jaya Abadi Medan. Based on the results of statistical testing and analysis, several key conclusions can be drawn.

1. Intellectual intelligence has a positive and significant effect on employee performance. Employees with higher intellectual abilities are more capable of understanding complex tasks, solving problems effectively, and making rational decisions, which ultimately enhance their job performance.
2. Work commitment also exerts a positive and significant influence on employee performance. Employees who are emotionally attached to their organization, feel a sense of responsibility, and remain loyal to company goals tend to perform better. Strong work commitment encourages consistency and persistence in completing assigned duties.
3. Work motivation strengthens the influence of intellectual intelligence and work commitment on employee performance. Employees who possess strong motivation are more likely to maximize their intellectual abilities and demonstrate greater enthusiasm in

achieving work objectives. Motivation acts as an energizing factor that transforms potential into actual performance.

4. The results of the simultaneous testing indicate that intellectual intelligence and work commitment together have a substantial impact on employee performance. The adjusted R<sup>2</sup> value of 0.554 shows that 55.4% of employee performance variation can be explained by the two variables, while the remaining 44.6% is influenced by other factors such as work environment, organizational culture, and discipline.

Overall, these findings confirm that intellectual intelligence, work commitment, and work motivation are critical psychological and behavioral factors that determine employee success. The study contributes to the body of knowledge by highlighting the moderating role of motivation in strengthening the relationship between cognitive and attitudinal factors and employee performance outcomes.

### **Recommendations**

Based on the findings and conclusions, several practical and theoretical recommendations are proposed:

1. **Enhancement of Intellectual Intelligence:**

The company should organize professional development programs such as training workshops, technical courses, and problem-solving seminars to improve employees' cognitive and analytical skills.

2. **Strengthening Work Commitment:**

Management should build a supportive work environment that fosters loyalty and emotional attachment to the organization. Recognition programs, transparent promotion systems, and fair compensation are essential to strengthen employees' sense of belonging.

3. **Increasing Work Motivation:**

Motivation can be enhanced by applying reward and incentive systems, setting clear career development paths, and adopting participative leadership styles that value employee input in decision-making processes.

4. **Organizational Culture and Supervision:**

The company should cultivate a positive and disciplined organizational culture that encourages teamwork, responsibility, and continuous improvement. Supervisors should act as role models who inspire and motivate subordinates.

5. **Future Research Suggestions:**

Future studies are encouraged to include additional variables such as emotional intelligence, leadership style, and work environment to provide a more comprehensive

understanding of the factors affecting employee performance. Researchers may also consider qualitative approaches or mixed-method designs to gain deeper insights into employee behavior and motivation patterns.

By implementing these recommendations, organizations such as CV. Riau Jaya Abadi Medan can enhance their human resource capabilities and overall competitiveness in the industrial sector.

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