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Effect of Information Technology on Leader Innovation and Its Impact on Leader Performance

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ABSTRACT

Important elements in environmental performance development of government leaders in Jayapura regional work units are information technology, leader innovation, and leader performance to face regional autonomy. Therefore, this research aim is to study effect of information technology on leader innovation and its impact on leader performance. This research is done to 323 employee of Jayapura city government. Data is collected by questionnaire that measured by Likert scale. Data result is analyzed by path analysis. Research result show that (1) The importance of information technology on leader innovation to create more subjective creativity can brings a comparative advantage as well as a sense of responsibility, (2) Effect of information technology on leader performance is mediated by leader innovation leaders to strengthen public management with responsibility to serve public service professionally, (3) Effect of leader innovation on leader performance in development of public bureaucracy has support from management and responsible to create interpersonal creativity in task development of public services.

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INTRODUCTION

Important elements in environmental performance development of government leaders in Jayapura regional work units are information technology, leader innovation, and leader performance to face regional autonomy. Leader performance is created in self-government, namely right of self-determination. Authority means supremacy of authority or rule to carried out entirely by local authority. To avoid leader performance gap, information technology and leader innovation is need to pay attention to principles of democracy, equality, equity and guarantee features and peculiarities.

Anthony and Govindarajanc (2003) describe leader performance as consistency mechanism associated with information technology and leader innovation as follows:

1. Performance should consistent with leader's vision, mission, goals and objectives and strategies in public bureaucracy, so leader work is consistent with target.
2. Leader performance need to concern and to follow up with demands of government officials focusing on alignment creativity and empowerment.
3. Leader performance calls for policy with principles of loose and tight orientation, which is used as a political commitment direction or guidance rather than political authority.
4. Leader performance must create a civil servant with job to serve community.
5. Leader performances understand the importance and value of task to increase level of self-actualization.

Government institutional arrangement is linked to several things namely, among others (Wilcoxson Lesley, 2005):

1. Unification of Institutional Nomenclature. Uniformity in nomenclature of institutions specializes in areas where incremental change is made to become basis of an institutional arrangement. Taking into account the institutional dimension, it covers transformational leadership style, information technology, leader innovation ship, and organizational culture and thus creating a system synergy between government agencies.
2. Determination of Total Institutions. It aim is to determine amount of regional institutions based on position of transformational leadership style, information technology, leader innovation ship, and organizational culture.
3. Regional Institutional Unity. Regional institutions unity determine the changes to positions of specific consequences regarding the implications of information technology and leader innovation

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Jayapura city local government perspective, which is based on public interest (public oriented) can guarantee a fair sense in effective and efficient way. The positive thing to improve leader performance is constructed by information technology and leader innovation. There are three basic elements that underlie the regulation authority in institutional arrangements, among others: (1) routine each organizational unit designated as an official duty, (2) relatively stable means no change and authorized in accordance with rules, and (3) mechanisms and procedures to ensure continuity of implementation of employees tasks.

In this study the leader performance is related to information technology and leader innovation in Jayapura city government. Information technology has a positive relationship with leader innovation, it is proved logically to describe the leader competence in organization. MacKenzie and Wajcman (2001) found that results can be a positive benefit of information technology in leader innovation to get accurate information to communicate well. Ursula (2007) suggested that information technology has a positive link to leader innovation to provide information to answer the challenge and competition of globalization knowledge age, as well as to realize good governance in public sector. This needs a leader who truly competent and have a competitive advantage. Wise (2001) explains that existence of a positive effect to information technology and leader innovation in government system can encourage consensus and solution relative to each priority. To understand organization, leaders need coordinate work in vertical, horizontal, diagonal, territorial functional, informative, consultative and coordinative. Chsholm (2004) suggested that position of information technology and leader innovation s have positive effect on existence of local government as a logical consequence of public service efforts.

Research gaps of this study suggests the inconsistency results of previous studies. Flak and Dertz (2005) show empirically that information technology has a direct relationship, and correlated positively and significantly on leader performance as results shows exponential technological information change in capacity of public administration. Albert Borgman (2006) demonstrated empirically that information technology has an indirect relationship as well as a negative correlation and no significant effect on leader performance, the results emphasis on understanding of human resources to use technology to access information, due to poor level of education quality in order to combine and system administration purposes.

Furthermore Guston (2000) empirically show positive effect of information technology on leader innovation to show that any change in office structure must be in accordance with appreciation of flexibility and adaptability skills. La Porte and de Jong (2002) empirically show positive significant effect of information technology on leader innovation to improve the effectiveness and organizational performance in order to find new ideas on managerial organization internally. Mowday (2001) empirically shows the positive effect of information technology on leader innovation with regard to evaluate the results of internet usage to carry out work as one of key determinant factors of success.

Yang (2008) empirically shows that leader innovation has positive and significant effect on leader performance to create productive behavior as a consequence of existence of management and employees responsibility to achieve high performance to work effectively and efficiently. Yasicca (2006) empirically show leader innovation has positive and significant effect on leader performance related to implementation of management system with government-oriented organization to work as a public servant to organize various possibilities that could arise from a change. Lau CM and Lim EW (2002) empirically show leader innovation have positive and significant effect on leader performance related to dynamics of change leaders to understand information through the use of multimedia technology that provides flexibility in performance adjustment mechanism. These positive changes make employee ready to accept a task from leader freely, happy and satisfied in their work and will improve leader performance.

To prove that information technology has positive and significant effect on leader performance, the researchers put leader innovation as mediation variable between information technology and leader performance. Inconsistence in research findings need contingency. Nouri and Parker (2008) suggest that inconsistency of research findings encourage researchers to test the intervening variables to explain relationship these variables. Based on description of research gap, the purpose of this research was to investigate the effect of information technology on leader innovation and its impact on performance of Jayapura city government leaders.

Theory foundation and hypotheses development:

Williams and Sawyer (2007) stated that information technology is field of technology management and covers various fields as processes, computer software, information systems, computer hardware, programming languages, and data constructs. It performs various functions of information technology (information technology, discipline and competence) of database information. Some tasks may include information technology do data management, networking, engineering, computer hardware, database and software design, as well as the management and administration of entire systems.

Longley (2005) states information technology relates with process, tool usage, manipulation, and management of information. Communication technology is all matters related to tools usage to process and

transfer data from one device to another. Because that information technology is an integral equivalent containing the broader sense of any activity related to processing, manipulation, management, and transfer or transfer of information between media.

Blais (2011) said that development of information technology to create a plan consist of: (1) unifying vision and mission to be achieved, (2) the establishment of an independent technology, (3) identifying the agency infrastructure, both hardware, software and systems and networks owned, (4) the determination of hardware and software that will be used or developed, (5) identifying its human resources, (6) determining the shape of training mastery by leaders and other staff, (7) the existence of a clear time schedule for the achievement of program, (8) the determination of necessary investments on a regular basis each year, (9) identified the development of software, and (10) adapted to hold a revised planning developments.

Information technology has flexible effect on leader innovation. Macek (2006) empirically prove the positive and significant effect of information technology on leader innovation related to a subjective relationship, as well as competitive services will that fast and accurate. Steiger (2008) empirically show the positive and significant effect of information technology on leader innovation to absorb and develop the structure, quality, participation, responsibility, and loyalty to do with overall performance matrix associated point there. Therefore, H1 is stated as follows:

H1. Higher information technology can increase leader innovation

Dessler (2006) shows the leader performance is achievement to produce something that results obtained with activities accomplished by a performance. Thus the concept offered is understandable that an organization's performance is the main concept that shows how much determination ability of leaders, organizational tasks in order to achieve the goal.

Performance is part of a complex leader in human resource management. Lewis (2003) explains that principle of leadership performance are follows: (1) principle of participation (equity and transparency), (2) networking, (communication, cooperation, and friendship), (3) management support (motivation, optimization, and guidance), and (4) organizational support (work support, and work requirements). Beatty (2008) suggested that performance is result which means what has been produced by individual employee. Another term is measured from the output of human productivity, absence, turnover, citizenship and satisfaction. Performance in individuals referred to as job performance, work performance and task outcomes. Heenan (2001) found that key factor of leader performance s, among others: (1) the use and abuse of power, (2) the leader activity, (3) consistent and consequences, (4) building relationships, (5) public services, (6) management and structuring, (8) changes preparedness, and (9) management process. Aronson (2001) found that leader performance needs to be developed on each employee to perform community service tasks. Leaders must be able to guarantee the operation implementation of each sector of public service to improve the quality of people life and develop the community. Poor leadership not only makes performance of public services is not effective, but also weaken the mentality and morality of public service officers. Detert and Burris (2007) explained that leadership performance can be viewed from the perspective of outcomes, processes, or behaviors that lead to objectives achievement. Javidan (2000) suggested that in context of performance, the appraisal main task is to determine the organization's leaders and to test performance perspective process that occurs between the leaders and subordinates.

Information technology has positive effect and contribution to leader performance who mediated by leader innovation. This can be proven by research as a primary source on result of logical reasoning, both inductive (empirical) and deductive (rational) to shows the relationship between subjective, service, competitive, individual competencies, networking, management support, organizational support, structure, quality, participation, responsibility, and loyalty. Therefore, H2 is stated as follows:

H2. Higher information technology increase leader performance

Meyer and Allen (2004) show the leader innovation is indicator to measure the degree and extent to which a person is entitled to an impartial board on organizational goals. Innovation refers to three dimensions, namely: (1) workers with strong affective commitment will continue to responsible work because want to do more for the organization, (2) workers are involved in organization because it is based on organization changes, and (3) workers with high normative felt it necessary to maintain organization.

Mowday (2001) conceptually says that leader innovation that addressed by employee are (1) rate of turnover, namely employee turnover in organization at a certain period, (2) the level of absenteeism designated by board of organization in certain period, (3) activity to seek employment outside of organization in which he works, and (4) willingness to become part of organization.

Innovation flexibly affects leader performance. This can be proven by research as a primary source on result of logical reasoning, both inductive (empirical) and deductive (rational) to shows the relationship between the structure, quality, participation, responsibility, loyalty, individual competence, networks, management support, and organizational support.

Anthony and Govindarajan (2003) empirically prove that leader innovation have positive and significant effect on leader performance to creates a new paradigm in accordance with organizational structure, quality,

participation, responsibility, loyalty, individual competence, and networking. Oinell and Palladino (2002) empirically prove that leader innovation has positive and significant effect on leader performance to align organizational strategies by understanding the dimensions of management support and organizational support. Therefore, H3 is stated as follows:

H3. Higher leader innovation improves leader performance.

Logical reasoning result, both inductive (empirical) and deductive (rational) of Scaborough (2006) empirically demonstrate the effect of information technology and leader innovation on leader performance to transform the structure, quality, participation, responsibility, and loyalty in knowledge and skills. Frank Webster and Robins (2001) empirically prove the effect of information technology and leader innovation on leader s leadership is mediated by a positive and significant results are performance based implementation, servicing, competitive, individual competencies, networking, management support, and organizational support in use of strategic policy measures of performance. Therefore, H4 is stated as follows:

H4. Higher information technology increases leader performance who mediated by leader innovation.

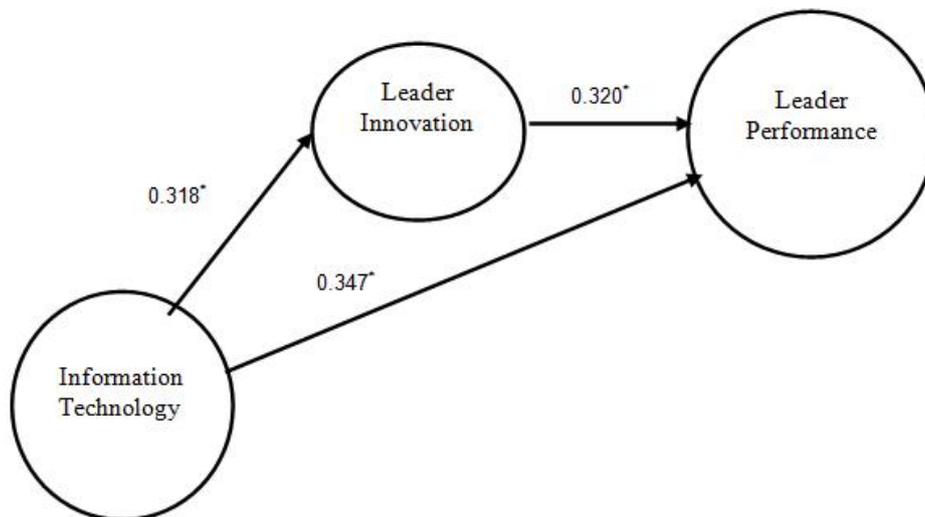
Methods:

This study used an explanatory research approach. The analysis used in this study is descriptive quantitative method to analyze the relationship between information technology variables (X1), the leader innovation (Y1), and leader performance (Y2). This study population was all Jayapura city government employees totaled 2,045 employees. Samples were employees of Group IV, III, II and I of Jayapura city government that determined by "probability sampling" technique to get 323 respondents.

Data collection was performed in a single step (on short study) or in cross section by using a questionnaire. Respondents answer a questionnaire based on a Likert scale, as follows: (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree. The data obtained were then analyzed by Structural Equation Model (SEM) using AMOS software version 4:01.

RESULTS AND DISCUSSIONS

Calculation with statistical applications can be done to find out direct and indirect effect between variables in model. The statistic result of direct effect can be seen in Figure 1 and Table 1 below.



Source: Primary Data Processed, 2013, Note: *significant at 0.05 levels

Fig. 1: Test Results of Path Model Analysis and Relation of Information Technology (X1), Leader innovation (Y1), and Leader performance (Y2)

Table 1: Test Results of Direct Effect

Hypothesis	Effect among variables	Direct	(p-value)	Decision
H ₁	Leader Innovation (Y ₁) ← Information Technology (X ₁)	0.318	0.000	Accepted
H ₂	Leader Performance (Y ₂) ← Information Technology (X ₁)	0.347	0.000	Accepted
H ₃	Leader Performance (Y ₂) ← Leader Innovation (Y ₁)	0.320	0.000	Accepted

Analysis result of direct effect in Table 1 can be explained below.

1. Test results show that information technology (X1) affects on leader innovation (Y1) with 0.318 values of standardized direct, p-value of 0.000. It means information technology (X1) has a significant direct effect on

leader innovation (Y1). It can be concluded that study result support the first hypothesis, where higher information technology improve leader innovation in Jayapura city government.

2. Test results show that information technology (X1) affects on on leader performance (Y2) with 0.347 value of standardized direct, p-value of 0.000. It means information technology (X1) has a significant direct effect on leader performance (Y2). It can be concluded that study result support the hypothesis that higher information technology can improve leader performance in Jayapura city government.

3. Test results show that leader innovation (Y1) has significant effect on leader performance (Y2) with 0.320 value of standardized direct, p-value of 0.000. This means leader innovation (Y1) has a significant direct effect on leader performance (Y2). It can be concluded that study data support the third hypothesis that higher leader innovation can improve leader performance in Jayapura city government.

Test results of direct effect can be used to determine indirect effect, as shown in table below.

Table 2: Indirect effect test

	Direct	Indirect	Total
	To Y1 = 0,318	0,00	0,341
From X1	To Y2 = 0,347	Ke Y2 through Y1 = $0,318 \times 0,320 = 0,101$	0,448
From Y1	To Y2 = 0,320	0,00	0,320

Table 2 shows that direct effect of information technology on innovation is 0.318. The direct effect of information technology on leader performance is 0.347. While the indirect effect of information technology on leader performance through leader innovation is 0.448. Based on above results, it can be seen that information technology directly has significant effect on leader performance. In addition, information technology indirectly has significant effect on leader performance through leader innovation as a mediation variable. Based on these results, it can be seen that this leader innovation is partial mediation (Solimun, 2012: 38). Therefore, the results of this study support the fourth hypothesis.

Conclusions and recommendations:

Conclusion:

Based research purpose, data analysis, hypothesis testing and discussion and research interpretation with reference to basic theory and previous research, it can be concluded as follows:

1. The importance of information technology on leader innovation to create more subjective to create creativity can brings a comparative advantage as well as a sense of responsibility.
2. Effect of information technology on leader performance is mediated by leader innovation leaders to strengthen public management with responsibility to serve public service professionally.
3. Effect of leader innovation on leader performance in development of public bureaucracy has support from management and responsible to create interpersonal creativity in task development of public services.

Recommendations:

Based on research conclusion above, it can put forward some suggestions that should be followed, especially in field of human resource management studies. Efforts to increase information technology, organizational culture and leader innovation to increase leader performance in Jayapura city government can be suggested as follows:

1. Efforts to improve information technology to increase leader innovation are developed through development of public service structure to improve multimedia distribution mechanism to implement the strategy of regional development planning.
2. The success of information technology to support leader performance who mediated by leader innovation is needed to improve the level of competency based on structure of systematic professional services to public.
3. Accumulation leader innovation on leader performance to develop changes of position in structure should be based on flexibility of decision-making competence.

This study has many limitations. The first limitation the research is only done in area of Jayapura city government. To improve the generalization it is advisable to examine the broader scope, such as some city governments in Indonesia. Another limitation is that assessment is carried out only in one direction, for example from the perception of staff. Future research may improve by using a better assessment system, for example a double scoring system, which includes self-assessment, superiors or subordinates.

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