

Effect of Team Coordination on the Performance that Moderated by Complexity of Tasks of Working Team at the Office of Public Works, Housing, and Settlement Area in the Regency of Sleman

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Abstract - Organization of Office of Public Works, Housing and Settlement Area (Indonesian: *Dinas Pekerjaan Umum, Perumahan dan Kawasan Pemukiman* (the "DPUPKP")) of the Regency of Sleman is a working team consisting of sector-specific special teams, related, and relatively loose. Performance achieved by the DPUPKP Working Team depends on how the sector team builds team coordination and tasks complexity. This research aims to analyze the effect of team coordination on the performance of the complexity of tasks that are moderated at the DPUPKP Working Team of the Regency of Sleman with the population of all structural officials of DPUPKP of the Regency of Sleman. Data collection techniques is using primary data in the form of questionnaires and through literature research. The survey was conducted by questionnaire distribution approach to 36 structural officials with 86.11% response rate. Technique of data analysis is using analysis of Moderated Regression Analysis (MRA). The results showed that coordination team had significant effect on the performance of team with positive regression coefficient of 0,770. The interaction of coordination team with tasks complexity has a significant influence on the performance of team with positive regression coefficient of (0.051). Coordination team, tasks complexity, and interaction both have an effect on the performance of team of 78.6%.

Keywords - team performance, team coordination, team, and tasks complexity.

1. Preliminary

The organization of DPUPKP of the Regency of Sleman is a working team consisting of sector-specific, related, and relatively loose networking teams. The Working Team consists of people from different functions or departments but has the same interests or targets, which means that they need to make special efforts to collaborate with each other. In the sector there are activity teams set up specifically to work together in full or part time to start and implement a project or solve a problem. Although in the context, the teams will have the

same goals, however different field or sector backgrounds bring up different sector goals.

The Sectoral Team in the organization of DPUPKP consists of members with different skills, skills and roles, who work on tasks that require them to combine their efforts in ways that facilitate the completion and success of their own tasks. All sectors are part of the DPUPKP Working Team, which is the backbone of the performance of DPUPKP in providing services to the community and addressing the problems and challenges faced.

Performance achieved by the DPUPKP Working Team, depends on how sector teams build team

coordination. Sectoral goals will lead to lower team coordination and thus, lower team performance (Nahrgang et al., 2013). The complexity of tasks moderates the effect of coordination against the performance, in which the effect of coordination against the performance is much stronger on simple tasks than complex tasks (Locke & Latham, 1990; Wood, Mento, & Locke, 1987). The negative effects of the sector on team performance are reinforced under increasing tasks complexity conditions and are explained by the amount of coordination within the team (Nahrgang et al., 2013).

This research aims to analyze the effect of team coordination on the performance of moderated tasks complexity in the Working Team of DPUPKP of the Regency of Sleman. The results of this research are expected to be an overview for the organization of the existing coordination, so that recommendations can be made to improve the coordination function.

This document is set in 10-point Times New Roman. If absolutely necessary, we suggest the use of condensed line spacing rather than smaller point sizes. Some technical formatting software print mathematical formulas in italic type, with subscripts and superscripts in a slightly smaller font size. This is acceptable.

2. Literature Review and Hypothesis Development

2.1. Performance of Team

Performance is derived from the word of “job performance” or “actual performance” which means work performance or achievement actually achieved by someone. Understanding the performance (work performance) is the work of quality and quantity achieved by an employee in performing its functions in accordance with the responsibilities given to him/her. Performance is an achievement of work, namely the comparison between the work with the standard set (Dessler, 2000).

Performance is the result of work of behavior (Armstrong, 2006). This performance understanding relates between work with behavior. As a behavior, performance is a human activity that is directed at the implementation of the tasks of the organization charged to it. According to the behavioral approach in management, performance is the quantity or quality of something produced or services provided by someone who does the work (Luthans, 2005).

Conceptually, the work team is unified in team performance and is a set of interconnected cognitions, attitudes and behaviors in dynamic work processes (Salas et al., 2008). According to Gittel (2010), high performance of work practices can improve team performance through

strengthening the influence among different members of a team. Performance of the team can be seen from work productivity, outcome efficiency, product quality, and performance of the organization's financial system. There are five components to see the high performance of work practices. The five dimensions are selection for cross-functional teamwork, rewards for cross-functional teamwork, cross-functional teamwork conflict resolution, cross-functional meetings, and cross-functional boundary spanner.

2.2. Coordination Team

Team coordination is defined as the way team members synchronize their actions to successfully complete group tasks (Wittenbaum, Vaughan, & Stasser, 1998). Relational coordination is a theory that arises to understand the dynamic influence of Gittel's work coordination (2010). In particular relational coordination is defined as a process that mutually supports the interaction between communication and influence with a view to achieving unity of task. Improved team coordination allows team members to master the task, thereby improving team performance.

There are three influences needed for the occurrence of coordination process, namely equalization or shared goal, shared knowledge, and mutual respect. According to the theory of relational coordination, coordination will be more effective if done through frequency and quality communication, and through high quality of influence among participants or workers in the organization.

Hypothesis 1: Team coordination has a positive effect on the performance of the DPUPKP Work Team of the Regency of Sleman.

2.3. Team

Team is a social entity consisting of members with high-tasks interdependence and common goals and shared value (Dyer, 1984). Team is often used to perform tasks within an organization. Often, the team consists of members with different skills, skills, and roles, who do the work and require them to combine their efforts in a way that facilitates the completion and success of the task.

Success in performing the main tasks and functions and objectives, which is the elaboration of the vision and mission of local government organizations will depend on the performance of employees who are members of the work team. The working team of DPUPKP of the Regency of Sleman is a cross functional type of work team, consisting of the five sectors with the same level (echelon III), with the main duty of function which is charged based on sectoral affair. The work team is a group that has individual efforts that generate greater performance than

the number of individual inputs (Robbins & Judge, 2015). The work team generates positive synergies through a coordinated effort. The work team is defined as an interdependent performance component needed to coordinate the performance of some individuals / sectors effectively (Eduardo Salas et al., 2008).

2.4. Complexity of the tasks

The complexity of the tasks herein is interpreted as the individual's perception of a tasks caused by the limited capability and memory, as well as the ability to integrate the problems that decision-makers possess. The complexity of the tasks is a function of (a) the number of different pieces of information that must be processed to complete the task, (b) the sequencing requirements associated with bringing information and actions together, and (c) the stability of the information process / influence with the precautions.

The complexity of tasks that increase and exceeds one's available resources causes performance to decline (Kanfer & Ackerman, 1989). Team in simple tasks conditions, directly affect performance by activating automated strategies and plans, which involve increased effort, perseverance, and attention (Latham, 2007; Locke & Latham, 1990). But when tasks become more complex, these automated strategies or plans are less effective (Nahrgang et al., 2013). In most complex tasks, successful performance depends on developing more sophisticated strategies (Latham, 2007; Locke & Latham, 1990; Wood & Locke, 1990). According to Nahrgang et al., (2013), team members cannot rely solely on individual efforts and their perseverance to achieve team goals in complex tasks, but instead have to exchange information and support each other to achieve team goals.

The complexity of the tasks to influence the extent to which team members are involved in coordination activities (Nahrgang et al., 2013). In most complex tasks, successful performance depends on developing more sophisticated strategies (Latham, 2007; Locke & Latham, 1990; Wood & Locke, 1990).

Hypothesis 2: Team coordination positively affects the performance of the DPUPKP Work Team of the Regency of Sleman, which is reinforced in a simple task.

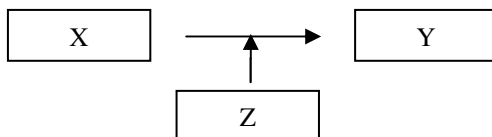


Fig. 1 Model of the influence independent variable (X) with dependent variable (Y) that is moderated by moderating variable (Z).

3. Method of Research

This research is a quantitative research with inferential statistics. Surveying or collecting data is done only at a certain time (Cross section / incidental). The unit of analysis in this research is the Public Works Department of Housing and Settlement Area of the Regency of Sleman, with 36 respondents who are structural officials.

The research was conducted in June 2018, conducted through a questionnaire that was completed independently by the respondents. The questionnaire consisted of 21 questions based on 3 dimensions namely; (a) team coordination dimension, with indicators; communication, support and adjustment of workload, (b) dimensions of team performance, with indicators; selection for cross-functional teamwork, cross-functional teamwork conflict resolution, cross-functional meetings, cross-functional boundary spanner and (c) tasks complexity dimensions, with indicators; the ratio of personnel capabilities to the number of activities, strategic plans, and information exchange.

Data analysis uses the Moderated Regression Analysis (MRA) by utilizing IBM SPSS Statistics version 22 formulation. From this analysis it will know the effect of team coordination on team performance that moderated tasks complexity.

4. Research Results and Discussion

Based on the data analysis, it obtains the general description regarding the respondents who are the structural officials / heads in DPUPKP; most of the respondents are ≥ 50 years, 64.5%, most of the respondents are have the term of office of ≥ 3 years, 61.3%, most of the respondents are male, 83.9 %, most of the respondents have higher education, 93,6% (Undergraduate Programme, 48,4%, and Graduate Programme, 45,2%), with respondent position is dominated by echelon Iva, 67,8%.

Table 1: Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.887 ^a	.786	.762	2.516

a. Predictors: (Constant), XZ, X, Z

$R^2 = 0.786$ means that the team coordination (X), tasks complexity (Z), and interaction (XZ) have jointly affected the performance of the team (Y). i.e. 78.6%.

Table 2: Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	628.445	3	209.482	33.093	.000 ^b
	Residual	170.910	27	6.330		
	Total	799.355	30			

a. Dependent Variable: Y

b. Predictors: (Constant), XZ, X, Z

If sig < α is significant

If sig > α means insignificant

Used level of significance (α) = 5% = 0.05

F arithmetic = 33.093 and sig = 0,000

Sig < α (0.000 < 0.05) means team coordination (X), tasks complexity (Z), and interaction (XZ) together have significant effect on the performance of team (Y).

Table 3: Result of hypothesis test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.442	7.954		2.444	.021
	X	.770	.370	.481	2.082	.047
	Z	-1.284	.670	-.764	-1.918	.066
	XZ	.051	.024	1.124	2.151	.041

a. Dependent Variable: Y

The result test of hypothesis 1: Sig < α (0.047 < 0.05) means team coordination (X) have positive and significant influence to team performance (Y). Coefficient of regression (0.770) positive means the higher the team coordination score (X) then the higher the team's performance score (Y) is predicted; the lower the team coordination score (X) then the lower the team performance score (Y) is predicted; thereafter it can be concluded that variable of Team Coordination positively affects the variable of Team Performance, which indicates that the first hypothesis is accepted. In this research, the DPUPKP work team has been involved in coordinating more teams to achieve team performance by always communicating accurately and timely to solve problems, mutually support through the exchange of relevant information and mutual assistance of other units. To ease the workload, DPUPKP structural officials share their duties, knowledge and other units.

The result test of hypothesis 2: Sig < α (0.041 < 0.05) means team coordination have positive effect to team performance that is reinforced by complex tasks. The interaction of team coordination with tasks complexity (XZ) has a significant effect on team performance (Y). The regression coefficient (0.051) positive means it is predicted that the higher the interaction score of XZ then the higher the team performance score (Y); the lower the XZ interaction score then the lower the Team Performance score (Y). This result also shows that Tasks Complexity (Z) is a reinforcing moderating variable, so it can be concluded that the second hypothesis is rejected. The negative effects of tasks complexity in the working environment of DPUPKP of the Regency of Sleman can be overcome and it becomes a separate motivation for existing structural officials to work harder. The complexity of the tasks is used as a motivational tool to improve the quality of an employee's work. Complex tasks, will be able to be implemented, if there is coordination or communication in completing the task, by putting forward communication positively influence on morale. In better coordination conditions, complex tasks will not hamper efforts to achieve better team performance.

Most of the DPUPKP structural officials have had sufficient work experience (≥ 3 years of 61.3%) and have a

high education background (Undergraduate Programme and Graduate Programme of 93.6%), with the majority age include in Gen X (≥ 50 years of 64.5%). Gen X has the characteristics of a difficult challenge, which means that in terms of working such generation tends to prefer a difficult challenge. They enjoy training opportunities and prize money based on their respective performance. Gen X desires to achieve high career in its work (career orientation), is a good planner and schedulers, and has a stable work ethic, and for them, the company's work loyalty is not desirable.

5. Conclusion and recommendation

5.1. Conclusion

Based on the data analysis, it is found that in the Working Team of DPUPKP, team coordination has a positive and significant impact on team performance. Team coordination (X) has a significant effect on team performance (Y) with positive regression coefficient (0.770). This suggests that this research supports previous research results or has consistency with previous research indicating that team coordination has a positive and significant impact on team performance.

The complexity of the tasks is a moderating variable of the effect of team coordination on team performance. From the analysis result found interaction of team coordination with tasks complexity (XZ) have significant influence to team performance (Y) with positive regression coefficient (0,051). This shows that the negative effect of the complex tasks on the performance of the DPUPKP team does not occur, since most of the DPUPKP structural officials have had sufficient work experience, have high educational backgrounds, with the majority of ages entering Gen X class which has the characteristics of a difficult challenge. Even the complexity of the tasks becomes a motivation to further improve the performance of the DPUPKP Working Team, through enhancing team coordination, more mutual exchange of information and mutual support. In contrast to previous research results conducted by Nahrgang et al., (2013) and Wood, Mento, & Locke, (1987), which states that team coordination positively affects team performance and progressively strong influence in simple tasks.

5.2. Recommendation

After considering the conclusion and recommendation, in order to meet the Minimum Service Standard of Public Works and Spatial Planning and Community Housing and Settlement Area, the leadership of DPUPKP of the Regency of Sleman is expected to pay more attention to the indicators that have an answer value

score below the average that is the adjustment of the load work, rewards, and strategies and plans.

DPUPKP structural officials must continue to communicate accurately and timely with other units to solve problems, must continue to support each other through the exchange of relevant information and mutual help other units, must share tasks, knowledge and appreciate other units, must be more careful in planning tasks / activities, performing tasks effectively and efficiently optimizing all potential and resources owned.

References

1. Armstrong, M., (2006). *Performance Management: Key Strategies and Practical Guidelines*. Kogan Page: USA.
2. Dessler, G., (2000). *Human Resource Management*. 8th edition. New Jersey: Prentice-Hall, Inc.
3. Dyer, L., (1984). Studying human resource strategy: An approach and an agenda, *Industrial Relations*, 23 (2): 156-69.
4. Gittel, J.H., (2010). *Relational coordination : Guidelines for theory, measurement and analysis*, Brendeis University, Massachusetts.
5. Kanfer, R., & Ackerman, P. L., (1989). Motivation and cognitive abilities: An integrative/aptitude-treatment interaction approach to skill acquisition. *Journal of Applied Psychology*, 74, 657-690.
6. Latham, G. P., (2007). *Work motivation: History, theory, research, and practice*. Thousand Oaks, CA: Sage Publications.
7. Locke, E. A., & Latham, G. P., (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall.
8. Luthans, F., (2010). *Organizational Behavior*, "An Evidence-Based Approach". 12 th edition.
9. Nahrgang, J.D., DeRue, D.S., Hollenbeck, J.R., Spitzmuller, M., Jundt, D.K., Ilgen, D.R., (2013), Goal setting in teams: The impact of learning and performance goals on process and performance. *Organizational Behavior and Human Decision Processes*, 122, (2013), 12-21.
10. Robbins, S. P., & Judge, T. A., (2015). *Perilaku Organisasi*. 12th Edition, Jakarta: Salemba Empat.
11. Salas, E. Cooke, N.J., & Rosen, M.A., (2008), On Teams, Teamwork, and Team Performance: *Discoveries and Developments. Human Factors and Ergonomics Society*, University of Central Florida.
12. Wittenbaum, G. M., Vaughan, S. I., & Stasser, G. (1998). Coordination in taskperforming groups. In R. S. Tindale, J. Edwards, & E. J. Posavac, et al. (Eds.), *Social psychological applications to social issues: Applications of theory and research on groups* (pp. 177-204). New York: Plenum Press.
13. Wood, R., Mento, A. J., & Locke, E. A. (1987). Task complexity as a moderator of goal effects: A meta-analysis. *Journal of Applied Psychology*, 72, 416-425.
14. Wood, R., & Locke, E. (1990). Goal setting and strategy effects on complex tasks. In B. Staw & L. Cummings (Eds.). *Research in organizational behavior* (Vol. 12, pp. 73-109). Greenwich, CT: JAI Press.