

INFORMATION TECHNOLOGY, CONTROL, AND EMPOWERMENT

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ABSTRACT

This essay discusses some different views of control and empowerment issues concerning IT implementation in the workplace. Some authors argue that IT deskills workers and reduces workers ability to control their work. Managers tend to use IT to reduce uncertainty and this, in turn, will be disempowering the workers. Some others, on the other hand, argue that IT enriches job content and gives workers the power to control their knowledge. This essay, however, argues that the impacts or effects of IT depend on perceptions, values, and human articulation about IT itself. It is evident that every group of people, such as managers, workers and owners, will have different views of IT. These various views seem to confirm the fact that organization is a political institution. Issue of power relation will also take place concerning the IT implementation. Yet, for the purpose of this essay, this issue will not be discussed in detail. Furthermore, this essay appreciates Zuboff's idea about informed organization but does not take it for granted. There are lots of problems to solve if we are moving toward to this kind of organization, such as tension between managers and workers regarding to control, authority, and management boundary. Finally, this essay raises some

important questions that have contributions in making the idea of informed organization comes into reality.

INTRODUCTION

Information technology (IT) implementation in organization has not only provided economic benefits, but also resulted in tremendous impacts on both workers and managers. The major issues concerning the application of IT are, among others, related to its impacts on organizational structure, skill and job content, control and autonomy, and on decision making (Buchanan and Boddy, 1983; Whisler, 1970; Zuboff, 1988). Interestingly, there is no single answer to the questions related to those issues, for instance, whether IT will degrade or improve skill and whether IT will give or reduce control and autonomy to workers and managers. Some researchers argue that information technology will result in progressive upskilling and empowerment to users. Some others, however, say that IT threatens to displace and de-skill users (Scarbrough and Corbett, 1992). Even, there is ambiguous definition of skill and empowerment itself (Clement, 1996). 'Skill' has both subjective and objective meaning. It depends on perspective used to describe this concept. Also, in describing the concept of empowerment, it is

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necessary to distinguish between functional and democratic empowerment.

This essay will discuss those issues by emphasizing empowerment and control side of IT. It will begin by contrasting some different views of IT's roles in organizations. This first section will further elaborate the concept of empowerment and control by answering question of whose perspective used to describe those concepts. This question is very important because different perspective will give different answer or meaning of empowerment and control. Nonetheless, many authors seem to take a similar path when discussing the impacts of IT on organization, especially related to organizational form in the future. They indicate that organization which permits the distribution of power, function, and control will be the best possible form in the future as a logical response of IT application in the organization (Clement, 1996; Morgan, 1997; Morton, 1996; Whisler, 1970; Zuboff, 1988). This issue will be elaborated in the next section. Finally, this essay will end up with some conclusions.

IT, EMPOWERMENT, AND MANAGEMENT CONTROL

To begin the discussion, it is better to understand the meaning of 'to empower' and 'to control'. Literally, the former means, among other things, '...to give (someone) the power or lawful right (to do something)...', and the latter means '...to have power over (someone or something)...' (Procter, 1978). Although not in exact words, many dictionaries will have similar description about these words. In real situation, however, the use of these words will result in different meanings. For instance, when ones intend to 'empower' the others, the effect of their action is not necessarily the same as that intended, especially when related to technological change in an organization.

Technological change in workplace can be seen in many ways, whether from capital and management or labor and employees perspectives (Beirne and Ramsay, 1992). The point of view will then be the basic argument for explaining the concept of empowerment and control. One can see IT as a source of empowerment, and the other will see as a tool of con-

trol. Forester and Morrison (1995) contrast two different views, Braverman's and Hirschhorn's, related to the role of IT in organization. On the one hand, Braverman observes that every effort to introduce new technology can be understood as a way to increase control over work force. The basic premise of this process is that employers do not want workers to have control over their skill. They will try to prevent workers to increase skills, so that they can exploit and control them for the sake of business. Managers will be threatened if the workers become skilled. Hirschhorn, however, does not believe that computer will deskill workers or degrade work. He says, as cited by Forester and Morrison, that 'robots can't run factories' because computer is basically unreliable. As it becomes more complex, technology needs human factor to operate it. Technology can not operate by itself and at this point, skilled operator will be needed. In other words, complex technology will indirectly produce a chance to improve knowledge and skill, not *vice versa*. Technology can create opportunity to up-skill workers and, therefore, learning and retraining will be significant to do if the workers want to survive in the future.

One of the possible explanations for the differences is the fact that employers, managers and workers might have different interests in organization, specifically regarding IT implementation. The argument for managers to use IT as a tool for control is obvious if, from the beginning, they consider the concept of control when formulating strategies. In that case, managers can be prey to such a way of thinking since they have responsibility to ensure that work process in organization will run well and help them to achieve desired goals. In doing so, they will include any attempts to control the whole process. For them, 'to manage is to control' (Kling, 1996). This argument is consistent with Buchanan and Boddy's (1983) findings. They find that management has three kinds of objectives: strategic, operational, and control objective. The first two are concerned with how to make the organization competitive and well-performed. The control objective, however, is related to management effort in reducing uncertainty as results of human intervention in work process. This means that managers will take into account the idea of control on their decisions, including

when they introduce IT in organization. Since control is so important to them, they will treat IT as a medium of control.

Nevertheless, it is interesting to see that even it means removing manual craft or skill, control over work process can also create opportunity for management to improve the quality of work. On the one hand, it takes over workers' skill. On the other hand, it also provides a better way of working by preventing human from doing boring and dangerous jobs (Buchanan and Boddy, 1983). The problems arise when there is no agreement of what is important in this context. Since managers think that it is their responsibility to manage the organization, they tend to see that the control is the most important. Differently, workers will see that job satisfaction, control over job, and job content are more important, and for these reasons they will perceive that what managers are doing for organization, by introducing IT to control work process, means reducing their jobs satisfaction and control over their jobs. For workers, IT will make them uncomfortable rather than enrich their jobs.

In that case, Zuboff (1988) gives excellent example by citing operators' experience in Tiger Creek, a pulp mill company in which she conducted her research. Doing my job through the computer, it feels different. It is like you are riding a big, powerful horse, but someone is sitting behind you on the saddle holding the reins, and you just have to be on that ride and hold on. You see what is coming, but you can't do anything to control it. You can't steer yourself left and right; you can't control that horse that you are on. You have got to do whatever the guy behind you holding the reins wants to do. Well, I would rather be holding the reins than have someone behind me holding the reins. (Zuboff, 1988, p.64)

The debate about control in workplace will be more complex since employers and workers may also perceive IT differently, especially related to skill. It is, therefore, hard to determine whether IT has contribution in upskilling or deskilling workers. 'Skill' then becomes an ambiguous concept (Scarborough and Corbett, 1992) because workers and employers do not have same answer to this question. Skill can have both subjective and objective meaning. Subjective meaning

is concerned with individual perspective on skill itself. Skill can be perceived subjectively if it is related to identity and individual satisfaction and it is very relative between individuals. On the other hand, skill is objective if it is reflected on its wage bargaining power. The higher wage earned by workers means the more objective the skill they have. For example, Kusketer, as cited by Scarborough and Corbett (1992), and shows that car assembly workers, who are perceived as 'unskilled' by the employers, tend to perceive themselves as 'skilled'. On the contrary, manual machine tools operators will see that computer machine tools could degrade their skill although employers give them higher wages because they are seen as 'skilled'.

Notwithstanding, managers and workers can have different understanding about empowerment. Often, managers focus only on 'functional empowerment', by promoting quality work, higher productivity and better wage rate, as a way of empowerment (Clement, 1996). With such understanding, managers assume that workers and organization have similar interests. Unfortunately, this assumption is possibly false. This unitary view tends to ignore political side of organization. There are many different interests and agendas among organization members. Although in the same organization, it does not necessarily mean that workers and managers will have the same goals. For example, if workers think that they will not get any benefits, they may be against managers' plan to use IT, even if they had been convinced by managers that IT will improve their skills.

In fact, the managers' rhetoric can be dangerous if it is used for intensifying work process but by reducing work force at the same time. Clement (1996) suggests that empowerment should be pointed at a broader level, which is 'democratic empowerment'. This idea of empowerment stems from the concept that workers should be given rights to take part in decision making process that might have impacts on them. In the more real sense, empowerment means 'to offer an authentic promise of enhancing work experience and outcomes' (p.384). Empowerment should also give workers discretion or ability to control of what they think to be important, such as skill and work pace.

IT AND ORGANIZATIONAL FORM: FUTURE PERSPECTIVES

To some extent, the concept of democratic empowerment is similar to Zuboff's (1988) idea of 'informed organization'. This idea arises since IT has two faces that can not be separated since they are inherently integrated. Zuboff claims that IT can 'automate' as well as 'informate'. IT can play dominant roles in organization. It will automate working process and will potentially replace work force if it is used to improve efficiency. Yet, at the same time, it can also produce information, and if managers exploit this capability, they will gain new opportunities. Zuboff emphasizes that managers should focus on these capacities because 'the dual capacities of information technology are not opposite; they are hierarchically integrated. Informing derives from and builds upon automation' (p.11). The exploitation of these capacities is very important to articulate empowerment for all of organization members. Managers should use IT not only for controlling, which may result in new problems by creating dissatisfaction, but also for creating freedom and giving more control to the workers in decision making process.

Many authors seem to support Zuboff by proposing a new organizational form that can accommodate the informing capacity of IT. Although using different terminologies to describe it, they seem to agree that this kind of organization is characterized as less hierarchical, participative, and team based (Clement, 1996; Morgan, 1997; Morton, 1996; Whisler, 1970). This organizational form will be enabling empowerment by giving flexibility in decision making process.

The leaner, more networked, more autonomous forms of organization we are moving toward, all have an empowering characteristic. Empowerment requires knowledgeable workers who rather than pass information up to the hierarchy use that knowledge to manage their process as a feedback control system...Empowerment means that operational decisions will not be made hierarchically, that knowledge workers must feel comfortable in making decisions, that managers must provide counsel rather than direc-

tives, and that information and our conceptual models of how to use it are the source of decisions. (Benjamin and Morton, 1992, as cited in Clement, 1996, p.382)

This new organizational form is logical response to changing environment due to the use of IT. Informed organization presupposes that the roles of managers and employees are different from those in the traditional one. In this organization, they sit together and no longer in a directive command line relationship. They now become partners in organization and work in teams. What is important in organization is information. For this reason they have to support to each other to use this information for increasing their productivity. They should work on a higher level and it is beyond automation. They have to learn and exploit the informing capacity side of IT. This will then characterize the organization as a 'learning institution', in which both managers and employees will consider learning activities as the part of working. Learning and working are now integrated in organization activities. Since intellectual skill is a precious resource in learning institution, managerial roles should pay more attention on improving its quality. Managers should create a conducive environment and enable all organization members to make contribution through learning process. In this regard, managerial activities should focus on four main activities: 'intellectual skill development, technology development, strategy formulation, and social systems development' (Zuboff, 1988, p.397). These activities should be interconnected because they are interdependent.

Zuboff says: There is considerable interdependence among these four domains of managerial activity...Activities related to intellectual skill development cannot proceed without the social systems management that helps to foster roles and relationships appropriate to a new division of learning. Activities in either these domains will be frustrated without technological development that supports an informing strategy. Integration and learning are responsibilities that fall within each domain, because without a shared commitment to interdependence and the production of value-adding knowledge, the legitimacy of learning community will suffer. Business outcomes such as cost, efficiency, quality, product development, customer service, productivity, et cetera, would

result from coordinated initiatives across domains. Managerial work would thus be team-oriented and interdisciplinary, and would promote the fluid movement of members across these four domains of managerial activity. (Zuboff, 1988, pp.398-399)

Nonetheless, there is a critical question that can be addressed as a response to these ideas: Will managers, who are in power, accept all consequences in the informed organization? Will they accept their new role? Or, to be straightforward, is this idea realistic? It is important to raise these questions because power relation often plays dominant roles in decision making process, especially that related to IT implementation in organization. If the answers are negatives, then the whole idea of informed organization will only become utopia.

In a traditional organization, control, authority, and management boundary have become the main themes. How to manage these things will determine how successful is managers in managing organization. Managers often treat themselves as different from employees. They think that they have special roles and their roles are different with those of the employees have. The relationship between managers and employees is based on subordination concept. Managers think that they are a group of people who control others, employees. Besides exploiting authority, they will also use techniques to control jobs and employees to ensure that they can achieve organization's goals.

In informed organization, however, knowledge sharing is very important. This is in contrast to the traditional organization, in which information flows in only one direction, from employees to managers. For managers, process of change to a more egalitarian environment might be very difficult. Managers tend to think that knowledge, to some extent, can be treated as a medium of gaining power in organization. Employees, on the other hand, will also keep their knowledge for their own benefits. For instance, they will use their expertise as a bargaining point especially concerning with their salaries. For this reason, it is easy to understand why managers and employees can not be good partners in learning and why they can not share information easily (Davenport, 1999; Zuboff, 1988). Zuboff says that it is very difficult for managers to switch to their new roles if there is no structure to support their commitment. They need incentives to do so as a trade-

off for what they have sacrificed, namely authority and control. On the contrary, employees seem to stick in their current position if management attitudes and their relationship model are still the same as in the past. That is a possible scenario in the future, and if this happens then the organization will remain in *status quo*.

CONCLUSION

This essay arrives at a conclusion that the role of IT in organization depends on, using Kling's terminology, the 'circuit of meaning'. IT can be perceived in different ways contingent on ideology or paradigm of employers, managers, and workers. They are all actors who can determine the whole conception of control and empowerment. The 'impacts' or 'effects' depend on the interpretation of the technology, and, in this case, human being is the only one who can articulate, interpret and give meaning to it.

This essay argues that the relationship between technology, managers, and workers can not be conceived in deterministic way because people in organization can perceive technology differently. It is clear that the impacts of technology depend on 'who says it is', and 'what' values and assumptions behind when people seeing the technology. What is not clear, however, is how to deal with people in organization when information technology has been extensively in use in organization. Zuboff suggests 'what' kind of organization would be possible in the future. Yet, she finds it dilemmatic and seems to mitigate her own argument by stating that informed organization is a hypothetical idea.

Finally, this essay underlines the issue of power relations concerning IT application in organization. Such an issue urges further discussion since those are in power, managers and owners, tend to 'say' what they want to say. The research should be focused on how they perceive their power to deal with workers when implementing IT in workplace. Will managers, both in private and public sectors, truly share their power with their workers or subordinates? Will owners and managers let workers or subordinates gain more discretion and control over their knowledge in the workplace? The answers to these questions are very important since they will have contribution to realize the idea of informed organization.

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