THE MEDIATING EFFECT OF HIGH PERFORMANCE WORK SYSTEMS IN THE ORGANIZATIONAL CULTURE AND INFORMATION TECHNOLOGY TOWARDS MANAGERIAL PERFORMANCE
(A Study at Cooperative in Semarang City, Province Of Central Java, Indonesia)

Maskudi
Fakultas Ekonomi Universitas Wahid Hasyim Semarang

Abstraksi


Kata kunci: budaya organisasi, teknologi informasi, sistem kerja kinerja tinggi dan kinerja manajerial.

INTRODUCTION

The business environment now a days is being more competitive and uncertain, demands a lot of companies in the world in general and Indonesia in particular to be more advanced and developed. In the conditions of environmental uncertainty, many companies requires accounting information, especially information and management information which can be used in management decision making.

The use of computer technology in the completion of the company's operational tasks can be explained by human factors (brain ware) that is behind the use of information and communication technology. This is because the operationalization of computer technology is largely using manpower. In addition to human problems, there are some constraints or factors that inhibit, among others: 1) the complexity of the problem, 2) the lack of top management support on the use of computer technology and 3) the lack of experience and the negative attitude of the users. (McLean et al., 2003).

Lepak et al., (2009) state that human resources practices designed to enhance employees’ skills and effort. Measures of HPWS have traditionally included practices related to structured and comprehensive approaches to recruitment and selection, pay for performance and other incentive-based compensation plans, information sharing, rigorous performance appraisal processes, and training in both generic and company-specific skills.
Ghandour, A et al., (2010) conducted a comprehensive study in an effort to overcome the complexity and diversity of information systems, the application of information technology in organizations not just install these technologies to be used to do a job. The application of information technology in order to succeed, the technology is designed with the conformity of worker task (task - technology fit).

Conformity between the task and technology is helping an individual in performing a collection of tasks that have impact in the performance of executive duties. Suitability of tasks and technology is ideal profile formed from a collection of task dependencies internally consistent with the elements of the technology usage. In other words, that technology element will have more benefitting value when it is supported by human resources interact in accordance with the norms or the existing organizational culture.

The phenomenon of organizational culture rife discussed by experts around the 1980's. Then what's the relationship between the culture of the company with company’s performance? Organizational culture is a system of social control within the organization so that members of these organizations have a culture that is relatively the same. With a relatively similar culture is expected to have an impact on the behavior and ways of thinking other members. Ultimately the purpose of the company will be more effective because the company has created a system of social control to its members through corporate culture. (Ngo, H.Y., Foley, S., & Loi, R., 2009).

In this interpretive approach, the organization is seen as a social construction that consists of the interaction of the people who are in the organization, in other words is a cultural organization because there is social interaction between people who are within the organization. Organizational culture is also expected to be an important factor, even from other economic factors in determining the success of a company (Ancok, 2003).

Over the last decade, several empirical studies show that High Performance Work Systems (HPWS) contribute to facilitate growth and improve the organization. (Peter Boxall, 2003).

Relevances of High Performance Work Systems should not only focus on the achievement of profit alone, but in the context of High Performance Work Systems also prepared to firms to face new challenges. High Performance Work Systems aims to improve the productivity and effectiveness as well as helping employees to identify appropriate tasks to overcome the burdens to achieve company goals. With this aim, the adoption of High Performance Work Systems requires the use of certain HRM practices, although there is no consensus has not been reached on what these practices. (Whitener, 2001).

Although the researchers of HRM possess different picture and different management practices in describing High Performance Work Systems, but the essential characteristics according to Jeffrey Pfeffer, there are seven dimensions, (1) Employment security work. (2) and selective recruitment of new personnel. (3) Self-management and decentralized decision-making as the basic principles of organizational design. (4) Compensation depends on the performance of the organization. (5) extensive training. (6) Reduce status distinctions and barriers, including dress, language, office arrangements, and wage differences across levels. (7) Sharing financial and performance information throughout the organization. (Pfeffer, J. 1996).

Although only a few studies have focused directly examines the impact of information technology on High Performance Work Systems (HPWS). Research on the effect of information technology on various aspects of life have been made, such as: (1) the effect of information technology on customer service (2) the effect of information technology on competitive advantage. Their general finding are to increase the speed of information
technology to deliver information to consumers and facilitate the collection of consumer data and information about the market. (Schiuma, B. M. a. G. 2003).

Davis and Albright argue that information technology can affect the information in decision making. Information related to the implementation of the High Performance Work Systems and Self-management roles in decentralization of decision making as the basic principles of organizational design and Sharing financial and performance information throughout the organization as a dimension of High Performance Work Systems.

The availability of personal computers (PCs) are supported by a wide variety of software that is easy to operate allowing managers to access information quickly and prepare more reports. Additionally, the use of information technology, which combines computer technology and communication technology can help High Performance Work Systems to present information in a wider scope. This is made possible due to the use of the network, information related to the external environment (governments, competitors) and internal (from various departments) can be obtained easily and quickly (Mc. Leod. Raymond, 1994).

The research was conducted on the cooperative in Semarang, Central Java province of Indonesia. The thing that is the reason researchers do research on cooperative because the cooperative as a business entity must have principles bussiness people's efficiency. Efficient Cooperative will be able to serve the interests of its members and to improve the welfare of members.

However, the realities facing the cooperative condition is far from what was expected because many cooperatives are standing but inactive. This can be seen cooperative conditions in Indonesia over the last 10 years, that cooperatives are not active around 30%, this is a pretty high number. The data of cooperative condition can be seen in the following table.

<table>
<thead>
<tr>
<th>Year</th>
<th>The number of cooperatives (Unit)</th>
<th>Percentage inactive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Active</td>
<td>Inactive</td>
</tr>
<tr>
<td>2004</td>
<td>93,402</td>
<td>37,328</td>
</tr>
<tr>
<td>2005</td>
<td>94,818</td>
<td>40,145</td>
</tr>
<tr>
<td>2006</td>
<td>98,944</td>
<td>42,382</td>
</tr>
<tr>
<td>2007</td>
<td>104,999</td>
<td>44,794</td>
</tr>
<tr>
<td>2008</td>
<td>108,930</td>
<td>46,034</td>
</tr>
<tr>
<td>2009</td>
<td>120,473</td>
<td>49,938</td>
</tr>
<tr>
<td>2010</td>
<td>124,855</td>
<td>52,627</td>
</tr>
<tr>
<td>2011</td>
<td>133,666</td>
<td>54,515</td>
</tr>
<tr>
<td>2012</td>
<td>139,321</td>
<td>54,974</td>
</tr>
<tr>
<td>2013</td>
<td>142,387</td>
<td>58,421</td>
</tr>
</tbody>
</table>

Source: Ministry of Cooperatives and Small and Medium Enterprises Republic of Indonesia

Based on the explanation above, researchers are interested in conducting research related to: "The Effect of Information Technology, Culture and High Performance Work Systems (HPWS) On Managerial Performance Cooperative in Semarang".

Seeing the importance and role of information for management and by basing on empirical studies that have been conducted by previous researchers regarding information technology,
interdependence and characteristics of High Performance Work Systems and its influence on managerial performance, the formulation of the issues raised in this study What is the influence of information technology, organizational culture and high performance work system on managerial performance Cooperative in Semarang?

The research objectives to be achieved in this study is to determine the effect of information technology, organizational culture and high performance work on managerial performance Cooperative in the city of Semarang.

THEORY AND HYPOTHESES
High Performance Work System (HPWS)

The main idea of HPWS is to create an organization based on employee involvement, commitment and empowerment of human resources rather than control employees. The unity of managerial practices will vary between one company and another company. Small business units that control their own destiny and involve everyone in the business is the best image for the involvement -oriented approach. In an organization high employee engagement can be seen from the responsibility to be involved in achieving success. They learn more and contribute more. They have the power of information, knowledge, and willingness to perform at the highest performance. (Lawler, 1992).

According to Boxall & Purcell, Implementation of Resource-Based View in the literature of HPWS is the development of organizational flexibility and enterprise growth. Approaches tried to obtain the commitment and involvement of employees with organizational objectives so that the behavior of members of their own organization governed and controlled, and avoid sanctions and pressures. (Boxall & Purcell, 2000).

High Performance Work Systems are not the same as Total Quality Management (TQM), but both approaches can be used in conjunction with one another. Although the approach of TQM emphasizes employee involvement, type of involvement was limited to allow employees to make suggestions and control certain elements of the production process and quality control processes. This does not indicate that the organization will be restructured and redesigned to emphasize employees have the information, knowledge, strength, benefits that will give them business experience. Instead employees are provided with information, knowledge, and power to fix a particular element of the organization's work processes. (Lawler et al., 1992).

Managerial performance

Vroom et al., (1974) stated performance is a degree to which individuals succeed in making job assignments. So that activities that commonly assessed in an organization is the employee's performance, how he does everything related to a job, position, or role in the organization. (Vroom, V. H., and A. G. Jago, 1974).

While Mahoney et al. (1963) define performance as the managerial skills of managers in carrying out the managerial activities between planning, investigation, coordination, supervision, staffing arrangements, negotiations and representations (Mahoney et al., 1963).

Managerial performance is a measurement of how effective and efficient managers have worked to achieve organizational goals (Stoner, 1992). An evaluation of the performance done by managers depend on the cultural development of each company (Ivancevich, 1999). Here are some of the measurement used to evaluate the performance of management, based on non-financial perspective:
1. **The ability of managers to make plans.**

Schermerhorn (1999) states that good planning can enhance the focus and flexibility in dealing with the job manager. Problems of focus and flexibility are two important issues in an environment where the competition is high and dynamic. Further said the ability of managers in planning can be one of the indicators to measure the performance of managers.

2. **The ability to reach the target.**

Manager performance can be measured by their ability to achieve what has been planned. Furthermore, the target is said to be quite specific, involving participants, realistic and challenging as well as having a clear span of time. (Mulyadi, 2001).

**Manager’s activity outside the company.**

Wagner (1995) mentioned the intensity of managers in representing the company in dealing with the outside shows the company's confidence in the manager. Then say this belief can arise due to the good performance of the manager. It is revealed that the role of managers in representing the company shows its performance level.

Balanced Scorecard is a strategic management system that translates an organization's vision and strategy into operational objectives and measures (Hansen and Mowen, 2003). Operational objectives and measures are then expressed in four perspectives: financial perspective, customers, internal business process, and learning and growth (Kaplan and Norton, 1996).

**Information Technology.**

Technology is devices used by individuals to complete their tasks. In the field of information systems, technologies associated with computer systems (hardware, software and data) and the use of support services (eg training) that gives the user guide in the completion of tasks. The model focuses on the effect of system specific or general influence of a set of systems, policies and services provided by the department of information systems. (Goodhue and Thompson 1995).

<table>
<thead>
<tr>
<th>Information processing tasks</th>
<th>Explanation</th>
<th>IT Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>capturing information</td>
<td>Obtaining information on the point of origin</td>
<td>Input technology, for example: Mouse, keyboard, barcode reader</td>
</tr>
<tr>
<td>Delivering information</td>
<td>Presenting information in a form that is most useful</td>
<td>Technology output, eg it: Screen, Printer, speaker</td>
</tr>
<tr>
<td>creating information</td>
<td>Process information to obtain new information</td>
<td>Software technology, for example: Word processing, Payroll, Expert</td>
</tr>
<tr>
<td>storing information</td>
<td>Store information for the future.</td>
<td>Storage technology, for example: Hard disk, CD Rom, Tape.</td>
</tr>
</tbody>
</table>
Organizational Culture

In business, the organization is also called the company because the company is a form of organization, or rather the organization of production that includes a variety of functions and coordinated through a specific system to produce goods or services. Further said by Reksohadiprodjo and Handoko (2000), culture is a system of meaning that is shared by people in a particular area and further away from the culture considered as a way of life. (Reksohadiprodjo and Handoko, 2000).

Nelson & Quick (2011) to define Culture is transmitted to an organization's members by means of socialization and training, rites and rituals, communication networks, and symbols. Organizational culture has four functions: gives members a sense of identity, their commitment increases, Reinforces organizational values, and serves as a control mechanism for shaping behavior.

Sasoengko (2002) describes the corporate culture is a system of meaning that believed and embraced as a pattern of behavior and the perception of a thing by all components of the company concerned. So the fundamental region of the respective companies greatly influenced by the beliefs of the founders and eventually form the idealistic values to the established company. The idealistic values are boundaries of something that should not be done and should be done by members of the organization. For more details see the image below.

H. Schein Edgar (1997), one of the leading management and organization theorists also provide a formal definition of the corporate culture, "a pattern of shared basic Assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough Considered to be valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problem.".

Schein (2011) defined organizational culture is the set of shared values, beliefs, and norms that influences the way employees think, feel, and behave in the workplace. Thus the overall corporate culture is an expression of behavior patterns, beliefs, arts, technologies and products of the human mind which is characteristic of a company. Corporate culture is also expected to be an
important factor even more important than other economic factors in determining the success of the organization. Schein (2011).

Poor corporate culture is like sticking with the paradigm of static and never changes, not sensitive to changes especially with the latest information is the main factor that led to the destruction of the company. Thus, the influence of the corporate culture may be positive but can also be negative (Ancok, 2003).

**Information Technology, HPWS and Managerial Performance**

Computer technology is one of the Information Technology (IT) that much influence on the organization of information systems for the computer-based information systems, information can be presented in a timely and accurate. As stated by Boxall & Purcell, 2000 (in Inmaculada Beltrán et al, 2008) with the use of a large number of computers useful information can be collected and reported to the manager immediately. What is happening in various parts can be seen at a glance. It allows management to make decisions more quickly.

Information Technology (IT) can also be used for integration of the integration work either vertically or horizontally (Martin et al, 1994). IT can assist companies in obtaining competitive information (McLeod, 1995). IT can present information in a form that is useful and can be used to send information to another person or to another location (Haag and Cummings, 1998). Information technology integrates data from the various parts, reducing clerical work, and speed up the presentation of the data required for decision making. Christiansen and Mouritsen (1995) states that information technology is a challenge for management accountants.

First of Information Technology (IT) is used to mechanize the accounting department tasks, such as reporting, data collection. IT in different forms integrated into production equipment, where the resulting data will be automatically saved, of course, it accelerates the reports relating to the production.

Second, Information Technology (IT) currently allows to provide a database that is more complex, so that non-financial information can be provided, for example, information relating to products, customers, production process. This information makes it easy for managers to monitor and analyze their operations. Third, the creation of the IT plan can be adjusted to the situation. Simulation and scenario what if (what if) that can be presented by IT can provide a range of alternatives from the consequences of a decision. The current software enables managers to make their own models quickly, and can be easily modified, without having to consult a computer specialist.

From the opinions of the above it can be concluded that the Information Technology (IT) can affect the characteristics of high-performance work system (High Performance Work Systems/High Performance Work Systems) scope. So the use of IT, which is a merger between the technology of computer and communications technology, helps high-performance work system in presenting the information in a wider scope. This is made possible due to the use of the network, information relating to the external environment (eg. government, competitors) and internal (from various departments) can be obtained easily and quickly.

Computer technology, with a wide range of software, enabling high-performance work system to present a variety of formats, both formats are referring to a formal decision model as well as the incorporation of the functional and temporal information. This can be done because of the database that allows new and old data is always available for management purposes. Availability of Information Technology (IT) that can affect the characteristics of high-
performance work system, allowing managers to make decisions accurately and quickly, which in turn can improve managerial performance.

Thus information technology can impact directly or indirectly on managerial performance characteristics through high performance work system.

**Figure 2 : Relationship of Information Technology , High Performance Work Systems With Managerial Performance.**

Description of some of the theory presented by some of the top experts in the hypothesis proposed in this study as follows.

H₁ : Technology information will be positive effect to High Performance Work System (HPWS).

H₂ : Information technology will be positive effect to managerial performance.

The effects of corporate culture on performance has been the topic of research menejrial Allen (1985), Dennison (1984), Gordon (1985), Buono, Bowditch and Lewis (1985 ), Lorsch (1985 ), Posner, Kouzes and Schimidt (1985) in his study found the that the correct understanding regarding employee organizational culture will lead to a significant difference in organizational performance. Organizational culture is a set of values, which if set properly will result in higher financial returns ( Baker and Hawes, 2001).

Organizational culture has the potential to Enhance organizational performance, employee job satisfaction, and the sense of certainty about problem solving ( Kotter, 2012). If an organizational culture Becomes incongruent with the changing expectations of internal and / or external stakeholders, the organization's effectiveness can decline as has occurred with some Organizations (Ernst, 2001). Organizational culture and performance are related Cleary (Kopelman, Brief, & Guzzo, 1990).

Organizational unit not only need information relating to the unit itself, but also information relating to the other units. To overcome this Bouwens and Abernethy (2000) found a high performance work system can be used to reduce the influence of interdependence. Broad scope of information that is provided by a high-performance work system provides managers a range of alternative solutions to be considered. It allows managers to understand the problems that occur better (Chenhall and Morris 1986; Abernethy and Guthrie 1994; Bouwes and Abernethy 2000).

In addition, evaluation of achievements in the sub-units of an organization that has a high degree of interdependence of the possibility of having assisted with information wide scope. As stated by Hayes (1977) that measure the performance of the units that have a degree of
interdependence would be very useful if the measure includes a measure to assess the reliability, cooperation, and flexibility of the division manager. In line with this opinion Mulyadi and Setiawan (2000) states that the use of improper accounting information in performance measurement often result in behavior that is not good, and could have negative consequences. Difficulties in determination and award- worthy managerial behavior resulting in the need for monitoring and appreciation for the work.

Ngo et al., (2008 ) states that interdependence has the potential to create a gap of information for decision makers. This gap occurs because less information is available than needed for decision making. When this occurs the decision maker facing uncertainty. Information provided by the broad scope of high performance work system can reduce these uncertainties. The information presented by an integrated high-performance work system will help managers to take effective decisions that impact performance arising from the decision - making will increase. Research carried out by Ngo et al., (2008) found no influence of organizational culture on managerial performance . Then also found no effect of organizational culture and high performance work on managerial performance. ( Hang-Yue Ngo and Raymond Loi (2008 ). Thus organizational culture can impact directly or indirectly on managerial performance characteristics through High Performance Work Systems.

Figure 3 : The relationship of organizational culture, HPWS and managerial performance

![Diagram]

Description of some of the theory presented by some of the top experts in the hypothesis proposed in this study as follows .

H₃ : Organizational culture will be positive effect to High Performance Work System (HPWS).

H₄ : Organizational culture will be positive effect to managerial performance.

H₅ : High performance work system (HPWS) will be positive effect to managerial performance.

H₆ : High Performance Work Systems will mediate the relationship between Information technology, organization cultural and Managerial Performance.

THE RESEARCH MODEL

The research model is shown in figure below.
METHODS
Population and sample

According to Cooper and Emory (1996) says the population is the entire collection of elements that can be to make some conclusions. The population in this study is a cooperative manager in Semarang is a manager in 1073.

The sample is defined as a part of the population from which the actual data in a penelitian. Teknik sampling is determined by using random sampling (Sugiyono, 2002)

Of the population above, the determination of the sample used Slovin’s formulation (Unam, T. et al., 2012, Husein Umar, 2001) namely:

\[ n = \frac{N}{1 + NE^2} \]

Based on the formula above, the samples taken at least 100 respondents.

Path analysis

Based on multiple regression analysis can be generated with a two-stage path analysis as shown in Figure 4 below.

| Hypotheses test |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Regresi          | Mediasi         | DE              | IDE             | TE=DE+IDE       | ME = 1- (IDE1×IDE2) | R²              | Sig             |

Figure 4: The research Model

![Figure 4: The research Model](image-url)
<table>
<thead>
<tr>
<th>$\text{TI} \rightarrow \text{HPWS}$</th>
<th>0.763</th>
<th></th>
<th>0.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\text{TI} \rightarrow \text{Performance}$</td>
<td>0.320</td>
<td></td>
<td>0.006</td>
</tr>
<tr>
<td>$\text{OC} \rightarrow \text{HPWS}$</td>
<td>0.612</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>$\text{OC} \rightarrow \text{Performance}$</td>
<td>0.434</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>$\text{HPWS} \rightarrow \text{Performance}$</td>
<td>0.417</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>$\text{TI} \rightarrow \text{Performance}$</td>
<td>HPWS</td>
<td>0.320</td>
<td>0.417x0.417=0.133</td>
</tr>
<tr>
<td>$\text{OC} \rightarrow \text{Performance}$</td>
<td>HPWS</td>
<td>0.434</td>
<td>0.417x0.181</td>
</tr>
</tbody>
</table>

**Testing Hypothesis 1:**

The magnitude of the effect of information technology on the High Performance Work Systems at 0.763, with a t sig = 0.006 (below 5%). This means that information technology has a positive effect on High Performance Work Systems.

**Testing Hypothesis 2:**

The magnitude of the effect of information technology on managerial performance at 0.320, with t sig = 0.000 (below 5%). This means that information technology has a positive effect on managerial performance.

**Testing Hypothesis 3:**

The magnitude of the influence of organizational culture on High Performance Work Systems at 0.612, with a t sig = 0.000 (below 5%). This means that organizational culture has a positive effect on High Performance Work Systems.

**Testing Hypothesis 4:**

The magnitude of the influence of organizational culture on managerial performance by 0.434, with t sig = 0.000 (below 5%). This means that organizational culture has a positive effect on managerial performance.

**Testing Hypothesis 5:**

The magnitude of the effect of High Performance Work Systems on managerial performance by 0.417, with t sig = 0.000 (below 5%). This means that organizational culture has a positive effect on managerial performance.

**Testing Hypothesis 6:**

Based on the calculations shown in the table are not directly test the hypothesis that $R^2 = 0.52$ is smaller than 0.721. Thus the information technology and organizational culture has a positive effect on managerial performance is mediated by the High Performance Work Systems.

**CONCLUSION**

On approach to the study of the theory, there is a positive relationship of information technology, organizational culture and High Performance Work Systems and managerial performance.
Similarly, from the results of path analysis, hypothesis 1 there is a positive effect of information technology on the High Performance Work System (HPWS) been accepted, as well as hypothesis 2, hypothesis 3 and hypothesis 4 is accepted. For hypothesis 5 which states there is the influence of information technology and organization culture on managerial performance through high-performance work system (High Performance Work Systems) is received.

From these results that the High Performance Work Systems (High Performance Work System) required by the cooperative management in developing the organization.

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