

Factors Affecting the Innovative Behavior of Government Employees

Ulung Pribadi^{1*}, Muhammad Iqbal², Monika Siti Aisyah³

¹Post-Graduate Program, Universitas Muhammadiyah Yogyakarta, Indonesia

²Department of Political Science, National Cheng Kung University, No. 1號, Dasyue Rd, East District, Tainan City 701, Taiwan

³Department of Government Studies, Faculty of Social and Political Sciences, Universitas Muhammadiyah Yogyakarta, Indonesia

*Corresponding Author: ulungpribadi@umy.ac.id

ABSTRACT

This study examined organizational structure, culture, leadership, satisfaction, and Information and Communication Technology (ICT) adoption to predict employee innovation. This study used a survey data collection method and a purposive sampling technique of respondents who did innovative behavior in realizing good governance and providing public services. The questions were created using a Likert scale. Structural Equation Model-Partial Least Square (SEM-PLS) examined the data to determine its validity and reliability and test hypotheses and regression. This study found that organizational structure, culture, and leadership positively and significantly influenced employees' satisfaction, with p-values of 0.000, 0.000, and 0.010, respectively. Moreover, employees' satisfaction and ICT adoption also positively and significantly influenced employees' innovation. Organizational structure, organizational culture, and leadership had a substantial impact on employees' satisfaction (R-square = 0.865), and employees' satisfaction and ICT adoption substantially impacted employees' innovation (R-square = 0.887). The limitations and implications of this study are evaluated.

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INTRODUCTION

External and internal settings that are constantly changing, as well as unpredictably changing global economic situations and even the organization's culture, have put the organization under unprecedented strain (Arviansyah, 2020). The organization must continue to innovate to maintain its competitive advantage and defuse the situation. Employees are crucial executors and driving forces of innovation since they are the micro-foundation of the organization (Liu et al., 2021). City governments encourage local government employees to behave innovatively. One of the main drivers

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of regional economic growth has been promoted as innovation, especially from the role of government (Makkonen et al., 2018; Coetzer et al., 2018). Public servants must be innovative and creative in improving services, products, and managerial procedures (Sherief, 2019).

Several scholars have conducted studies on the innovative behavior of employees. Lee investigated the relationship between employee creative work engagement, intrinsic motivation, leadership, and the quality of employee-organizational relationships in Italy (Lee et al., 2018). The effect of job enrichment on employee innovation in the service sector in Egypt has also been investigated (Badawi et al., 2019). Other scholars explored key organizational climate elements influencing public servants' creative behavior (Sherief, 2019). Gao analyzed employees' entrepreneurial psychological capital and deviant innovation behavior (Gao et al., 2020). A study examined the impact of intellectual capital on innovation among Jordanian administrative workers (Al-assaf et al., 2020). According to a survey, both on-the-job training and employee education had a significant and favorable impact on all types of employee innovation in Eastern European and Central Asian countries (Na, 2021). Other researchers analyzed the effect of transformational leadership on government employees' organizational innovation (Alshamsi et al., 2020). A study investigated motivation, proactive personality, and employee creativity in the public sector hospitals of Peshawar city (Farooq, Rehman, et al., 2020).

Several studies have also been conducted on the innovative behavior of employees in Indonesia. A study found a relationship between individual technostress and ICT-enabled employee innovation (Chandra et al., 2019). A study used organizational learning as a mediating variable to examine the impact of hard and soft skills on local government employee innovation capabilities (Sopa et al., 2020). Complex skills, soft skills, and organizational culture also affected teacher innovation capability (Asbari et al., 2020). Furthermore, employee innovation is influenced indirectly by corporate culture and transformational leadership (Junaedi et al., 2021).

Unfortunately, those studies are not comprehensive in explaining the factors that influence the innovative behavior of local government employees. This study fills the knowledge gap by examining the effects of organizational structure, organizational culture, leadership, employee satisfaction, and ICT adoption on employees' innovation.

1. Employees' innovation

The innovation behavior or activities of employees are the creation or invention, or exploration of new ideas or programs or products or solutions (novelty, usefulness, and non-obviousness), fresh or improved services or delivery methods and procedures (processes), strategy and operations (goals or purposes, mission, policy, management), or governance (citizen engagement) (Makkonen et al., 2018; Sherief, 2019; Chen et al., 2020; Alshamsi et al., 2020; Dong et al., 2020; Campos-Blázquez et al., 2020; Liu et al., 2021; Zhang et al., 2021).

2. Employees' satisfaction and employees innovation

Several scholars have investigated the relationship between employee satisfaction and innovative employee behavior. Employee motivation and satisfaction affect the creative behavior of employees in public organizations

(Demircioglu & Audretsch, 2017). Psychological empowerment, commitment, and job satisfaction are related to organizational innovation (Nikpour, 2018). Transformational leadership strengthens innovation by mediating job satisfaction (Al-edenat, 2018). Job satisfaction affects employee innovation performance (M. Al-Sabi et al., 2019; Ezeanyim & Ufoaroh, 2019). A study found that job satisfaction mediates the relation between pay satisfaction and organizational citizenship behavior (OCB) (helping, assisting, and undertaking work) (Farooq, Bilal, et al., 2020). Job satisfaction affected innovation commitment with job responsibilities as moderator (Tsai & Yen, 2020). Restructuring, communication, and commitment influenced employee performance through job satisfaction (Kadir et al., 2021). Congruence in career calling influenced employees' innovation performance through work passion as a mediator (Liu et al., 2021).

3. Organizational structure and employees' satisfaction

Several academics have studied the relationship between organizational structure and employee satisfaction. In public sector organizations, red tape, hierarchical authority, and a lack of objective organizational definition may negatively affect employee satisfaction (Kjeldsen & Hansen, 2018). Organizational structure influenced sports personnel satisfaction in Nigeria (Ezekiel-Zebulun et al., 2020). Employees' perceptions of a reasonable downsizing plan mitigated the association between job satisfaction and innovation commitment (Tsai & Yen, 2020). The organization's job clarity role for government personnel showed a more vital link with job satisfaction (Tao & Campbell, 2020). Organizational structure affected job satisfaction, work engagement, and behavior in Thailand (Chayomchai, 2020). Organizational structure at the federal government level affected employee job satisfaction in Nepal (Madhav Adhikari, 2021). Organizational structure influences corporate culture and job satisfaction (An & Umuhoza, 2021). Organizational structure, organizational climate, transformational leadership, and human resource management influenced job satisfaction and the innovative creation of employees (Pulphon et al., 2021). Restructuring, communication, and commitment affected employee performance in the city government through job satisfaction (Kadir et al., 2021).

4. Organizational culture and employees' satisfaction

Many scholars have looked into the link between organizational culture and employee satisfaction. Job satisfaction was positively connected with a climate of inclusion, in which each member felt respected and appreciated (Brimhall & Mor Barak, 2018). Organizational culture impacted employee satisfaction (Reidhead, 2020; Čuček & Mlaker Kač, 2020). The impact of open-border corporate culture on employees' open innovation knowledge, attitudes, and rewards was investigated (Alassaf et al., 2020). There is a positive relationship between employees' empowerment, employees' participation, job security, and employees' satisfaction (Zamanan et al., 2020). Organizational commitment influenced job satisfaction among government agency employees in the Northern Philippines (Candelario et al., 2020). Corporate culture influenced job satisfaction in Sri Lankan local government sector (Kankanamge & Sirisena, 2020). Employee performance was

affected by company culture and employee engagement, with job satisfaction as an intervening variable (Fidyah & Setiawati, 2020). A performance-oriented culture, enactment, and commitment, all played essential roles in improving satisfaction (Kwon & Jeon, 2020; Park & Doo, 2020). Job satisfaction and performance were influenced by organizational culture, leadership, commitment, work motivation, ICT, and the quality of human resources (Fachri et al., 2021; Irwan et al., 2020; Paramita et al., 2020; Hendrato et al., 2021; Ridlwan et al., 2021; Nugroho et al., 2021; Tran, 2021).

5. Leadership and employees' satisfaction

Transformational leadership reinforces innovation through job satisfaction as mediating role (Al-edenat, 2018). Authentic leadership affects employee creativity and innovation with psychological capital negotiating factors (Rashid et al., 2019). Employee job satisfaction will be significantly boosted by perceived supervisor support, organizational support, and training (Terefe & Tadese, 2019). In Vietnam, the quality of the leader-member connection impacted job satisfaction, innovation, and operational performance (Nguyen, 2020). Transformational leadership motivates positive emotions and innovation among government employees (Alshamsi et al., 2020). Job satisfaction was positively influenced by leader support and job security in Thailand (Chayomchai, 2020). In public sector organizations, ethical leadership impacts work satisfaction and organizational commitment (Qing et al., 2020). There was a relationship between leadership style and job satisfaction in Zamboanga City (Celdran & City, 2020). Teachers' job satisfaction was linked to principals' leadership style in Harar City's Government Secondary Schools (Bogale, 2020). Leadership and conflict management significantly impacted job satisfaction (Anastasiou, 2020). Leadership style, work motivation, empowerment, and organizational culture influenced job satisfaction and employee performance (Irwan et al., 2020; Ristianity & Adam, 2020). In Indian academics, servant leadership conduct impacted job satisfaction (Singh & Ryhal, 2021). Transformation and situational leadership, competence, organizational culture, and employee empowerment affected government employee's job satisfaction and performance during Covid-19 (Bhatti et al., 2021; Almohtaseb et al., 2021; Ridlwan et al., 2021; Nugroho et al., 2021; Tran, 2021; Johnson et al., 2021).

6. ICTs adoption and employees' innovation

In New Zealand, top and middle management have used ICTs to promote innovation and collaboration (Jones & Hooper, 2017). Technology can enforce value creation in the public sector (Cordella & Paletti, 2018). Through knowledge and innovation, social media technologies influence organizational performance (Garcia-Morales et al., 2018). ICTs boosted service and manufacturing innovation and productivity (Aboal & Tacsir, 2018). In Switzerland, higher investment in digitization was linked to increased employment of high-skilled workers and job creation (Balsmeier & Woerter, 2019). In the Norwegian labor and welfare administration, ICT mediated social work practice and innovation among professionals' experiences (Zhu & Andersen, 2020). In emerging countries,

information technology innovation has impacted job creation (Chege & Wang, 2020). Technology startups increased innovation and performance of employment change in Korea (Choi et al., 2020). Machinery is intended for public sector organizations' creation (Clausen et al., 2020). Employee innovation was enabled by technological spatial incursion for ICT, which was mediated by perceived usefulness (Chandra et al., 2020). High-technology new ventures enforced employees' innovative behavior and Entrepreneurial leadership in Iran (Bagheri et al., 2020). In Vietnam, using a knowledge management method has resulted in more innovative working behavior among information technology employees (Pham et al., 2020). In Jordan's e-government project, information technology management aided the innovation of head departments, officers, and technicians (Alsalim, 2020). Government support for the talent policy of science and technology transformation in China was the external antecedent of innovative work behavior (Zhang et al., 2021). Social media usage improved public employees' value (Todisco et al., 2021).

METHOD

Type of Research

This study uses a quantitative approach. Authors use this approach for specific populations or samples, and data collection uses research instruments. Data analysis is quantitative/statistical to test predetermined hypotheses.

Data collection

A survey approach design was created to obtain primary data on local government personnel. This study employed a self-managed organized questionnaire to obtain preliminary data as a research tool. This study examined employees who work in local government agencies in Bantul Regency, Indonesia. The Bantul Regency Government received the "Top 99 Public Service Innovation" award in 2019 from the Minister of State Apparatus Empowerment and Bureaucratic Reform of the Republic of Indonesia, particularly the Agency for Agriculture, Food, Marine and Fisheries, Bantul Regency (www.starjogja.com). The Bantul Regency Government encourages its employees to innovate to realize good governance (Susanto et al., 2018; Siregar & Muslihah, 2019; Eprilianto & Pradana, 2019; Aziza & Sujarwadi, 2020; Damayanti & Prasetya, 2020).

Sampling technique

The Agency for Agriculture, Food, Marine, and Fisheries of Bantul Regency had 172 employees in 2019. Using the Slovin formula, this study took a sample of 63 respondents. This study uses a purposive sampling technique, namely This study selected people who innovate in carrying out their work. They were the employees of the Agriculture, Food, Marine, and Fisheries Agency. In the process of this research, respondents were asked to fill out the questionnaire that had been provided.

Measurement and Analysis technique

Data was gathered using quantitative survey questions. A Likert scale was used to design the questionnaires. Likert scales were used to gauge the respondents' opinions, with 1 indicating strong disagreement, 2 suggesting robust debate, three indicating neutrality, 4 indicating agreement, and 5 indicating strong agreement.

Research model and hypotheses development

The following study model and hypotheses were established based on the theoretical framework:

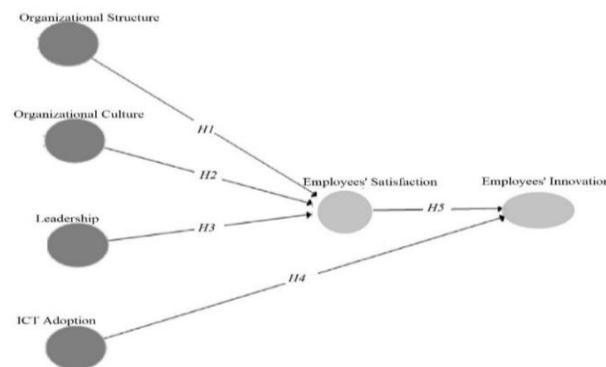


Figure 1. Research model

Hypotheses of this study:

- H1. Organizational structure positively and significantly influences employees' satisfaction.
- H2. Organizational culture positively and significantly influences employees' satisfaction.
- H3. Leadership positively and significantly influences employees' satisfaction.
- H4. ICT adoption positively and significantly influences employees' innovation.
- H5. Employees' satisfaction positively and significantly influences employees' innovation.

The following is an explanation of the preceding sentence. First, the more adaptive the organizational structure, the more intent is to enhance employee satisfaction. Second, the more positive the corporate culture, the more sense is to increase employee satisfaction. Third, the more empowered the transformational leadership, the more purpose is to intensify employees' satisfaction. Fourth, the more sophisticated ICT is used, the higher the employee innovation. Fifth, the higher the level of employee satisfaction, the higher the creation.

RESULTS AND DISCUSSION

Demographic profile of respondents

The profile of respondents (n=63) was as follows: the number of female respondents was 57%, and the number of the male was 43%. Respondents 20 to 35 years old were 16%, 36 to 51 years old were 54%, and 52 years old and over were 30%.

Respondents who have a Diploma or Bachelor’s level of education were 54%. The second largest number of respondents with a junior or senior high school education level was 27%.

Finally, the least number of respondents with a Masters and Doctoral level of education was 73%. The work experience was dominated by those who worked between 6 – 15 years, i.e., 46%, and then who worked more than 16 years, namely 43%, and who worked less than five years, i.e., 11%. The experience of using an electronic-based government system was dominated by users who used between 1 to 3 years, i.e., 49%, then those who used over three years, i.e., 38%, and finally those who used less than one year, i.e., 13%.

The innovative behavior of local government employees is based on the Regulation of the Governor of the Special Region of Yogyakarta Number 72 of 2008 concerning Government Culture in the Special Region of Yogyakarta. Examples are employees looking for new ways to provide public services through friendliness, openness, and trust. Another example is the employee being proactive in contacting stakeholders.

Validated research model

Cronbach’s alpha supports internal consistency model measures. When Cronbach’s alpha is 0.70 or higher, construct indicators are considered reliable (Nunnally, 1978). Table 1 demonstrates that all variables have a good level of dependability (organizational structure = 0.853, organizational culture = 0.709, leadership = 0.806, ICT Adoption = 0.722, employees’ satisfaction = 0.756, and Employees’ innovation = 0.742).

Tabel. 1 Composite reliability dan Cronbachs alpha figure 2 depicts the validity of the indicators established as questionnaires. A hand was regarded as valid if its value was more significant than 0.5 (Chin, 1998). All of the numbers in Figure 2 were larger than 0.5, suggesting that all indicators were correct.

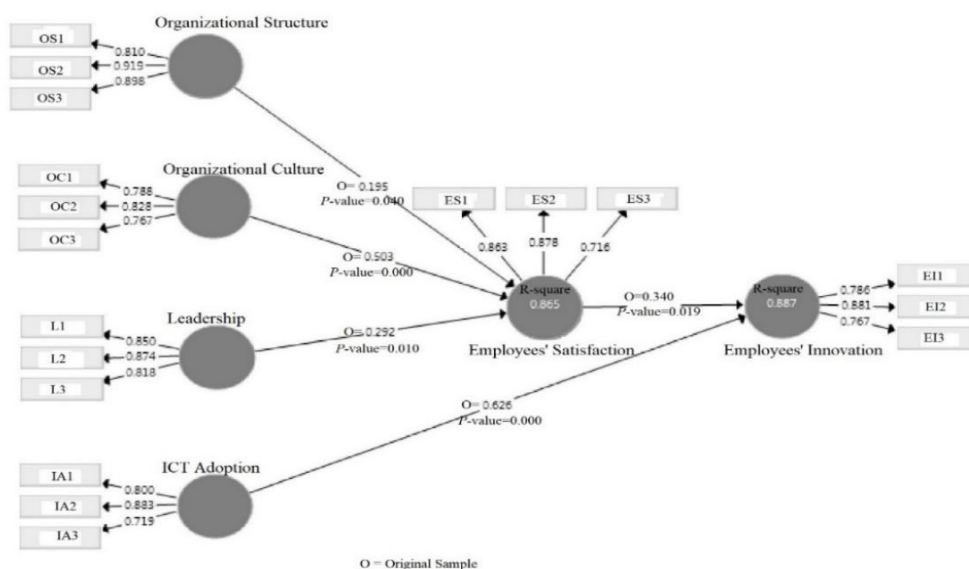


Figure 2. Validated research model

Figure 2 also shows the results of hypothesis testing. The hypotheses were accepted when the p-value was less than 0.05 (Henseler et al., 2009). As shown in figure 2, the H1 hypothesis, stating that organizational structure positively and significantly influences employees' satisfaction, was supported (p-value=0.000). It might be deduced that the more flexible an organization's structure is, the greater the desire to improve employee satisfaction. The H2 hypothesis confirmed that organizational culture positively and significantly influences employees' satisfaction (p-value=0.000). It is reasonable to conclude that the more positive an organization's culture is, the greater the desire to improve employee satisfaction. The H3 hypothesis, which indicated that leadership positively and significantly influences employees' satisfaction, was confirmed (p-value=0.010). It is logical to argue that the more transformational leadership is empowered, the greater the aim is to increase employee satisfaction. The H4 hypothesis was supported, stating that ICT adoption positively and significantly influences employees' innovation (p-value=0.000). It seems to reason that the more sophisticated ICT is deployed, the greater the level of staff innovation. The H5 hypothesis supported that satisfaction positively and significantly influenced employees' creation (p-value=0.019). It appears that the higher the amount of employee pleasure, the greater the level of staff innovation.

The original sample demonstrates the independent variable's considerable influence on the dependent variable. Figure 2 shows that organizational structure has a 19.5 percent effect on employees' satisfaction. Organizational culture has a 50.3 percent effect on employees' satisfaction. Leadership has a 29.2 percent impact on employees' satisfaction. ICT adoption has a 62.6 percent impact on employees' innovation. Employees' satisfaction has a 34.0 percent impact on employees' innovation.

The study's key findings are that, in this situation, the organizational culture variable had a more significant impact on employees' satisfaction than organizational structure and leadership variables. Moreover, the variable of ICT adoption had a more significant effect on employees' innovation than the variable of employees' satisfaction. The degree of influence of the variables was determined by regression analysis, which was divided into three R-square scales: 19 percent - 33 percent low (weak), >33 percent - 67 percent moderate, and >67 percent strong (substantial) (Chin, 1998). The regression analysis findings are shown in Figure 2. Employees' satisfaction was influenced by organizational structure, organizational culture, and leadership in 86.5% of cases. It means that independent factors had firm control over the dependent variable. Furthermore, Employees' innovation was influenced by employees' satisfaction and ICT adoption in 88.7%. It means that the independent variables had much influence over the dependent variable.

Discussion

This study empirically evaluated the organizational structure, culture, leadership, satisfaction, and ICT adoption in predicting Employees' innovation. This study confirmed that organizational structure influences employees' satisfaction (p-value=0.000). As a result, this research validates the establishment of some scholars in other countries (Kjeldsen & Hansen, 2018; Ezekiel-Zebulon et al., 2020; Tsai & Yen, 2020; Tao & Campbell, 2020; Chayomchai, 2020; Madhav Adhikari, 2021; An & Umuhoza, 2021)

This study affirmed that organizational culture influences employees' satisfaction (p -value=0.000). As a result, this study justifies the claims of a few academics (Brimhall & Mor Barak, 2018; Reidhead, 2020; Čuček & Mlaker Kač, 2020; (Alassaf et al., 2020; Zamanan et al., 2020; Candelario et al., 2020; Kankanamge & Sirisena, 2020; Fidyah & Setiawati, 2020; Kwon & Jeon, 2020; Park & Doo, 2020). According to this study, leadership impacts employee satisfaction (p -value=0.010). Consequently, this study justifies the views of scholars who have done the same research elsewhere (Al-edenat, 2018; Rashid et al., 2019; Nguyen, 2020; Alshamsi et al., 2020; Chayomchai, 2020; Qing et al., 2020; Celdran & City, 2020; Bogale, 2020; Anastasiou, 2020; Singh & Ryhal, 2021; Bhatti et al., 2021; Almohtaseb et al., 2021; Tran, 2021; Johnson et al., 2021).

This study established that ICT adoption influences employees' innovation (p -value=0.000). Accordingly, The establishment of this study validates the findings of other experts who have conducted similar research (Jones & Hooper, 2017; Cordella & Paletti, 2018; Garcia-Morales et al., 2018; Aboal & Tacsir, 2018; Balsmeier & Woerter, 2019; Zhu & Andersen, 2020; Chege & Wang, 2020; Choi et al., 2020; Clausen et al., 2020; Chandra et al., 2020; Bagheri et al., 2020; Pham et al., 2020; Alsalim, 2020; Zhang et al., 2021; Todisco et al., 2021). This study ensured that employees' satisfaction has an impact on influencing employees' innovation (p -value=0.019). Therefore, the founding of this study strengthens the finding of other scholars (Demircioglu & Audretsch, 2017; Nikpour, 2018; Al-edenat, 2018; M. Al-Sabi et al., 2019; Ezeanyim & Ufoaroh, 2019; Farooq, Bilal, et al., 2020; Tsai & Yen, 2020; Kadir et al., 2021; Liu et al., 2021).

CONCLUSION

The study findings of this research are that the effect of organizational structure on employee satisfaction was positive and substantial, with p -values of 0.000. The corporate culture had a favorable and significant impact on employee satisfaction, with p -values of 0.000. With p -values of 0.010, leadership positively and significantly impacted employee satisfaction. ICT adoption had a favorable and significant impact on employees' innovation, p -values of 0.000. Satisfaction positively and significantly impacted employee innovation, with p -values of 0.019. So, all of the hypotheses of this research are accepted. R-square = 0.865 pointed out that organizational structure, culture, and leadership strongly impacted employees' satisfaction. R-square = 0.887 indicated that employees' satisfaction and ICT adoption substantially affected employees' innovation.

Theoretically, the findings of this research in Indonesia support established theories. The practical implications are as follows: first, the leaders of local government agencies must specify the duties and jobs and the standard operating procedures of each employee so that they feel clear and satisfied in their work. Second, the institution's leaders must use a local cultural approach in the organization so that employees find it easier to do tasks and feel satisfied at work. Third, government leaders must apply sophisticated and complete technology to support employees' innovative behavior, especially in providing public services.

There are some limitations to this study, as well as some suggestions for further research. The number of the research area is not significant; just one area is used as an object, the number of respondents is not many, and the research period is relatively short, among the study's limitations. The following are some suggestions for future research

First, future research will involve a wide range of local government organizations to cover a larger area. Furthermore, more respondents should be included in future studies to determine the consistency of their conduct. Finally, future studies could employ longitudinal data to verify the suggested model's performance.

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