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#### Abstract

This research explores the role of effective communication, cognitive flexibility, and competence in fostering collaboration and innovation among Civil Servants (ASN). It reveals that competency significantly impacts performance, emphasizing the importance of competency development for organizational success. However, the study does not prove that communication significantly influences performance through competence. The findings can guide local governments in developing effective HRM policies and programs for ASN, enhancing bureaucratic capacity and effectiveness.

Keywords: Cognitive Flexibility, Communication, Creativity, Competence, Performance

# INTRODUCTION

Bureaucratic reform has become the main focus of the Indonesian government since the introduction of the Grand Design for Bureaucratic Reform 2010-2025 through Presidential Regulation No. 81 of 2010. The final stage of implementing this reform, which will take place from 2020 to 2025, marks an effort to create a worldclass bureaucracy defined by quality public services, effective and efficient governance, high professionalism, and democratic management. The Civil Servants (ASN) is the main driver in realizing this vision, emphasizing integrity, high service culture, professionalism, public orientation and global insight. However, the introduction of the Industrial Revolution 4.0 has changed the work landscape drastically, forcing all sectors, including Civil Servants (ASN), to adapt to the era of digitalization. Public demand for fast, precise and efficient services is increasing. Therefore, human resources (H.R.) management and Civil Servants (ASN) management must transform into a world-class bureaucracy responsive to these changes. Even though there has been progress in bureaucratic reform, many challenges still need to be overcome, especially in the governance of Civil Servants (ASN) management. The main problem facing the Industrial Revolution 4.0 is the need for more competence and performance to the demands of the times. Civil Servants (ASNs) are expected to be able to adapt to become Civil Servants (ASN) that are agile, high performing and have relevant competencies. Human resource management (HRM) is considered one of the main keys to improving Civil Servants' (ASN) performance. HRM covers various aspects, from recruitment, selection, and career development to performance measurement. However, there are areas for improvement in measuring Civil Servants' (ASN) competency and performance, where the two tend to operate separately. This is not by the finding that competence positively and significantly affects performance. Measuring the professionalism index of Civil Servants (ASN) human resources is crucial in knowing the extent to which Civil Servants (ASN) competence and performance meet the job requirements. However, there are areas for improvement in the competency and performance measurement process, such as unequal access to training and a need to evaluate Civil Servants (ASN) assignments after attending training. In the context of Riau Province, success in achieving the Green Riau development priority depends on the competence and performance of Civil Servants (ASN) as the main organizer. However, there has been criticism regarding the need for a good concept in implementing this program and delays in planning and implementation. Thus, this research aims to perfect the determination of Civil Servants' (ASN) competency

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with the aim of improving Civil Servants' (ASN) performance in Riau Province towards a world-class bureaucracy. This research also examines the importance of integration between competency and performance in measuring the Civil Servants (ASN) professionalism index and the urgency in planning and implementing development programs effectively to achieve the desired development goals. Through an in-depth understanding of this background, this research can contribute to formulating appropriate and effective solutions to improving the quality of bureaucracy in Riau Province and, more broadly, in Indonesia in general.

# LITERATURE REVIEW

## **Cognitive Flexibility**

A person must possess cognitive Flexibility to change from a maladaptive behaviour—one that cannot adjust or adapt to one's environment—to an adaptive behaviour that complies with social and cultural norms (Toraman,2020). Meanwhile (Fröding & Osika, 2015) revealed that cognitive Flexibility is a process of an individual's ability to regulate strategies in dealing with new and unexpected situations. Besides that, Spiro and Jehng in Toraman (2020) explain that an individual who is more situational and flexible, cognitively viewing task representations from various views, will find it easier to interpret changes.

## Communication

Communication is the interaction of humans with each other who influence each other, intentionally or unintentionally, which has not only the limitations of verbal language but also the participation of facial expressions and art (Krawczyk & Turowski, 1987). According to(Mafra, 2017), communication is a process of individual efforts to provide understanding and transfer messages to other people. Different opinions were expressed (Widjaja, 1993), which says that communication is a person's process of mutual interaction in giving and receiving symbols that are important to humans. Communication is integral to the management process; efficient communication may foster harmonious teamwork to achieve goals. (Wandi et al., 2019) states that there is a need for action from the leadership to take policies in communicating with parties outside or external to the organization in managing an organization. This is intended to establish an active communication relationship between two or more communicating organizations. Herdment in Wandi et al. (2019)states that the success of an organization must be connected to the importance of external communication implemented. External communication is built on reciprocal communication, implemented by providing information, collaborative activities and dialogue between organizations.

## Creativity

Creativity will produce various innovations and new developments. Creative individuals will always be needed by their environment because they can meet the changing needs of their environment. Creative individuals can survive in dynamic and tight global competition(Murtadho & Eriyani, 2018). Creativity is also defined as the ability to create results that are new, innovative, unprecedented, interesting, strange and useful for society(Estheriani & Muhid, 2020)

## Competence

The talent people need to function exceptionally well and effectively to develop their abilities toward higher performance is known as competency (Rande, 2016). For more than three decades, different researchers have defined competency in various ways based on their thoughts and perspectives. Competency is a collection of knowledge, attitudes, and abilities essential for creating crucial outputs (McLagan & Suhadolnik, 1989).(Hutapea & Nurianna, 2008) describe competency as an individual's ability, skills, knowledge, and conduct to fulfil tasks allocated to them. Temporary (Lee, 2009) defines competency as knowledge and behavioural skills that can impact the most important areas of a worker's job. Competency also refers to the performance of workers, individuals, or practitioners connected to organizational performance in carrying out activities or labour that can be evaluated and measured (Sulaiman et al., 2015)

## Performance

As we enter the digitalization era of the Fourth Industrial Revolution, Civil Servants (ASN) must be able to adapt to technological transformation to carry out quality government governance (good governance) and public service functions more efficiently, precisely, and swiftly. Civil Servants (ASN) must use cutting-edge technology to improve community services (Anggoro, 2022; Faedlulloh et al., 2020). Employee performance is a function of the interaction between motivation and ability(Hendra, 2020; Robbins et al., 2013). Employee and organizational performance is largely determined and significantly and positively influences employee competence. (Budhiningtias Winanti, 2011; Qamariah, 2011; Suprapto, 2009) Whereas (Winanti, 2011) revealed that if all existing individuals are well-integrated within the company and are competent in carrying out their duties and functions, then high performance can be achieved.

## **Research Model**

The model created for this research is based on the gap and research gap concepts derived from previous research findings. The model used in this research is depicted in the following figure:

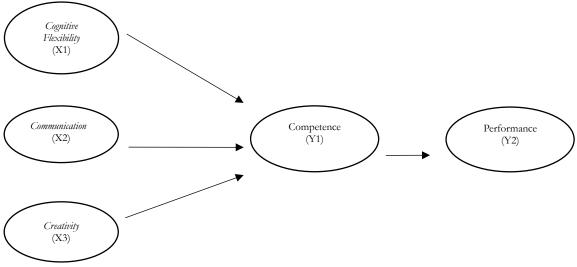


Figure 1. Conceptual framework

## Hypothesis

Cognitive Flexibility influences competence.

Communication influences competence.

Creativity influences competence.

Cognitive Flexibility influences performance through competence.

Communication influences performance through competence.

Creativity influences performance through competence.

Competence influences performance

# METHOD

This research was quantitative and uses sampling and measurement methods to collect data. Participants in this research were Civil Servants (ASN) involved in planning the Green Riau development program at Bappedalitbang Riau Province and Bappeda 12 Regencies/Cities, consisting of (1) Head of Bappedalitbang/Bappeda, (2) Head of Economic Division and (3) Functional Planner. In this study, after calculating the number of samples, we found

229 samples. Data collection was carried out using a questionnaire. Meanwhile, using Structural Equation Modeling - Partial Least Square (SEM PLS) analysis, the data analysis for this research was quantitative.

## RESULTS

## **Convergent Validity**

By examining the loading indicator value or loading factor for each indicator on each construct variable in this study, the convergent validity test findings were visible:

Cognitive Flexibility	Communication	Creativity	Competence	Performance	AVE
0.789	0.882	0.799	0.783	0.856	
0.771	0.852	0.798	0.858	0.748	
0.763	0.829	0.842	0.786	0.804	
0.738	0.848	0.817	0.876	0.833	
0.757	0.877	0.879	0.762	0.825	
0.715	0.803	0.806	0.802	0.813	>0.5
0.864	0.828	0.829	0.789	0.840	>0.5
0.824	0.787	0.852	0.879	0.839	
0.837	0.864	0.823	0.761	0.837	
0.862	0.787	0.850			
0.835	0.838				
0.793	0.822				7

Table 1 Convergent Validity Test Results of Research Variables

Source: Smart Pls 4.0

All indicators had a loading factor value greater than 0.7, as shown in Table 1. The average variance extracted (AVE) value was also higher than 0.50, indicating a correlation between the constructed variables and all the reflective indicators discussed above. This explains why each variable in the variable construct meets the convergent validity criteria.

Another technique for calculating discriminant was the AVE value squared. Good discriminant validity was shown by an AVE square root value greater than the correlation between the model's latent constructs (Ghozali & Latan, 2014). The following table illustrates the results of the discriminant validity test with square root, average variance extracted (AVE), diagonal columns, and parentheses; the correlation between latent variables in the same column (above or below it) must be greater than this correlation.

Variable		Cognitiv Flexibili		Con	nmunic	ation	(	Creativi	ty	Co	ompeter	nce	Per	forman	ce
Dimensions	Situation	Solution	Problem	Conflict	Idea	Information	Motivation	Creative	Blending	Knowledge	Skills	Experience	Quantity	Quality	Punctuality
Situation	0.756														
Solution	0.649	0.842													
Problem	0.463	0.662	0.831												
Conflict	0.373	0.554	0.609	0.849											
Idea	0.352	0.532	0.658	0.753	0.827										
Information	0.332	0.474	0.526	0.492	0.546	0.816									
Motivation	0.239	0.431	0.559	0.547	0.600	0.664	0.814								
Creative	0.341	0.466	0.620	0.572	0.618	0.664	0.768	0.838							
Blending	0.323	0.427	0.513	0.513	0.600	0.574	0.492	0.573	0.842						
Knowledge	0.486	0.427	0.350	0.374	0.299	0.267	0.355	0.379	0.316	0.810					
Skills	0.446	0.512	0.479	0.430	0.399	0.341	0.400	0.440	0.384	0.569	0.815				
Experience	0.398	0.445	0.409	0.352	0.368	0.371	0.357	0.374	0.453	0.355	0.538	0.811			
Quantity	0.434	0.418	0.430	0.288	0.354	0.385	0.319	0.455	0.485	0.451	0.441	0.468	0.804		
Quality	0.479	0.396	0.407	0.346	0.466	0.428	0.438	0.482	0.475	0.485	0.500	0.540	0.667	0.824	
Punctuality	0.493	0.448	0.423	0.371	0.472	0.407	0.431	0.528	0.520	0.527	0.527	0.515	0.659	0.686	0.839

Table 2 AVE Square Root Values of Research Variable Constructs

#### Source: Smart Pls 4.0

Table 2 above shows that there was a strong correlation between one construct and another, with a higher square root of AVE along the diagonal line indicating a higher level of construct validity.

## **Indicator Reliability**

The following Cronbach's alpha table shows the results of reliability tests using reliability indicator criteria:

Variable	Dimensions	Cronbach's Alpha	Decision
	Situation	0.850	Reliable
Cognitive Flexibility	Solution	0.794	Reliable
	Problem	0.775	Reliable
	Conflict	0.922	Reliable
Communication	Idea	0.768	Reliable
	Information	0.750	Reliable
	Motivation	0.831	Reliable
Creativity	Creative	0.788	Reliable
	Blending	0.794	Reliable
	Knowledge	0.740	Reliable
Competence	Skills	0.745	Reliable
	Experience	0.738	Reliable
	Quantity	0.727	Reliable
Performance	Quality	0.763	Reliable
	Punctuality	0.789	Reliable

Table 3 Cronbach's Alpha Test Results for Research Variable Constructs

Source: Smart Pls 4.0

Cronbach's alpha values for the constructed variables were all greater than 0.70, as shown in Table 3. This explains why all constructed variables meet reliability standards.

## Internal Consistency Reliability

Internal consistency reliability refers to the estimation of reliability based on the average correlation of test items (Ghozali & Latan, 2015). The following composite reliability table shows the results of reliability tests with internal consistency reliability criteria:

Table 4 Composite Reliability Test Results for Construct Variables

Variable	Dimensions	Composite Reliability	Decision
	Situation	0.889	Reliable
Cognitive Flexibility	Solution	0.880	Reliable
	Problem	0.870	Reliable
	Conflict	0.939	Reliable
Communication	Idea	0.866	Reliable
	Information	0.856	Reliable
	Motivation	0.887	Reliable
Creativity	Creative	0.876	Reliable
	Blending	0.880	Reliable

Variable	Dimensions	Composite Reliability	Decision
Competence	Knowledge	0.851	Reliable
	Skills	0.855	Reliable
	Experience	0.852	Reliable
	Quantity	0.845	Reliable
Performance	Quality	0.863	Reliable
	Punctuality	0.877	Reliable

Source: Smart Pls 4.0

Based on Table 4, all combined reliability scores for the research variable construct variables were higher than 0.70. This explains why all construct variables meet reliability standards.

#### Structural Model Testing (Inner Model)

#### Coefficient of Determination

The results of the Adjusted R-squared value can be seen as follows:

Dependent Variable	R-square	R-square adjusted		
Competence	0.460	0.453		
Performance	0.478	0.476		

Source: Smart Pls 4.0

According to Table 5, the modified R square value for competency is 0.453. This suggests that cognitive Flexibility, communication, and creativity contributed 45.3% to competency. The performance R squared value was 0.478. This suggests that 47.8% of performance was influenced by competency.

#### F2 analysis

In F2 analysis, the effect size, or f-square, was used to determine how much a variable influenced the outcome. 0.02 was classified as little, 0.15 as medium, and 0.35 as large f-squared value. Values less than 0.02 can be ignored or assumed to have no impact.

Influence	f2	Criteria
Cognitive Flexibility -> Competence	0.257	Currently
Communication -> Competence	0,000	No effect
Creativity -> Competence	0.064	Small
Competency -> Performance	0.916	Big

Table 6 F2 Test Analysis Results

Source: Smart Pls 4.0

The F2 number, as shown in the table above, indicates the strength of the relationship between the dimensions of exogenous and endogenous factors. The F2 score of 0.02 suggests that the latent predictor variable (latent exogenous variable) has a minor impact on the structural level. The F2 value of 0.15 shows that the predictor latent variable (exogenous latent variable) moderately influences structural parameters. The structural level was considerably influenced by predictor latent factors (exogenous latent variables) (F2 = 0.35).

#### Fitting Model

Several indicators can be defined to assess model suitability and quality indices; the results were shown in Table 7 below.

Criteria	Saturated models
SRMR	0.084
d_ULS	9,744
d_G	2,725
Chi-square	3131,972
NFI	0.623

Source: Smart PLS, 4.0

A model will be feasible if the SRMS criteria get below 0.08. From the tests carried out, the SRMS value was 0.070 < 0.08, which was significant that the model fits the data.

#### Hypothesis test

Seven hypotheses would be revealed by hypothesis testing using partial least squares (PLS). The t-test (t-test) of the influence between variables was used for this test. The following were the test results using bootstrapping from PLS analysis:

Hypothesis	Path Coefficient	T statistics	P value
DI	RECT		
Cognitive Flexibility -> Competence	0.486	6,467	0,000
Communication -> Competence	-0.015	0.166	0.868
Creativity -> Competence	0.290	3,711	0,000
Competency -> Performance	0.692	17,962	0,000
IND	DIRECT		
Cognitive Flexibility -> Competency -> Performance	0.336	5,976	0,000
Communication -> Competency -> Performance	-0.011	0.166	0.868
Creativity -> Competency -> Performance	0.201	3,435	0.001

Table 8 Hypothesis Testing Results

Source: Smart Pls 4.0

From the test results above, an image model was obtained. The Structure Diagram was as follows:

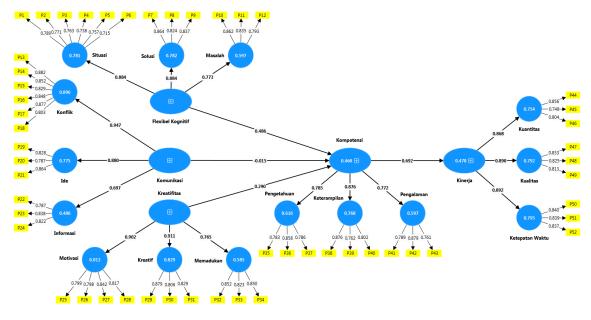


Figure 2 Structural Diagram Model Pls

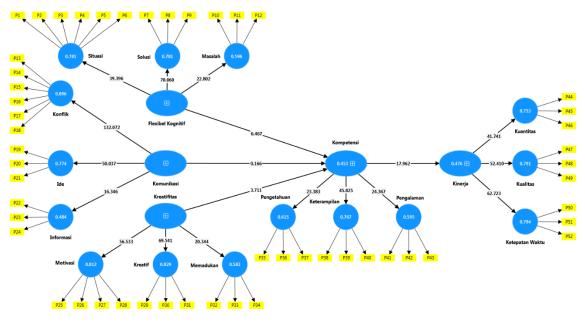


Figure 3 Bootstrap

# DISCUSSION

# Hypothesis 1

The t-statistic was 6.467, the p-value was 0.000, and the coefficient value was 0.486. The t statistic (6.467) was more than the t table (1.96) according to these results, and the P value (0.000) was less than 0.05. Compatibility was thus significantly impacted by cognitive Flexibility.

# Hypothesis 2

The obtained coefficient value was -0.015, with a P value of 0.868 and t-statistics of 0.166. According to these results, the t statistic (0.166) was less than the t table (1.96), or the P value (0.868) was greater than 0.05. Consequently, communication had no discernible effect on competency.

# Hypothesis 3

A coefficient value of 0.290 was discovered using a P value 0.000 and t-statistics of 3.711. According to these results, the t statistic (3.711) was more than the t table (1.96), or the P value (0.000) was less than 0.05. Therefore, creativity has a big influence on competency.

# Hypothesis 4

A computed t-statistic of 5.976 and a P-value of 0.000 accompanied the obtained coefficient value of 0.336. These findings suggest that either the P-value (0.000) was less than 0.05 or the t-statistic (5.976) was greater than the t table (1.96). Therefore, through competence, cognitive Flexibility has a significant impact on performance.

# Hypothesis 5

The coefficient value obtained was -0.011 with calculated t-statistics of 0.166 and P value of 0.868. These results show that the t-statistic (0.166) was smaller than the t table (1.96), or the P value (0.868) was greater than 0.05. Thus, communication has no significant effect on performance through competence.

# Hypothesis 6

Calculated t-statistics of 3.435 and P value of 0.000 yielded a coefficient value 0.201. These findings indicate that either the P value (0.000) is less than 0.05 or the t-statistic (3.435) was bigger than the t table (1.96). Hence, through competence, creativity has a big impact on performance.

# Hypothesis 7

With a t-statistic of 17.962 and a p-value of 0.000, the coefficient value was 0.692. The t statistic (17.962) was greater than the t table (1.96), according to these data, or the P value (0.000) was less than 0,05. Thus, performance was significantly influenced by competence.

# CONCLUSION

As described, creativity development plays an important role in improving human resource competence. When someone can create new solutions, adapt to change, and innovate in the work environment, this benefits the individual and the organization they work for. Good communication is also important in improving competence because it facilitates the exchange of ideas, coordination of tasks, and achievement of common goals. Cognitive Flexibility, the ability to adapt and think in new situations, is important in expanding a person's ability to solve problems and achieve goals. By paying attention to the role of each of these aspects in improving competence, organizations and governments can take concrete steps to facilitate the development of these skills in their human resources. Support in the form of training, a supportive work environment, and incentives to innovate can be effective strategies for improving overall competency.

## Limitations

It was still necessary for the 229 responders to accurately represent the true situation. The research object only examines one province; neighbouring provinces were not included in the research object. Additionally, during the data collection process, information provided by respondents via questionnaires occasionally needs to accurately reflect the respondents' opinions due to differences in their individual beliefs, presumptions, and understandings. Respondents' thoughts and additional variables like honesty were filled out in the questionnaire.

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