

## Adoption of Information Technology as a Mediator Between Institutional Pressure and Change Performance

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### Abstract

*The adoption of information technology today is something that cannot be denied along with increasingly competitive business competition. On the other hand, institutional pressure to keep the organization in its performance target. In the literature there are three categories of institutional pressures, namely: Coercive Pressures, Mimetic Pressures, and Normative Pressures. The purpose of this study was to examine how the influence of institutional pressure on the performance of changes mediated by the adoption of information technology. The research target is one of the state universities in Indonesia with the object of research being lecturers, students and education staff. From the data collection process, 268 valid data were obtained. With the PLS-SEM analysis tool, the results of hypothesis testing indicate that there is a significant positive effect between Industrial Pressure and Information Technology Adoption of 16.377. While the relationship between Information Technology Adoption and Change Performance has a significant positive effect with a value of 4.544. The direct relationship between Industrial Pressure on Change Performance has a significant positive effect with a value of 6.251. While the relationship between Industrial Pressure on Change Performance mediated by Information Technology Adoption gets a value of 4.250 which means that the mediating impact also has a significant positive effect. This shows an important finding that the*

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*role of Information Technology Adoption contributes to the improvement of Change Performance. The implications and research suggestions are discussed.*

*Keywords: Technology Adoption, Institutional Pressure, Change Performance, PLS-SEM, Higher Education.*

## INTRODUCTION

Empirically, university managers in the world are anxious about the annual achievements this year. Is there an increase in ranking, stay or decrease. The trend of global-scale university ranking models forcing managers of State Islamic Religious Universities and the Ministry of Religion to transform steps and encourage governance that allows these universities to lead in the global arena on behalf of World Class Universities. On the other hand, global university ranking organizations with different assessment models are forced to demand certain strategies to make it happen. For example, the Quality and Success World University Rankings gives a score on the quality of academic review of 40% with a citation index per faculty of 20%. Another indexing agency; Times Higher Education (THE) gives an assessment weight of 55% on research income, academic papers, citation impact, and reputation survey. Other third indexing institutions such as the Academic Ranking of World Universities (ARWU) give a fairly large weight to research published in scientific journals of international repute, up to 60%. This weighting model is then what universities want to be globally classed to improve their performance, especially in terms of research and publications. The university management must encourage the governance system, and the existing resources to encourage the university to be world class.

The problem is how far the university organization can change. In academic references, researchers find the terminology Organizational Capacity for Change (OCC), or organizational ability (to) change<sup>1</sup> there are at least eight dimensions in OCC; trustworthy leaders, trusting followers, Capable champions, Involved mid-management, Innovative culture, Accountable culture, Systems thinking, and Systems communication<sup>2</sup>. OCC is understood as a combination of managerial and organizational capabilities that enable companies to adapt more quickly and effectively than their competition in response to changing situations. Empirical research on OCC was with two key questions; first, why some organizations are more capable of change than others. Second, which organizations are more successful with their change projects<sup>3</sup>. The results of this study indicate that an organization's capacity to change is positively correlated with the performance of its change project. On the other hand, the level of turbulence (disruption), for example; higher technology, does not strengthen this

relationship but weakens it. Heckmann's research also shows that higher levels of technological turbulence and previously perceived positive change experiences are positively related to organizational change capacity, but that higher levels of competitive intensity and the number of prior change experiences do not occur.

Thus, dynamic capabilities are needed that can respond to external dynamics, or how they maintain dynamic capabilities in the long term<sup>2</sup>. Andreeva and Ritala add that dynamic capabilities are usually more appropriate for specific domains. In other words, the organization's ability to adapt to environmental changes has the potential to be sustained. Therefore, in realizing dynamic capabilities to create organizational capacity for change, researchers build assumptions from three dimensions, first from the institutional dimension, second from the organizational dimension, and third from the individual dimension. At the institutional level, why do policies or institutional pressures promote the ability to change. Research<sup>5</sup> states that institutional pressure (mimetic, cursive, and normative) can be a driving force as long as the organization is market-oriented. Zhang, et al. emphasize the extent of the role of institutional pressure. At the organizational level, emphasize the orchestration role of existing resource management which is believed to encourage the ability of the organization to change<sup>6</sup>. Chadwick et al concluded from their research that managers at all levels should be involved in resource management activities.

On the other hand, opportunities to improve higher education performance can be achieved through the support of Information<sup>7</sup>. Information Technology can meet the information needs of the business world quickly, effectively, accurately, and relevantly. In addition, Information Technology (IT) also has an important role for companies in competitive advantage strategies. IT will influence almost all aspects of business management and can provide added value if it is managed properly and designed to become an effective information system<sup>8</sup>. suggests that now Information Technology Systems have developed very rapidly and the development of Information Technology Systems also looks quite significant from decade to decade. Until now Information Technology Systems have undergone many changes and are increasingly sophisticated. Related to the development of higher education suggests that universities can utilize information technology on three levels, namely: providing support for services and administration, as teaching aids and means of communication, and utilization for decision making<sup>9</sup>. From institutional pressure to change to become a university that can compete globally, as well as technological support to be able to change in realizing institutional pressure, at the internal level of the organization there is the potential to leave problems related to the

possibility of resistance to change from the university's internal entities. In other languages, there is the possibility of some internal s who do not want to change towards a world class university.

From the arguments above, the researcher wants to limit research on how the influence of institutional pressure on performance is mediated by technology adoption, a case study at the State Islamic University of Surabaya, Indonesia. This college is one of the universities in Indonesia which is favored as a university with an international reputation. This university is one of the universities in Indonesia that is favored as a PT with an international reputation. Indeed, quite a lot of research has examined the impact of technology adoption on organizational performance. However, relatively limited research examines the effect of institutional pressure in encouraging changes in organizational performance mediated by the use of information technology, which in this case is academic information systems in universities. The Islamic University of Surabaya was chosen because it is institutionally mandated by the Indonesian Ministry of Religion to become a university with an international reputation (aspects of institutional pressure). This is also in line with the vision of the Islamic university of Surabaya which wants to become an Islamic University that is superior, competitive, and of international standard. But, from the QS WUR version of the world university ranking data, the Islamic university of Surabaya has not yet entered the top 5000 at the university level in Asia.

In terms of the use of information technology, the Islamic University of Surabaya has been relatively well established in adopting and utilizing information technology systems to carry out routine operations in the fields of Teaching, research, and community services, both for data and information processing as well as for learning administration facilities. However, to the best of the researcher's knowledge, there have been no studies that have evaluated institutional pressure and the role of the use of information technology on changes in performance in universities. It is hoped that from this research, research results will be obtained to assist decision support in developing institutionally with relevant stakeholders in realizing a world class university.

## **LITERATURE REVIEW**

### **2.1 Dynamic Capabilities**

The concept of dynamic capabilities emerged from strategic management theory which aims to determine how an organization can achieve and maintain its competitive advantage in a constantly changing environment<sup>4</sup>. The problem, according to Andreeva and Ritala, lies in where these capabilities come from in responding to

dynamics with a fairly long or unpredictable duration of change. Changes in the business environment are so dramatic and ongoing that organizations must be prepared to deal with them. In recent decades, strategic theory development has focused more on the search for unique and sustainable competitive resources<sup>10</sup>.

In a continuously changing environment, especially in times of crisis, the organization's ability to maintain and renew competition becomes something important. Therefore, the idea of dynamic capability<sup>11-15</sup>. In simple terms, Dynamic Capabilities are defined as "A company's ability to adapt, integrate, and reconfigure its internal and external resource<sup>15</sup>.

## 2.2 Institutional Pressures

At the institutional level, why can policies in the form of institutional pressure encourage the ability to change? The researcher starts which states that institutional pressure (coercively, mimetic and normative) can be a driving force as long as the organization is market-oriented<sup>16</sup>. The first dimension is coercive, through Zhang et al's research hypothesis which states that government policies positively affect the level of market orientation. At this point, it shows that there is coercive pressure or something that is binding on the policy of the institution.

The institutional pressure is in the form of an explicit regulatory process, a monitoring process to the imposition of sanctions. So in this dimension because of the binding government policy factors. The second dimension is mimetic because of the market competition factor. While the third dimension in the context of this institutional approach is the normative dimension. Zhang elaborated on this sub-dimension of the certification system, education management, employee turnover/refreshment, and consulting management. The direction of our research is more on the role of coercive and normative institutional pressure support in encouraging organizational capacity for change.

Other studies justify the role of institutions in how institutions can encourage the performance of internal business processes in the case of information technology outsourcing<sup>16</sup>. Kshetri examines how organizational responses, structures, and practices relate to institutions. Kshetri's conclusion shows that the institutionalization process shows that organizational structures and practices tend to be isomorphic, that is, consistent with regulations, cognitive and normative. This is also in line with research<sup>17</sup> which states that government support, regulations, and public policies can affect the ability and willingness of companies to be responsive to their changing market environment.

### 2.3 Change Performance

In general, Bulchand-Gidumal & Melián-González<sup>18</sup> divide the performance of universities into two things. Those two things are 1. Academic performance, and 2. Research performance. But on the other hand, there are several resistances to performance improvement in the organization. The performance of organizational change requires the organization to constantly change so that it can carry out the desired performance target. The performance of change, on the one hand, relates to resistance to these changes. With resistance it can, hinder the improvement of change performance. Own research Rieley & Clarkson<sup>19</sup> divides three groups of individuals who resist change. The study identified three groups of individuals not knowing, not being able, and not willing. The first group of individuals, not knowing, do not know why the change occurred and why change efforts must be implemented. This group can be resolved by raising awareness and holding forums by discussing these changes clearly so that the population group will rise to the level of not able or unable.

Referring to Rieley & Clarkson<sup>19</sup>, researchers reduce the dimensions that are factors in the change performance indicators which include aspects of thinking, achieving, leading, and influencing. Thinking is related to the ability and innovation of individuals in terms of the thinking process to take both tactical and strategic actions and decisions to support something more advanced. Achieving is related to the spirit of building achievements and the best work. Leading to how the individual's ability to carry out the organization in such a way is related to existing resources. Influencing is how individuals can provide direction, direction and influence decisions and the 'climate' in the organization so that it becomes the best.

### 2.4 Adoption of Information Technology

Adoption has used individual decision-making theory such as planning theory behavior, it's not entirely goal-oriented in a unique way but is a response to pressure<sup>20</sup> Adoption can essentially be interpreted as a process of accepting innovation and/or behavioral changes in the form of: cognitive, affective, or psycho-motor in a person, after receiving the "innovation" accepted by the target community. In this context, "adoption" refers to the stage at which a technology is accepted and chosen for use by an individual or organization.

Technology adoption aims to raise human awareness of learning technology to utilize, apply, and adopt technology to improve the quality of learning in all aspects of life. As said by Prawiradilaga<sup>2</sup> at the existence of technology in education, the educational design will be programmed so that the educational process can be organized and detailed, including a technological model that is deliberately created to facilitate the learning process to achieve educational goals.

## 2.5 Strategic Management

The word strategy was adopted from the Greek word *strategos* which means art. Strategy is closely related to the military field. Sun Tzu, a Chinese military expert introduced strategy in 500 BC with the advice "Know yourself, know your opponent, do a hundred battles and win a hundred victories.". The Oxford English Dictionary defines strategy in a military context as the art of mobilizing and moving troops to bring down the enemy's preferred place, time, and, conditions of battle on the enemy. The definition of strategy in the business field varies from one author to another, the emphasis is on the pattern of activities that have an impact on the achievement and goals of the organization regarding its environment<sup>22</sup>.

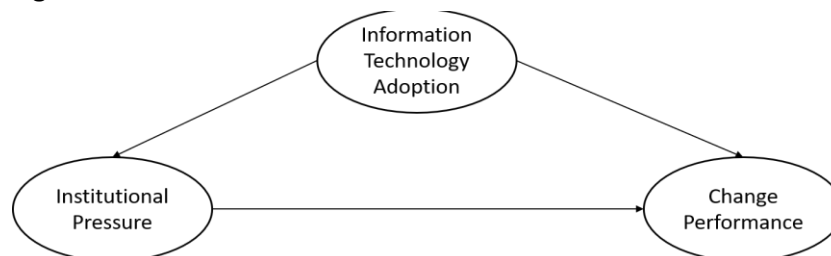
In order profit and nonprofit based organizations to develop, strategic management is needed, or in terms of strategic management. Strategic management is closely related to the management of available resources in facing challenges and taking advantage of existing opportunities. In the process of achieving goals, organizations must involve strategy development and policy formulation. Strategic management also proposes a framework for organizations to adapt to a biased environment and future<sup>23</sup>. Then the business world began to adopt strategies in each competition called strategic management.

Thus, strategic management is defined as a process carried out by the organization regarding how the pattern of adaptation to the environment in which the organization operates. In his research, he explains how the strategic management process is. It begins with the process of compiling the activities to be carried out by the organization (called strategy formulation), then building the necessary conditions to ensure that these activities are carried out (called strategy implementation). These two processes are continuous<sup>22</sup>.

## 2.6 Research Models and Hypotheses

From what has been described, the researchers developed a research model as shown in Figure 1.

**Figure 1. Research Models**



The theory of institutional pressure proposed by DiMaggio and Powell<sup>24</sup> divides institutional pressure into three types, namely coercive pressure, mimetic pressure, and normative pressure.

Coercive pressure can take the form of rules or regulations from which the organization depends, mimetic pressure can come from the uncertainty that makes individuals or organizations imitate other organizations that are felt to be more successful, and normative pressures that come in the form of professional Adopting information technology, logically it will be more effective if it is influenced by institutional pressure, this is evidenced by previous research which states that institutional pressure has a major impact on technology adoption<sup>25</sup>.

According to proprietary research, normative pressure and mimetic pressure are one of the factors influencing technology adoption and mimetic pressure is the most dominant factor among the three institutional pressures<sup>26</sup>. Meanwhile, proprietary research by Khalifa & Davison<sup>20</sup>, states that coercive pressure, mimetic pressure, and normative pressure influence the adoption of information technology. This study represents coercive pressure with custom mimetic pressure with competition and normative pressure with employee's needs on this research, the following hypotheses can be proposed:

Hypothesis 1: There is an influence between institutional pressure on the adoption of information technology

With the implementation of the current information system, existing data will be integrated to become material for making decisions. The decisions that will be taken by the user are adjusted to the position needed by the user himself quickly and precisely. The decisions taken will affect the performance of the organization in terms of academics, finances, administration, and so on. Thus, it is logical that there is a relationship between the implementation of information systems with organizational performance. According to Abugabah & Sanzogni<sup>27</sup> the performance of organizational change can be influenced by the adoption of IT but also to pay attention to aspects of its users as well. In line with the results of previous research, according to Gebauer<sup>28</sup> the implementation of information systems has the potential to improve business performance in higher education by increasing the services offered to students, faculty, and staff. Thus the adoption of Information technology will affect the performance of organizational change, especially in the related campus environment. Based on the results of the discussion above, a hypothesis can be formulated as:

Hypothesis 2: There is an influence between the adoption of information technology on the performance of organizational change

The institutional pressure present in the organization is closely related to the resulting organizational performance, this is indicated by several previous studies that discuss the relationship between institutional pressure and organizational performance. Previous research by Colwell & Joshi<sup>29</sup> discusses how the relationship between

institutional pressure and organizational performance is mediated by the company's environmental responsiveness. The results of the study indicate that institutional pressure has a significant influence on the company's environmental responsiveness, and the company's environmental responsiveness can mediate the relationship between institutional pressure on company performance. In addition, nowadays many management studies prove that information technology makes a positive and significant contribution and even collaborates them into a new terminology<sup>30-32</sup>. Based on the results of the discussion above, a hypothesis can be formulated as follows:

Hypothesis 3: There is an influence between Institutional Pressure on Organizational Change Performance

Technology adoption can be a mediator in the influence of institutional pressure on organizational performance. In previous studies in the context of ERP system adoption, mimetic pressure has a significant influence on ERP system adoption. In addition, ERP adoption was also found to have a significant positive impact on organizational performance, thus being able to mediate the relationship between institutional pressure and organizational performance<sup>33</sup>. In addition, organizational resources including information technology systems positively affect company performance by matching the resource base with a changing environment, making market changes, supporting resource extraction mechanisms & forming capabilities in increasing capability<sup>34-37</sup> their research show that the technological resources of an organization have a positive effect on the sustainable performance of the organization. For an agency, these capabilities can influence performance through more specific organizational capabilities or the competence of the top-level management team. On the other hand, Jantunen<sup>38</sup> in his research proposes a modern business model by connecting the three indicators of the ability to adopt a technology that supports high performance. The three indicators are characterized by changes in management and practice and by the absence of changes in technology and markets. Therefore, the performance structure of the modern business model integrates organizational capabilities with the development of information technology. Based on the results of the discussion above, it can be formulated a hypothesis based on the results of the discussion above, then the hypothesis can be formulated as follows:

Hypothesis 4: There is an effect of Information Technology Adoption Mediation on the relationship between Institutional Pressure and Changes in Organizational Performance.

## **METHODOLOGY**

This research uses a quantitative approach where the results of observations are in the form of numbers and then the statistical analysis will be carried out to test the hypotheses that have been done previously. The population used in this study are all educational activists or parties involved in universities such as leaders, lecturers and students. In this research uses a probability technique in which each individual in the population has the same probability of being selected (systematic) or a probabilistic sample<sup>39</sup>. Sampling using simple random makes each individual have the same probability of being selected, and the sample can be generalized to a larger population<sup>40</sup>. A sampling of the study using Isaac Michael's Table to a population of about 30,000. So the number of samples used in this study with an error rate of 10% is 268 people.

The data collection technique of this research is a questionnaire. Data collection was carried out from May to August 2021 using the help of the google form application (questionnaire attached). Questionnaires were broadcast through WhatsApp groups or personal chats to several research respondents, both lecturers, students, and education staff at faculties or units within the research target university. Considering that the unit of analysis of this research is the individual, the respondents are not from the official element on behalf of the institution. Analysis of the data used is partial least square (PLS). PLS is a multivariate statistical analysis to make a prediction that can handle many independent variables.

## **RESULT AND DISCUSSION**

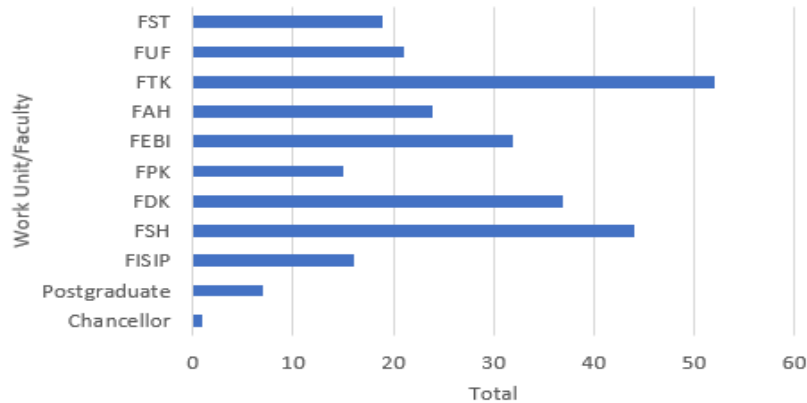
### **4.1 Demographics of Research Respondents**

From the online data collection process from May to August 2021, 273 respondents were obtained with the criteria for using the Sinai website at the State Islamic University of Surabaya. Of the 273 data obtained, a validation process was carried out, and by using Isaac Michael's rule in determining to sample, 268 data were used.

Most of the respondents were students, amounting to 259 people from 268 respondents, or 95%. This is based on the proportion of the total population, students, lecturers, and education staff. Then, most of the respondents were women, amounting to 189 people or 70%, and male respondents totaling 79 people or 30% of the 268 respondents. The majority of respondents have the latest education in high school level as many as 207 people (77%). Given the majority of respondents are undergraduate students. Then the last education bachelor amounted to 46, postgraduate 10 people and Doctor 5 people from 268 respondents. Then in terms of faculties, the majority

of research respondents are at the Faculty of Tarbiyah (faculty of education) and Teacher Training, the Faculty of Sharia and Law and then as described in the following diagram.

**Figure 2. Faculty Respondent Demographic Diagram**

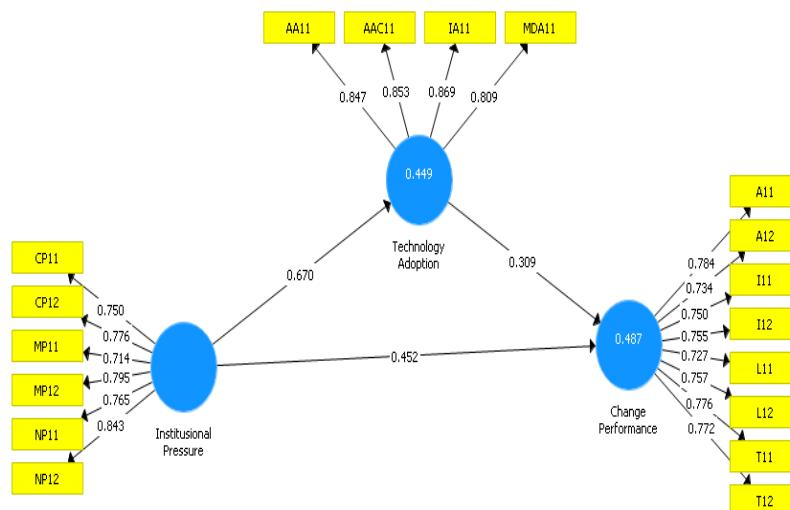


#### 4.2 Validity dan Reliability Test

The data analysis process used in this study uses the SmartPLS tool. The data analysis phase using partial least squares is divided into two models, the outer model and the inner model. In the outer model, several tests can be carried out as follows.

Convergent validity has the aim of knowing the correlation that the indicator has with its construct, the value used is the value of the loading factor. The value of convergent validity<sup>41</sup> can be seen based on the loading factor value  $> 0.70$ . The results of convergent validity can be seen in Figure 3.

**Figure 3. Testing the Outer Model**



In Figure 3. the loading factor value on all indicators has a value > 0.7 because the loading value has met the minimum limit, and the variable or construct used has a high level of validity. Discriminant validity testing has the aim of knowing the value of each construct has a unique value and is different from other constructs, the value used in the discriminant validity test is the cross-loading value. The intended loading value must have a loading value that is greater than the other constructs. In this study, each variable used is greater than the other variables. The results of the discriminant validity test can be seen in Table 1.

**Table 1. Discriminant Validity**

| Indicator | Change Performance | Institusional Pressure | Technology Adoption |
|-----------|--------------------|------------------------|---------------------|
| A11       | 0,784              | 0,537                  | 0,521               |
| A12       | 0,734              | 0,555                  | 0,422               |
| I11       | 0,750              | 0,495                  | 0,436               |
| I12       | 0,755              | 0,487                  | 0,453               |
| L11       | 0,727              | 0,431                  | 0,429               |
| L12       | 0,757              | 0,380                  | 0,395               |
| T11       | 0,776              | 0,522                  | 0,508               |
| T12       | 0,772              | 0,544                  | 0,517               |
| CP11      | 0,494              | 0,750                  | 0,477               |
| CP12      | 0,499              | 0,776                  | 0,563               |
| MP11      | 0,428              | 0,714                  | 0,407               |
| MP12      | 0,487              | 0,795                  | 0,538               |
| NP11      | 0,586              | 0,765                  | 0,499               |
| NP12      | 0,555              | 0,843                  | 0,608               |
| AA11      | 0,482              | 0,541                  | 0,847               |
| AAC11     | 0,542              | 0,538                  | 0,853               |
| IA11      | 0,559              | 0,595                  | 0,869               |
| MDA11     | 0,481              | 0,587                  | 0,809               |

The reliability test used in the partial least square is used to determine the consistency of the answers that have been obtained. The reliability test used in this study is composite reliability and Cronbach alpha whose value must be > 0.7. The following are the results of the reliability test in the PLS used in this study as shown in Table 2.

**Table 2. Reliability Test**

| Variable               | Cronbach's Alpha | Composite Reliability | Information |
|------------------------|------------------|-----------------------|-------------|
| Change Performance     | 0,894            | 0,915                 | Reliable    |
| Institusional Pressure | 0,867            | 0,900                 | Reliable    |

|                     |       |       |          |
|---------------------|-------|-------|----------|
| Technology Adoption | 0,866 | 0,909 | Reliable |
|---------------------|-------|-------|----------|

#### 4.3 Hypotheses Test

Inner model testing is used to perform testing by making predictions or evaluations between variables used

in research. In testing the inner model there are several tests as follows.

##### 4.3.1 R Square

The value of R Square is the value of the coefficient of determination on the endogenous variable. The coefficient of determination has a value between 0 to 1. The following is the result of the R Square analysis.

**Table 3. R Square**

| Variable            | R Square |
|---------------------|----------|
| Change Performance  | 0,487    |
| Technology Adoption | 0,449    |

Table 2 shows that the value of the endogenous variables used in this study, namely the change performance and technology adoption variables have a moderate influence. The resulting R Square values such as 0.19, 0.33, and 0.67 have meaning that the resulting values are weak, moderate, and strong<sup>42</sup>. A high R Square value can be interpreted as the exogenous variable having provided all the information needed to predict the endogenous variable, and vice versa.

##### 4.3.2 Predictive relevance

Predictive relevance to validate the predictive ability of the model. The value of Q Square has a value of 0.25, and 0.50 means that the prediction accuracy is small, medium, and large<sup>43</sup>.

**Table 4. Predictive Relevance**

| Variable            | R Square |
|---------------------|----------|
| Change Performance  | 0,255    |
| Technology Adoption | 0,298    |

Table 3 shows that all predictive relevance values have values greater than 0 so the model used has predictive relevance. The predictive relevance value for the change performance and technology adoption variables has a moderate or moderate predictive value.

The Goodness of Fit value is used to evaluate the value of the inner model and outer model. According to Sumarna & Manik44 the GoF values are 0.1, 0.25, 0.38 which means small, medium, and large. The following is the formula for calculating the GoF.

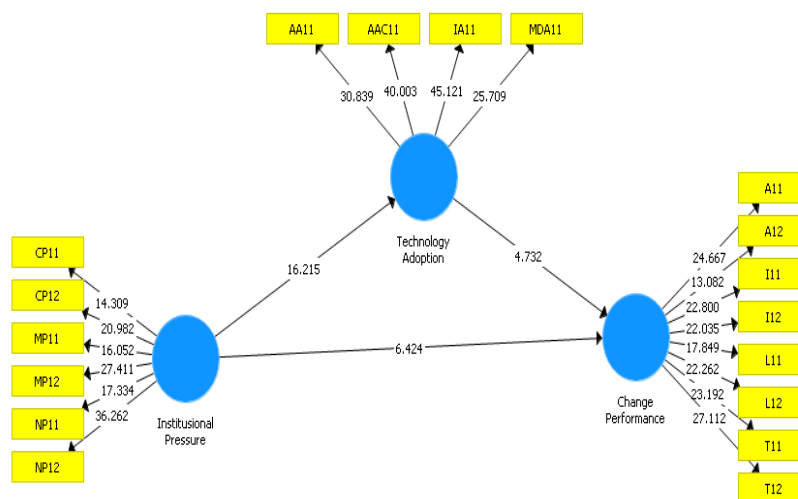
$$\begin{aligned} \text{GoF} &= \sqrt{R^2 \times \text{AVE}} \\ \text{GoF} &= \sqrt{0,312^2 \times 1,411} \\ \text{GoF} &= \sqrt{0,097 \times 1,411} \\ \text{GoF} &= 0.136 \end{aligned}$$

From the calculation of the GoF value above, the resulting value is 0.136 so it can be concluded that the goodness of fit value in this study is small. The greater the GoF value, the better the model used. So, based on the testing that has been done, the model can be used and proceed to the hypothesis testing stage.

#### 4.3.3 Hypotheses Test

Hypotheses Test on PLS uses the bootstrapping menu that is available on SmartPLS. Here are the test results using bootstrapping.

**Figure 3. Bootstrapping**



Hypotheses test on SmartPLS using the bootstrapping menu as shown in Figure 4. produces path coefficient values to see the relationship between variables having a positive or negative value or significance if the t-statistic value > 1.96 and P-Value < 0.05. The following are the results of the direct influence hypothesis test as in 4.

**Table 5. Path Coefficient**

| Variable                                     |  | Original Sample | T-Statistic | P-Values | Information              |
|----------------------------------------------|--|-----------------|-------------|----------|--------------------------|
| Institutional Pressure Change → Performance  |  | 0,452           | 6,251       | 0,000    | Positive and Significant |
| Institutional Pressure Technology Adoption → |  | 0,670           | 16,377      | 0,000    | Positive and Significant |
| Technology Adoption Change → Performance     |  | 0,309           | 4,544       | 0,000    | Positive and Significant |

In addition to the relationship between variables that have a direct influence, there is also an indirect effect. In the specific indirect effect, it can be seen that the results of the hypothesis test have an indirect effect. The indirect effect is caused by the mediating or intervening variable. If it has a t-statistic value > 1.96 and P-Value < 0.05, it has a significant meaning or the mediator variable mediates the exogenous variable on the endogenous variable so that the effect is not direct. The following are the results of the specific indirect effect hypothesis test.

**Table 6. Specific Indirect Effect**

| Variable                                                          | Original Sample | T-Statistic | P-Values | Information              |
|-------------------------------------------------------------------|-----------------|-------------|----------|--------------------------|
| Institutional Pressure → Technology Adoption → Change Performance | 0,207           | 4,250       | 0,000    | Positive and Significant |

H1 proposed in this study is that there is an influence between institutional pressure on technology adoption. After testing the hypothesis, the results of the T-Statistic value of 16.377 are more than 1.96 and the P-values are 0.000 less than 0.05. So institutional pressure has a positive and significant impact on the adoption of information technology. Thus, it can be concluded that H1 is accepted. This shows that the institutional pressure received by technology users is a consideration in adopting information technology. Thus H1 is accepted.

This study proposes H2, namely, there is an influence between information technology on the performance of changes in higher education. The results of the H2 test showed that the T-Statistic value was 4.544 which was more than 1.96 and with P-values of 0.000 less than 0.05, which means that the adoption of information technology has a positive and significant impact on the performance of higher

education changes. Thus, the results of the hypothesis test indicate that the acceptance of H2 which means that technology adoption is one of the factors that affect the performance of higher education changes. Thus H2 is accepted.

H3 in this study states that there is an influence between institutional pressure on the performance of changes in higher education. After testing the hypothesis, the results obtained are a T-Statistic value of 6.251 which is more than 1.96 P-Values value of 0.000 below 0.05. This shows that there is a positive influence between institutional pressure on the performance of changes in higher education so that it can be concluded that H3 is accepted. The stronger the institutional pressure received, the higher the change performance of the given university. Thus H3 is accepted.

H4 in this study states that there is an influence between institutional pressure on the performance of changes in higher education mediated by the adoption of information technology. after testing the hypothesis, the results were obtained with a T-statistic value of 4.25 which is higher than 1.96 and a P-Values value and with a P-value of 0.000 less than 0.05. This shows that there is a positive influence between institutional pressure on the performance of changes in higher education mediated by the adoption of information technology. It can be said that H4 is acceptable. Thus H4 is accepted.

#### 4.4 Discussion

From the analysis and hypothesis testing above, it shows that Institutional Pressure has a significant effect and has a positive direction on Information Technology Adoption. this is evident from the t value of 16.77 which is greater than 1.96 so that it can be explained that the increase in Information Technology Adoption can be built from maximizing the role of good Institutional Pressure. So it is important for stakeholders that the better the institutional pressure, the more adoption of information technology will increase.

The results of this study indicate that when you want the adoption of Information Technology, in the context of the research target, it is deemed necessary to have the role of institutional pressure from the mimetic, normative and coercive dimensions. This is in line with research conducted by Alziady & Enayah<sup>45</sup> which shows that institutional pressure has an impact on intentions to use green information technology. In addition, the findings of this study are also in line with research by Zorn, Flanagan, & Shoham<sup>46</sup> that institutional roles play a role in using ICT in organizations.

From the results of data analysis, it was also found that the adoption of Information Technology had a significant positive direction on Change Performance, in the case study at the State Islamic University of Surabaya. This is evidenced by the large t-value of 4.544 which is

higher than 1.96. This shows that the better the Technology Adoption, the better the Change Performance will be. This rejects the research presented by Amrozi et.al<sup>47</sup>, that the adoption of Information Technology has an insignificant positive effect on a sustainable competitive advantage. This research study is at a Private Islamic Religious College in East Java. However, what has in common is that they both have a positive influence on the performance of higher education institutions. This research is also in line with research by Arifin et.al<sup>48</sup>, who found that technology adoption factors were able to encourage organizational performance.

Meanwhile, the indirect relationship between Institutional Pressure on Change Performance mediated by Information Technology Adoption shows a t value of 5.25, which is above 1.96. This shows that the relationship between Institutional Pressure and Change Performance mediated by Technology Adoption has a positive and significant effect. Because when the number is below 1.96 and above 0.05, it is influential but not significant. This means that the better the role of Institutional Pressure and the role of Information Technology Adoption will encourage the performance of Change Performance. Based on researchers' searches in the Google Scholar database, Elsevier and web of science, no research has been found that raises ICT mediation on the relationship between Institutional Pressure on Organizational Performance. However, there is a common ground, namely that collaboration between Institutional Pressure and Organizational Technology Adoption can encourage organizational performance.

However, what is interesting is that the direct relationship between Institutional Pressure on Change Performance and the relationship mediated by Information Technology Adoption is greater than the indirect relationship. The value of the t statistic in a direct relationship is 6.25. While the mediative relationship t value is 4.25. This means that even though they both contribute significantly positively, the direct role of Institutional Pressure in supporting Change Performance is more dominant than the mediation of IT adoption. Meanwhile, the relationship between Information Technology Adoption and Change Performance has a t value of 4.54. Thus, the researcher gives an interpretation that it might be because of current technology. information has become familiar to everyone, so this has become commonplace. What is more important is the extent to which the role of institutions in encouraging performance improvement through the Institutional Pressure instrument.

Thus the managerial implication is that the mimetic, normative, and coercive strengthening of Institutional Pressure is very encouraging (based on this finding) toward Change Performance, therefore it is a concern that Institutional Pressure needs more attention to encourage

Change Performance. Another thing that needs to be studied as a follow-up to this research is, whether are there other factors that contribute to the performance of change in the organization, for example, the ability of leaders to orchestrate existing resources, both existing technological systems and organizational capabilities.

## **CONCLUSION**

From the presentation presented, based on data analysis of research findings, it can be concluded as follows:

1. This study aims to examine the influence of Institutional Pressures and Information Technology Adoption on Change Performance at Public University in Indonesia.
2. On the relationship between Institutional Pressure on Information Technology Adoption, the results of the study show a significant positive effect.
3. On the relationship between Information Technology Adoption on Change Performance, the results of the study show a significant positive effect.
4. While the a direct relationship between Institutional Pressures on Change Performance, the results also have a positive and significant effect.
5. While the indirect relationship between Institutional Pressures on Change Performance is mediated by Information Technology Adoption, the results have a positive and significant effect.
6. From points 4 and 5 above, this is an interesting finding that the mediation of Information Technology Adoption is not too far apart in its influence compared to the direct relationship between Institutional Pressures in terms of encouraging Change Performance at State Islamic University of Surabaya, although all of them have a significant positive effect. Even the direct relationship between Institutional Pressure on Change Performance is higher in value than the relationship mediated by Information Technology Adoption.
7. The conclusion from the findings of this study confirms that all proposed hypotheses are accepted

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